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Preface

The needs of the library in the present era are changing drastically so there is an urgent need to take some initiative steps in this regard. The successful and innovative implementation of libraries depends upon the committed and sincere efforts of the library professionals. The successful library services are those who are able to fulfill the present need of stakeholders.

Libraries especially academic libraries have rapidly been shifting to quality needs based information disseminating services. Technological developments have affected the library services. Libraries and their resources have partially moved to the virtual world of the internet. Technology now allows users to submit their queries to the library at any time from any place in the world. Web based services, digital library services, internet library services and electronic library services are terms with similar meanings. As more libraries moved towards providing services in a digital environment, the improved access to the remote library collection is making the use of electronic information resources more realistic and more attractive. Traditional online services had transformed themselves into internet based online services today. Keeping these perspectives and issues in mind Smt. H R Patel Arts Mahila College Shirpur and North Maharashtra University Jalgaon come together and organized a very timely International Conference on “Web Based Library and Information Services in Academic Libraries”. The discussion and deliberation of the conference are largely devoted to the main theme and the following sub themes-

2. Best practices in the global scenario.
3. Emerging technologies: issues & challenge.
4. Digital content Management system.
5. RFID and Smart Cards.
6. WEB 3.0.
7. Digital Preservations Archives.
8. Digital Libraries & Future.
9. Web Resources.
10. Role of Librarians in e-governance era.
11. Professional behavior & changing attitudes.
12. Delivery & Exchange of Services.
13. Professional Ethics & Values.
14. Open Source Software & library Application.

- Web OPAC, Online Databases & Search Engines
- Web Based User Education
- Subject Directories, Virtual Library Tours & Real Time Services.

It is noteworthy that the conference received an overwhelming response from the authors all over India, a good number of qualitative papers have been received and selected. Papers accepted for presentation are included in this volume of conference proceeding. These authors have tried to cover different areas of the conference theme.

An International conference like this needs the support of many people across India. We express our deep sense of gratitude to Vice Chancellor of North Maharashtra University Jalgaon Prof. P. P. Patil, Shirpur Education Society's Smt H. R. Patel Arts Mahila College's President, Hon. Shri Amrishbhai R. Patel, Managing Director Hon. Bhupeshbhai R. Patel, Vice President Hon. Rajgopalji C. Bhandari, former Vice Chancellor of North Maharashtra University Jalgaon Hon. Dr. K B Patil for their kind support and guidance

Editors

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Dr. Rahul Gopichand Saner

Mr. R. N. Mendhe

Dr. H. R. Chaudhar



Dr. (Ms) Nayana Wijayasundara

Keynote Speech.....

Greetings from Sri Lanka! *Ayubowan*- which means „may you live long’ as Sri Lankans greet anytime of the day!

First of all, I would like to express my deepest gratitude to the organizing committee for inviting me to the conference on web-based library and information services in academic libraries. I am honored to be here to deliver my speech to this august gathering.

Today’s conference theme is “Web-based library and information services in academic libraries”. I’m sure that there will be many research papers and discussions on that topic are ready for today’s proceedings. Thus, I thought of bringing out certain concepts from our Sri Lankan university system generally, not specifically on web-based services. Let me introduce you to the

“Recent Changes and Developments in Sri Lankan Academic Libraries”

Sri Lankan university libraries have experienced a tremendous evolution towards modernization during the last few years. These transformations have come up with additional dimensions beyond excellent management, technical embracement, myriad organizational skills and efficient collection development.

Appearance of a library counts a lot. If your library looks worn out- doesn’t confuse this with the term old-actually we need to preserve old buildings as they are the symbols of our culture and heritage – worn out library can be more easily dismissed as non-essential. We need to maintain the physical environment of the library by investing in upgrades, painting walls with matching colours, sometimes with theme colours of the university. Providing attractive furnishing and keeping them clean and tidy including the surroundings are very essential. Appropriate colours, fabrics and a nice finish can also help a space stand the best of time. It doesn’t matter whether your Library is huge or small. Welcoming, appealing library is not an option. It is a requirement.

Introducing my own university library, Library of University of Sri Jayewardenepura (USJP), the building is nearly 35 years old. It badly needed colour washing and repair. Renovation was carried out phase by phase giving minimal disturbance to our clients. We made the main counter very attractive as it is the first sight to any person who enters the library. We wanted

to make the place welcoming. If someone walks further into the library from the gate at side of the counter, a spacious lobby can be found. Ambiance is important because when someone walks into a space, it immediately generates an impression from the space.

We always look for attractive and multifunctional furniture. Instead of just producing same furniture items we already have, we should give innovative design ideas to furniture suppliers and get the best furniture to fit our needs.

READ shaped book rack was designed to house “Just – returned” books. This 6 feet height and 16 1/2 feet long letter formation rack gives an elegant look to the library. It is visible to the far end of the main entrance. Knowing the fact that, majority of “Just – returned” books are in high demand and frequently circulated, our library customers have a habit of browsing the books in this rack. On the other hand, those who are new to the system, just walk in there to see what it is. With time they also get familiar to this.

Triangular shaped computer tables are specially designed for the Interactive Study Area of our library. Made out of steel and wood, these tables serve the purpose of changing the area to suit with different purposes by arranging the tables in various ways. When we conduct sessions for students, we arrange those in rows in single or in pairs. When it is organized for learning commons 3 units together, 4 units together, 5 units facing inside or outside can be arranged. These tables can be moved very easily as they are made with caster wheels.

Gadget corner is another element designed, which facilitates using computers for a short period of time while standing. Polystyrene cover is decorated with a specially designed sticker, and 2 computers are kept side by side and two users can stand face to face and use the computers. Kiosk is another gadget we introduced to our library. It is provided to browse the OPAC and floor plans of library with touch screen facility. The upper and lower parts of the screen are allocated for screening library notices and sometimes certain video clips related to nature or history. They are previously uploaded and automatically run throughout the day.

In addition we have provided attractive reading promotion library posters to give a new look to the library. Most of the university libraries have developed their Institutional Repositories (IRs). Publications done by the own university staff is collected in their IR. Going beyond a future step USJP library has developed its IR named as Scholar Bank depositing university full-text theses, convocation speeches, newspaper clippings and other creative works like lyrics of songs written by our professors in music/arts.

In order to increase the efficiency of housekeeping functions of the library, and to give a better service, Sri Lankan university libraries started automation process in early 1990's using commercial packages like Libsys, Alice for windows, Libsuit etc. With the evolution of open source software, IT experts among the library professionals looked for the possibility of application of open source integrated library management software into our libraries. At present 11 libraries out of 15 public universities use KOHA open source software for their catalogue maintenance and circulation functions. Our Library catalogue was on Alice for windows for about 11 years and moved to KOHA in 2014. The main advantage of this move was not only saving the huge annual maintenance cost, but we were able to enter our

catalogue entries without transliterating Sinhala/Tamil titles of books because KOHA supports not only English characters, but it supports characters of our own languages. This was a tremendous move, as I see, because transliteration according to the existing standards caused many problems for our common customers as most of them do not know the transliteration standards. E.g. „tha’ sound in Sinhala has to be written as „ta’ when transliterated, whereas „ta’ sound is also transliterated in the same way. So, when reading out transliterated titles, many customers get confused whether it is „tha’ or „ta’ as both are transliterated as „ta’. At the same time, we were able to provide renewing and reservation of items remotely for our customers.

Sri Lankan universities embarked in providing electronic database access services in late 1990’s with the generous support of SIDA (Swedish International Development Agency). Under a special project of SIDA, few scholarly electronic databases were provided through INASP (International Network for Availability of Scientific Publications) to universities and research institutions in Sri Lanka. Later, several universities subscribed to additional electronic databases depending on their fund availability. Access to HINARI was granted through WHO for the Medical Faculty communities. With time, electronic database providers reduced or restricted their service provision to Sri Lanka through these projects as they might have foreseen market place in Sri Lanka though it may be a very small segment. How did we face this scenario? All of the university libraries got together and formed a consortium in 2013. We invited experts even from India, who had worked towards successful consortia. We studied different models of consortia. Finally, we came up with a good model and formed Consortium of Sri Lankan Academic Libraries (CONSAL) keeping UGC, Sri Lanka, as the apex body. In 2014, we were able to get access to 5 e-databases through CONSAL and funds were provided through UGC. In order to select e-databases which were best fit for the requirements of all the universities, preliminary surveys were done by each university librarian, and data was compiled by the Librarian, University of Colombo. With hard work done by the working committee of CONSAL by negotiating with vendors, we were able to get reasonable pricing models for each and every e-database we subscribed. Each year renewal of subscription totally depends on usage. I am very proud to announce that my university has the highest Usage of CONSAL provided databases among all the universities in Sri Lanka. The secret behind this is not anything other than marketing.

Marketing of library services is another vital area. In Sri Lankan university libraries, we use formal as well as informal marketing strategies. Word-of-mouth is the most powerful and efficient strategy. Apart from the Library Committee, librarian is a member of the Senate and all faculty boards are represented by the librarian or nominated representative. This gives an opportunity to voicing and submitting memos related to library matters to the members. In addition, Librarian is a member of the university Senate, Research Council, Deans’ Committee, IT Committee, Strategic planning committee and other main committees with slight variations from university to university.

Providing remote access to the library e-resources is another remarkable development achieved by some of university libraries. Remote access facility is very essential in the present scenario as many academics prefer doing their literature searches on their research

staying at home after work. This service is restricted to their university email username and password, which is used to make sure that they do not share it with another person unlike providing common username and password to all customers.

Collaboration with faculties is another important aspect that we give emphasis. Information Literacy sessions, statistical analysis sessions are conducted by librarians in collaboration with the faculties. Collection development is supported by the relevant faculty by recommending required resources. Collaboration work extends to conduct research, joint publications, and librarians serving editorial boards. For example USJP Librarian is the co-editor-in-chief for the tri annual university newsletter and the executive editor of Vidyodaya Journal of Science and Vidyodaya Journal of Humanities & Social Sciences. In addition, librarians serve as reviewers of journal articles, conference proceedings of other faculties.

Another recent development in Sri Lankan university libraries is laptop lending service. Initiated by USJP library, now this is popular among other university libraries as well. Students who cannot afford a laptop on their own are benefitted by this service. Borrowed laptops can be used inside the library, as the whole library is covered with Wi-Fi facility. Providing Wi-Fi facility is another development we saw in the past few years. Customers can connect their own devices to the Internet via this Wi-Fi facility. Our library has also provided a SMS- alert service. Those who want to get connected with this alert service need to register their mobile number with our system. Library notices, upcoming events, new additions are directed through this SMS alert service.

We do have another attractive area in the library called English Learning Zone (ELZ). This area is designed with comfortable eye-catching seating facilities and adjustable revolving racks. This ELZ is designated for learning English and housed with simple English story books and grammar books. We conduct programs for first year students in this section collaborating with the university's English Language Teaching Unit.

Providing security to library properties as well as for library patrons should be introduced in libraries. We are in the process of accompanying books with RFID (Radio frequency Identification) tags and tattle tapes. RFID tags are for storing data and used for circulation purposes. Tattle tapes are used for detecting unauthorized movements of library materials from the library. Security gates set up at the exit point detect and alarm any material containing de-magnetized tattle tape strips if taken through that point. Further inside the library, security surveillance system is in operation to minimize thefts and mutilation of library material, and for the safety of our patrons and library staff. These cameras are located to cover many areas in the library including entry and exit points.

Token operated coffee/tea machines are installed inside the library in common areas to cater refreshments needs of the library customers. This helps us to attract more patrons to the library as some of them visit the library just to have a cup of hot coffee/tea. This was introduced according to the popular and growing concept of „fast-casual’ in restaurants.

Sri Lankan universities have taken up the challenge of fulfilling 100% document delivery requests made by their customers. Extending the existing ILL (Inter Library Loan) service to

CONSAL, libraries have the facility of getting down journal articles through BLDS (British Library Document Services). Cost of BLDS articles is born by a grant provided by UGC, and the service is coordinated by the University of Colombo. This service is very speedy as it takes only the time of sending and receiving emails and the customers, specially university academics are very happy about this service.

Outreach services are another emerging category of library services of Sri Lankan university libraries. This outreach services extend to schools, temples, libraries in other sectors and associations in various forms like storytelling to children, supporting to organize their library collections etc. University of Moratuwa is deeply engaged with outreach services.

Establishing research support units in libraries is another trend in Sri Lanka. As most of the universities work towards enriching the research culture in the universities, libraries need to support in achieving this status. USJP library's research support unit is a very good example for this as it provides one-to-one sessions on literature search, prevention of plagiarism, using referencing software, citation styles and sometime using of statistical software packages. It also extends to providing the service of recommending good journals for academics to do their publications by avoiding predatory journals, obtaining ISSN and ISBN for university publications, supporting those publications to index in relevant indexing services and explaining the advantages of open access publications.

You may wonder why I'm emphasizing on these small changes or developments in a time like this where people talk about delivery of books using drones, creating maker spaces in libraries and I'm sure the above explained services and products may not be new to library professionals like you. What I want to emphasize is that to develop our services we cannot depend only on fund availability. It needs some other dimensions as I mentioned at the very beginning; passion, creativity, thinking differently are a few to mention. As librarians; you need to be the change agents of your organization. We need to make our patrons happy and meaningful. We all want happiness. We all seek for meaning in our lives. They need not be mutually exclusive. Library user pursues both of these being in the library. Therefore, we need to make our library in a way that everyone enjoys their favorite spot!

Thank you very much for listening patiently. Again I would like to express my sincere thanks to the organizing committee for inviting me to this conference and providing all facilities. To conclude, I would like to convey my best wishes to all the paper presenters and participants. Have a fruitful and wonderful session ahead! I wish the deliberations of the conference a grand success.

Thanks a lot

Dr. (Ms) Nayana Wijayasundara, PhD

Librarian, University of Sri Jayewardenepura
Sri Lanka

President, University Librarians Association of Sri Lanka

President-Elect, Sri Lanka Library Association Member, Board of Management of NILIS,
University of Colombo



MESSAGE

I am happy to know that Smt.H.R.Patel Arts Mahila College, Shirpur is organizing International Conference on "***Web Based Library and Information Services in Academic Libraries***" on 10th February 2018.

This conference is providing a platform to the eminent experts, academicians, librarians and researchers of national repute to promote closer interaction on various facets of library and information sciences. I am sure that deliberations in this conference will help to develop innovative and creative web-based library services in the universities and colleges.

I wish the International Conference a grand success.


(Prof.P.P.Patil)
Vice-Chancellor

North Maharashtra University, Jalgaon



Message

I am very much delighted that Smt H R Patel Arts Mahila College is going to organize an International Conference on “Web Based Library and Information services” with support from North Maharashtra Jalgaon.

The international conference on “Web Based Library and Information services” is a kind of platform to generate new, innovative, sustainable, strategic and emerging technological ideas in the field of libraries.

I am very much happy with the theme chosen for the conference which is most relevant, apt and suitable in the present scenario of libraries. Today’s world is the world of science and technology and each and every sphere is captured by it and library science is not an exception to it. Inculcation of new technology and technology means in library is the indispensable need of libraries which will definitely suffice by such a kind of conferences. The present conference will play the role of catalyst in this process.

I heartily wish the grand success to the conference

Hon. Amrishbhai R. Patel

President

The Shirpur Education Society, Shirpur



Message

ICT plays very important role the field of library sciences and has been a key to drive much of the futuristic thinking in libraries. People nowadays are shifting fromv traditional library to technology based library and in the present library scene the adventure by Smt. H R Patel Arts Mahila College Shirpur by organizing aninternational conference on “Web Based Library and Information services” is really praiseworthy.

I aspire that the present international conference will open new frontiers for the library to work on in their respective libraries in respect of the latest demands of its stakeholders.

I wish best luck and success to the conference.

Hon. Rajgopalji C. Bhandari

Vice President

The Shirpur Education Society, Shirpur



Message

In last 25 – 30 years advances in computer technology and internet brought in tremendous changes in ICT enabled education system. As a result of these developments working of libraries and information services has also changes to great extent. It is heartening to know that Smt. H R Patel Arts Mahila College, Shirpur is organizing an international conference on “Web Based Library and Information services”. I am sure that in this conference issues related to recent developments in library and information services will be discussed. I appreciate the initiative taken by Smt. H R Patel Arts Mahila College, Shirpur and wish every success to the conference.

Dr. K. B. Patil

Former vice Chancellor N. M. U. Jalgaon



Message


I am very glad to know that the Smt. H.R. Patel Arts Mahila College, Shirpur is organizing an International Conference on “**Web Based Library and Information Services in Academic Libraries**” to be held on 10th February, 2018. Dear researchers, at the beginning library was just a store house of books and other documents. General people were not allowed to use the documents available in the library. Services are the heart of any kind of library. Now, web based library services is a trend. From middle of the 19th century, a large number of different services came into the picture. Computer came during the middle of the 20th century and the mode of library services changed dramatically to an extent with web environment. If we try to find out the history of web based services I would like to say that it was 1960s we can think as a first step. Libraries are taking full advantages of internet and web facilities. Users also are very happy by saving their time and harassment from getting the library services through web. The western countries have gone far miles than developing and underdeveloped countries. In our country we are far backward in this matter. Various networking system in our country is simply failed due to the lack of adequate infrastructure, professional manpower, good will, efforts and ego problem of big libraries. But still there is hope we will enable to overcome all these problem and library will enable to provide web based service to all. I am sure, if the library and information center is being a professional about their services then in near future it can become a money making self earning organization.

I congratulate the team of the college for organizing the International Conference on such a relevant topic.

I wish grand success for this International Conference.

With best wishes,

Sincerely yours,


(Prof. P.P. Mahulikar)
Pro-Vice Chancellor

North Maharashtra University, Jalgaon

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APPLICATION OF BIG DATA, SMALL DATA AND DARK DATA IN INFORMATION RESOURCE CENTRE**R. Perumal**, Librarian**Jitendra Chauhan**, College of Law, Vile Parle (w), Mumbai – 400056**Abstract**

Data is a piece of information or fact obtained through observation or experiment. The data when it is processed it become an information. The information is used for taking decision or solution for the problem. The data may be classified in to three types like Big Data, Small Data and Dark Data. Technological development helps to access and analyze the data and improve the library services. Basically the data study is used in the business field, later on it is used in library services also. When we use the technology for the library services it helps to access the data on day to day activities, this data is called big data. The small data is the data where the librarian use study about the user and find how to promote library services. The dark data is defined in two different ways like when the data is collected and not used for long time or when the big data is interpreted and generate the new data is dark data, this data is hiding in the big data. Application this concepts in library management will promote the effectiveness of library services to the greater extent.

Keywords: Big Data, Small Data, Dark Data, Information Resource Centre, Library Services.

Introduction: The Big Data concept was first coined by Laney in 2001. It is capture, store, and process and present the data which helps creation or generation of knowledge. The big data consist of volume, variety and velocity. The Big data is the structured and unstructured data one stores for which there is no immediate purpose (Norbert Boon). “Connecting pieces of data that already exist, but have not been appropriately linked to show a more complete picture of what is occurring in the market or in the firm” (Lind). “Big data is data from source in which we have no way to estimate, how large it will be, how much it will grow and how much it will change” (Daniel Gutierrez). The traditional data management system could not manage voluminous data available in variety of format like social media, website, email and generation data within short period of time. The big data assist to process large volume of data and support for fast decision making which is in the form of structured, unstructured or multi structured. It is difficult to understand, access, consolidate and scrutinize. When we used the big data it is useful to save money and improve the efficiency of the service. The technological advancement assist to processing the data in Terabyte or in Petabyte. The small data are the data which are small in quantity, easy to understand, access and analyze the data, which is in megabyte or gigabyte. It is information about day to day activities or information about the person or the individual documents. The Dark data is a data where the data is generated from the analysis of big data or the data collected are utilized. The dark data are the hidden data. Nowadays the administration of information system require latest technological and professional skills for data processing, assigning metadata and digital preservation technique. The skills required in the field of information and knowledge management are: Translating the day to day activities of the library in to structured information. Data mining. Capturing, storing, analyzing datasets that are large, complex, unstructured and in different formats. Catering the user’s expectations or requirement.

Big data and Library: The traditional library were using only the documents like books, periodicals, magazines, maps, encyclopedias and etc. which are physical format. They were not in digital format. Now days due to the advancement of the technology the information is in the form of electronic. Most of the libraries are using electronic documents for their collection development. Digital information support to access from different places. Which increase the usage. The library is reorganized which helps collection development and delivery of information. The digital library helps to promote the storage, preservation and information access for the educational program. The librarians are aggregators of information must have a highly trained staffs in order to develop the most advanced international organization and become recognizable. The new generation of librarians are becoming knowledge navigators rather than just record keeper. data in library could be used in many ways like improving usability, helping users to find the interesting pattern they require. The data about the users which helps to analyze the users visit, type of documents they used and which type of document referred more times, who are the active members of the library and all the information about social media activity, cultural and social behavior. The data which are collected from websites, databases, and user search behavior and bibliometric information are big data in library. The development and revolution of library services are based on the data combination of all these data that helps to predict the future trends. The electronic information support to collect, store and preserve large quantity of data. Though better analysis of the large volume of data that are becoming available. There is the potential for making faster and advances in library services. Schwartz emphasized the importance of government initiatives on work of big data for libraries and the impact on the library collections.

Application of Big data in library:

Decision Making: The big data helps to take decision. The data which are combined and analyzed will give the outcome. The outcome can be utilized for the decision making in the following;

Database: The big data helps to take fast decision in the matter of library services. The management spent crore of rupees for subscribing databases, they need information about the usage of databases, and it is not possible to give manually. The databases are used from different terminals by different users. The technology

generate usage data of the users. Based on the data the librarian can decide which database is used and which is not used or less used, accordingly the renewal can be done.

Collection Development: Based on the circulation report, the collection development policy can be formulated or modified according to the user's expectations. Generally the collection development policy is different from the earlier one. For example before the introduction of databases hard copy of the reports were used more. After the offline database the hard copy usage came down. Now because of online database the usage of offline database came down. This data we can access through the circulation section. If we spent more amount on hard bound and offline there is no use or meaning. The online information reduce the time limit to access the information.

Finance: When the library allotted money for different department, the data shows which department utilize more amount than others. The Amount spent on particular department is useful or not, based on that the information, librarian can transfer or turn the volume of amount to other department which on priority or necessarily required.

User behavior study: The big data helps to study about the behavior of the users. The study shows what type of information they need, when they are attending the library and what are their expectation this could be studied from the data.

Data formatting. The traditional library collections are based on books, encyclopedias and rare book collections. Which has to be scanned and put in the digital collection. This digital document can be linked to the other databases, which support to improve the usage. Before going to digitalize the document it is necessary to study the usage of the document. The usage shows whether the document has to be formatted or not. The usage data helps to find out the usage information of the document.

Metadata: The documents like research report, case study, dissertation and thesis which are underutilized because of there is no data about the data of the document. When the metadata is prepare and put it on the data collection it helps to improve the usage.

Small Data: The library collection is static collection in library (Hessaman). It is not necessary to put it in big data technology. Small data which small in size, easy to understand, access analyze (Salil Miglani) Small data is data in which we have a sense of where it coming from and how much there will be (Daniel Gutierrez). The data collected without any help of technology or can use simple technology..

Dark Data: Dark data is a data which is not being used according to consulting and market company Gartner Inc. "Information assets that are organization collects, process and stores in the course of its regular business activity but generally fails to use for other purposes". In the library the data about information seeking behavior of the users, information literacy study, Library evaluation study, library case study and online database usage study are carried out but based on the study no action was taken because of some issues like finance, infrastructure, manpower and etc. Secondly the dark data also a data which are obtained from the big data analysis. The dark data is also called as hiding data because when the data is processed that time it shows the data otherwise the data hiding inside the big data.

Conclusion: The Big data, Small data and Dark data all data are important for the library services. But for library with small collection the small data is very useful because the big data needs investment in technology, man power with technical skill and ability to adopt bigdata and privacy issues. The person who is working as a librarian should have the data analytical skills for which he has to undergo for training. The small data can be analyzed with the help of spreadsheet in open office, it will gives the outcomes. It is enough to improve or introduce new services in the library. When we use the dark data it helps to understand past situation based on that we can predicate the future.

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BEST PRACTICES IN ACADEMIC LIBRARIES

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Abstract

In the changing information environment, the academic libraries are undergoing drastic changes in their internal and external environments. Due to these changes, the role of academic libraries and the impact of ICT on them in the present context. The article focused on the current challenges faced by the academic libraries, and how it can be overcome by using the best practices. Also highlights the broad areas under which the works are classified, along with its list under each category. The process that are adopted in the academic libraries are discussed and concludes that with the adoption of the best practices in academic libraries there will be a continuous improvement and overall performance in the institution / organization.

Keywords: Academic Libraries, Best Practices, ICT, User Education, Library Services

Introduction: The international changes particularly the Information and Communication Technologies (ICT) have impact on the functioning of academic libraries. The developments in ICT have changed the users' expectation from the academic libraries in different ways. The ways to build collection and services to the end users vary from the recent past practices. To meet the end-users demands effectively, the academic libraries need to identify and adopt good practices and benchmarks. Thus, preparing guidelines in a standardized way based on the best practices employed by libraries is significant which will ultimately enhance the value based services of academic libraries. Library and Information Services of Higher Education institutions play a central role in enhancing the quality of academic and research environment. The National Accreditation and Assessment Council (NAAC) strive for quality and excellence in higher education and advocates for enhancing the role of Library and Information Services in improving academic environment. Though, it is institutional accreditation that the NAAC does, the assessment of a library, a vital sub-unit, is a key step that integrates itself with the overall evaluation.

2. Definition: Best Practice in simple term known as the practices which have the way of enhancing the existing function and help in effective implementation or use of the process.

According to the Oxford Advanced Learners Dictionary, "Best practices as a quality of high standard, excellence, highly improved outstanding par excellence service. It means way of doing something that is usual or expected way in particular organization or situation, guidelines for good practices. In this process of developing best practices we taken action rather than good ideas & we improve our skills." According to the online dictionary of Library and Information Science, " In the application of theory to real life situations, procedures that, when properly, applied consistently yield superior results and are therefore used as reference points in evaluation of the effectiveness of alternative methods of accomplishing the same task. Best practices are identified by examining empirical evidence of sources" According to National Board of Accreditation and Assessment (NAAC). "Best Practice may be innovative and be a philosophy, policy, strategy, program, process or practice that solve a problem or create new opportunities and positively impact on organizations. Institutional excellence is the aggregate of the best practices followed in different areas of institutional activities."

From above definition, best practice means, it is a method or technique used to improve the current workflow of an organization to obtain its objectives effectively & with predetermined standards.

3. Role of the Academic Libraries: The role of the library and information centre in a college is aimed at realizing the educational goals of the college or the parent organization. The college libraries not only provides stimulus to reading by procuring materials for study and research, by introducing open access system, by providing long hours of open, by organizing the library resources in a systematic way, but also feeds the intellect of the student, encourage the researches of the faculty and thus serve the teaching and research needs of the faculty. The college library and information resource centre acts as a vehicle for disseminating information and the related computer technologies through the best practices for utilization by its community of users and also for the exchange of information among its users. 'Best practice' in academic library in simple terms is known as that practice which makes the way for enhancing an existing function or an activity and helps in effective implementation or use of the process thereby leading to a continuous improvement and overall performance of the library NAAC (2006). With this information as background an attempt has been made to highlight the practices that are adopted in the academic libraries.

The Best Practices are classified under the following broad areas:

Management and administration of a library: - In-service Programmes, - Observation of other Library practice.- Staff promotional policy.- Maintenance of service area- Special deposit scheme
- Resource Generation through external membership.- Resource generation through internet services.- Student participation programme.

Collection and services: Collection development in different formats, Compact storage of less used collection, Library book exhibition, Extended library opening hours, Extended hours of service

Extent of use of services: User education, Initiation to fresher's, Preparatory course for students project

- User orientation, Information aids, Library use statistics, Library best user award, User feedback practice through different formats, Suggestion box and timely response

Use of technology in libraries: On-line information retrieval- Internet access, Free browsing unit -Internet access. Broadband internet centre, Library homepage for information dissemination, A strong and dynamic library website, User feedback through library homepage, Access to e-resources, Information retrieval through web OPAC, Campus-wide LAN facility, Database creation using international standard formats, Electronic surveillance system CCTV, The best practices suggested by the NAAC in its quality indicators in Library and Information services to the utilized / constituent colleges listed below.

1. Computerization of Library with standard Software.
2. Inclusion of Sufficient information about the library in the college prospectus.
3. Compiling user statistics.
4. Displaying newspaper clipping on the notice board periodically.
5. Career/ Employment information services.
6. Internet facilities to different user groups.
7. Information Literacy programs.
8. Suggestion box and timely response.
9. Displaying new arrivals and circulating a list of those to academic departments.
10. Conducting book exhibitions on different occasions.

4. Best Practices in Academic Libraries

Book Display programme: To organize exhibitions and book display programme on important dates and important occasion on well-known personalities. This helps and provides an opportunity for users to know the various types of information resources available on a particular aspect in the library and information centre.

Orientation programme: One of the best practices is to create awareness among the students about the library resources, the library services, good reading habits, creative programmes and activities for maximum utilization of the library. In other words enlighten the fresh students at the beginning of each academic year about the importance of the library, thereby exposing the students to its various sections of the library, the library resources and the various library services.

Educating the User: The academic libraries have a great role and responsibility in creating awareness among its users which will help to make use of the library resources, facilities, services, more effectively and efficiently.

Staff Users Meet: The academic libraries should organize various programmes including orientation, lectures on related issues, and topics, workshops, seminars, which focuses the issues useful to the users as well as to the staff.

Developing Virtual Presence: The libraries can use web 2.0 applications like social networking, blogging, use of RSS feed, audio and video streaming, Wikipedia, etc, and interacting delivery information services

Demonstrations and Exhibitions: The Libraries should organize demonstrations and exhibitions to create awareness about their collection, services.

Information Brochures: Information brochures and pamphlets are also one of the important sources for creating awareness about the facilities, services, and the collections of the library, the users can be provided the information brochures at the time of their enrollments as registered members. The Information brochures may be on reprography or Xerox facilities, latest publications, and latest additions to the library

Web Based Services: The libraries can provide various web based services through its strong Library Website updated with services such as virtual tour, virtual reference desk, ask the librarian, full text article, help desk, lecture notes, electronic announcement, e-Books, digital suggestion box, project reports, frequently asked questions, dissertations, face book etc.

Conclusion:- The best practices will help for improving quality of library services. This will create best image of the library & library profession in the society. The best practices adopted should bridge the gap between library & user for maximum utilization of the resources. The web based services are essential for providing up-to-date information to all users. The development of any new research is based on the timely & accurate information given to the users, so the libraries must follow best practices. Thus undertaking all above best practices by every college Library creates its own image in the mind of students & society. The nature of the students to look Librarian became as not only the Teacher but as Information finder.

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INTERNET AND REFERENCE SERVICE: AN OVERVIEW

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Abstract

The internet is a computer network of networks. Internet means a large number of computers hooked together. The word Internet can also be referred as the 'Net'. Today technology is a very important and useful part of the higher education. The aim of reference service is to establish right contact between a right user and a right document at a right time. Use of the Internet and telecommunications technology is becoming a prevalent aspect of current and existing libraries and reference service.

Keywords – Communication medium, E-Resources, Information Service, Information Technology, Internet, Libraries, Reference Service.

Introduction: Today use of the Internet has changed the fundamental roles, organizational culture of libraries and librarians. The number of full-text databases grew by more than 50 percent every year. The Internet is a big global network of a large variety of computer networks. These networks and computers are connected by communications lines and they communicate by using a common transmission language i.e. the Transmission Control Protocol/Internet Protocol (TCP/IP). The internet has become an integral part of library and information centers that helps in meeting the information requirements of the users in a timely manner.

Internet and its History: Internet as a 'Global Village' means instant communication by a click with any part of the world. Different computer experts have defined Internet differently. The term, Internet comes from a concept called 'Internetworking' that denotes interaction between different networks of computers. We can define the Internet as the worldwide publicly accessible network of interconnected computer networks that transmit data by packet switching using the standard Internet Protocol(IP). It is network of networks that consists of millions of smaller domestic, academic, business and government networks which together carry various information and services. The Internet began in the United States as a military project. In the 1960s, the Advanced Research Projects Agency (ARPA), a division of the U.S. Defense Department, developed the ARPANET. Now, more and more networks have been internetworked within and outside of the U.S. Today the network connects government, research, academic as well as commercial sites in over 100 countries and is widely known as the Internet. Now the Internet has grown to thousands of regional network that can connect millions of users. This global network is not owned by any single individual, company or country. Today, the Internet is a public, cooperative, and self-sustaining facility accessible to hundreds of millions of people worldwide at a time.

Reference Service: According to Ranganathan (1992) "Reference Service is the process of establishing contact between a reader and his documents in a personal way." From the first moment of the reader asking for help to the last moment of his getting all his documents, the librarian will have to be personally administering to the needs of the reader. Therefore, reference service is essentially personal service. "Reference service is the establishing of contact between reader and book by personal service". (Krishan Kumar, 1996). Reference service is "That phase of library work which is directly concerned with assistance to readers in securing information and in using the resources of the library in study and research".

Internet for Reference Service: Reference service is the salesmanship. Use of the Internet and other network resources has changed the traditional functions of library. Previously Internet was used mainly for communications, database searching, and bibliographic access, today the Internet's modalities are changing traditional functions of library professionals such as the information transfer process and the perceived nature of information itself. The highest attitude towards the Internet and the highest use of the Internet were related to the combination of having high levels of knowledge and innovation. (Abbas, 1997). The Internet offers many benefits to its users such as its high speed and low cost. The Internet is a collection of various services and resources. Access to the Internet gives a wide range of topics and media which facilitates different learning styles. Use of computers and the Internet enables learners to become researchers more easily because they can have direct access to data.

Resources available on Internet to provide Reference service: Internet users make use of the network to perform a large variety of activities. Internet will affect the information transfer process, information view of the society and the information professional. Google is the king. Some websites for reference sources are given below.

Biographical Dictionaries: www.biography.com- This is searchable online database of articles about more than 25,000 of the greatest lives, past and present. Search by name or birth date (McDermott, 2008).

Dictionaries: There are number of subject specific and general dictionaries are available on Internet. e.g. Cambridge Dictionary (<http://www.dictionary.cambridge.org>) and The Oxford English Dictionary (www.oed.com)

Directories: Disease Directory e.g. www.medweb.emory.edu/MedWeb/default.htm and <http://healthweb.org/index.cfm> etc. BSNL Online Telephone Directory (www.bsnl.co.in/online directory)

Encyclopedias: Encyclopaedia Britannica online (<http://www.britannica.com>) (<http://www.eb.com>)

Geographical references: Internet contains various sites which provide the Geographical information and maps e.g. (<http://www.maps.com/explore/atlas/>)

Statistical Sources: Some websites provides information about financial data, statistics e.g. Census Information (<http://www.censusindia.com>)

Web News: News portal are a good place for instant overview of the news scene. (McDermott, 2008). <http://cnn.com>; <http://newshub.com>; <http://news.google.com>; <http://news.yahoo.com> etc.

Year Books: The yearbook is an annual publication that provides information about a country or organization. e.g. Statesman's Yearbook (www.statesmansyearbook.com)

Other resources which are useful to solve queries of the readers are

Access to various databases: There are various academic journals databases which are essential reference tools for users for detailed research study into different subject areas, and are grouped into subjects according to the different areas/disciplines. The internet provides access to the large and growing number of databases and information systems. Most of the databases and information systems are provided free of charge. In recent years, however, more and more commercial organizations sell their databases on the Internet for only profit. In Hong Kong, a number of government departments, organizations, hospitals, universities and secondary schools have already made their information available free on the Internet.

Search Engines: Search engines are open access sites and are the most widely used resources for users and the query results for specific types of documents such as documents with .pdf, .ppt, .doc extensions are available.

Electronic Libraries: Electronic Libraries which offer an important advantage in accessing information required from related sites are classified into two different groups such as open or closed access web sites of universities, and other web sites which are completely open through the Internet. The articles in libraries such as Wikipedia, which has become an official research tool can be compared with the information in other resources and this makes it more detailed and reliable (Sahin, Balta & Ercan, 2010). E-mail can also reach a large number of people at the same time through the mailing list system. Librarians have been considered as, "Search Intermediaries" because of the special searching skills (Jange and Sami, 2006). Some sites like **Project Gutenberg** (<http://promo.net/pg/index.html>), (<http://scholar.google.com>) etc. are useful to solve the queries of the readers.

Conclusion: Reference service is an essential service provided by a library. It plays an important role in satisfying the laws of library science. It helps to maximize the use of a library. Role of the reference librarian becomes extremely important. The success of the reference service depends greatly upon the reference librarian. In order to confidently utilize the Internet, librarians will require adequate training, encouragement by the administration, and time to develop their skills. The role of libraries and librarians will continue to evolve. The changing roles of librarians, as facilitated by the use of the Internet, should be of great concern to the profession. The library profession is to embrace these changes and accept a new idea of service. The Internet is a useful source of information and an important means of communication with the world. Thus, Internet and library have become two sides of the same coin as both deal with information, content management and dissemination.

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GOOGLE CLOUD PRINTS AND LIBRARIES

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Abstract

Library is the heart of any Institute. Therefore, updating of the Library is imperative so that it can provide instant and best of the services to their users. It demands that Libraries shall always be ready to adopt new and modern concepts. One of such novel concept is 'Cloud Computing'. Cloud Computing is a method of running application software to store the related data in central computing system and providing its access to consumers or other users through internet. Nowadays a lot of is talked about cloud computing and it is being employed in many new work areas. It is also being utilized in some Libraries but the emphasis of the current paper is not on cloud computing but on cloud printing which is rarely exploited area of the cloud computing concept. In the present paper we have discussed about use of cloud storage for cloud printing, its use in library and the advantage and limitations of cloud printing.

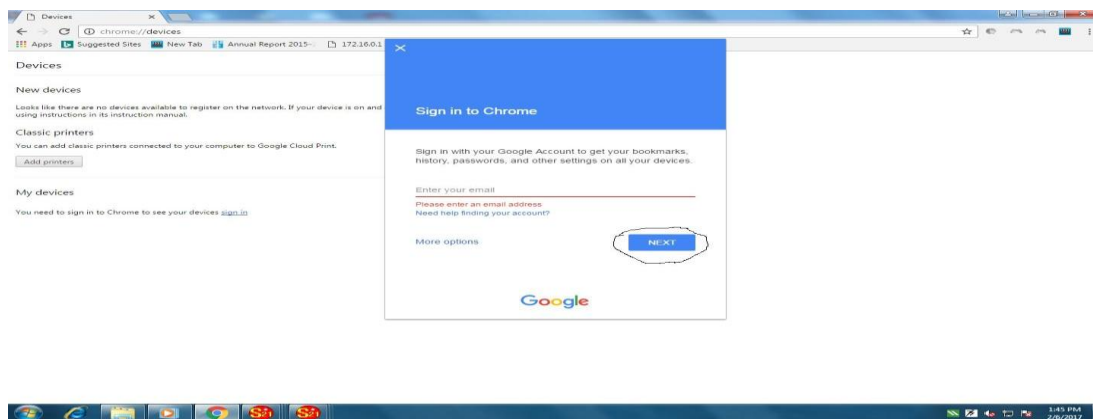
Keyword: Google Cloud Print, Information Technology, Library Services

1.0 Introduction: Google Cloud print is one online service using which reader or library staff may get connected to any of the printer in the library and can have required prints. Today social media is one of the most popular and influential medium and most of the library users are active on this medium (Pawar R. R., Patil V. V and Gautam R. P (2015). Smart phones are the powerful tool for use of social medium (Kumbhar S. S. and Pawar R. R (2014). Many research scholars are also active on social media and transact information using smart phone. They can also store this information in memory device of their phones (Pawar R. R. and Moghe G.(2014), but real trouble arises when they want this information in hard copy form. For having this information in hard copy format, the only option is to transfer the information on desktop and then have print. Transfer of data from phone to desktop can either be done using data cable which may not be available to all users or the information can be emailed to other computer. But the receiver computer shall have internet connection and as well printer to take prints. If it is required frequently then it may take a lot of time and is really troublesome. Cloud printing is the excellent solution for this.

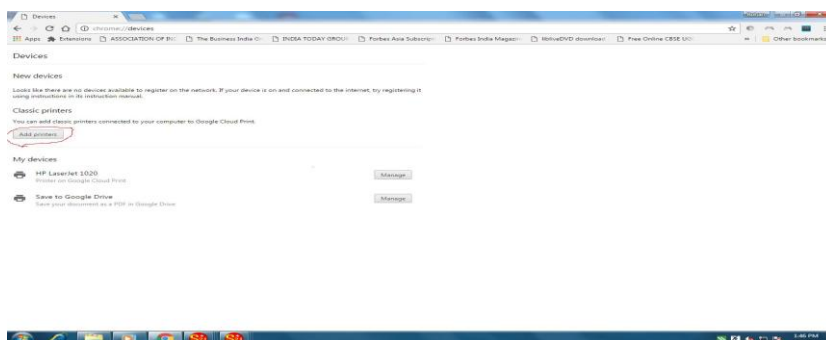
2.0 Google Cloud Print: The Google Cloud print can work with all printers and the only requisites to use the cloud print are that you should have smart phone and PC and printer with internet connection and need to connect printer through your smart phone.

Cloud print is very simple concept which is easy to comprehend and exercise which enables to save your valuable time. The important steps in using cloud print are as follows:

First open chrome browser and go to 'New Tab' and type 'chrome://devices' And then click 'Sign in' option under 'My devices' and register yourself with your Email ID and Password.



- 1) After registering come to previous screen and click add printer and check the appropriate box and OK.



2) Now open the word or PDF file you want to print in your smart phone. Go to file menu and click the print option.



3) You will view the option as Save to Google Drive and also printer you have added to your phone. You can have the print either through Google Drive option or by clicking on direct printer you have added. You need not to connect again and again for this for printing multiple times.



6. After select printer you can adjust the copies, two sided or one sided printing or selected pages etc.



Advantages: There are number of advantages of cloud printing which are as follows: Nowadays smart phones are vastly and regularly used to assimilate the information and cloud printing service could be very convenient to these users.

Limitations: There are a few limitations also for utilizing this concept widely which are as follows: To use cloud print, Google account is essential. Google chrome browser is required. Internet connection is required for PC, smart phone and printer. High speed internet is required for smooth processing. Registering and Login is required in both smart phone and desktop to take print outs.

Conclusions: Google Cloud Print service is very useful and convenient option for printing for all users. The print outs can be taken from anywhere and number of users using only one PC and printer. Only thing required is to register and sign in to enable to take print of data from your smart phones. This is a small but novel concept that is easy to operate and can save a lot of time.

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MARKETING OF LIBRARY AND INFORMATION SCIENCE: PRODUCTS AND SERVICES

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Abstract

Today is determining the needs of Marketing of Library and Information products and services. We wants and demands of the target users through designing and delivering appropriate products and services most effectively for the purpose of achieving organizational objective and goals. This paper deals with the marketing of product and services of library and information science in the global era. The librarians should understand the needs of users, nature of information, the transfer process between Information and user. Understanding of this new dimension of library and information services will help concerned librarian in formulating appropriate plans and programs to make the library and information services most effective, and long sustainable.

Keywords Library services; Information services; Market; Management

Introduction: Marketing of library and information products and services is an area which is now beginning to attract the attention of research scholars, market researchers, and the business people. Marketing in the broadest sense ranks as one of the most popular topics of the day. Marketing basically starts with the market research, identifying the consumer needs and demands, their pricing and promoting them to the appropriate consumers. The main purpose in marketing is attracting and retaining a growing base of satisfied customers. Libraries are relatively new to the marketing area. Marketing of library and information products and services is a new concept in India. It is not too old as a compared to the developed countries also. The above said concept has emerged during the early 1970s. Since then, it has gained much attention in the USA and is considered as most important profession.

Definition of Marketing: "Marketing is a 'social and managerial process by which individuals and groups obtain what they need and want through creating, offering and exchanging products of value with others". -

Philip Kotler

"Marketing is planning that focuses on products, place or mode of delivery, adjustment of cost / price to the market, and promotion to specifically targeted segments of the special librarian's market". - **Zachert & Williams**

➤ Require marketing orientation in library and information services and it will help us in:

1. Management of Libraries: Due to explosion of information at global level because the more information available in the market, therefore management of libraries is necessary to right information needs of the users. The world in which libraries exist has changed dramatically because he uses the new technology. That it is he moves faster relies on technology and competes more intensely.

2. Commitment to User Satisfaction: In the particular of library services area, the user is fund providers, patrons, employees, etc. The satisfaction of the user is of primary concern in the marketing process and the entire era. The library and information center is not profit-oriented organization in the marketing because the library services offered more willingness to user satisfaction will be increased and also result will be increased. Hence, the users have for a direct link to support for the library services.

3. Understanding Users: When we talk about the users, we have some very necessary questions to ask, this questions that affect any and everything else we do. Such questions included: Who are the users? Whom are we trying to serve? What is the interested of area? There is a common understanding that who knows better about the library then he knows better about its resources, services, facilities, and products particularly in the information era. The most important role of marketing in library is to be find information and products for the users. We must always attention of users' requirement and preferences due to need of the information.

4. Welcome Again and Again: The users are come to the library again and again; we should get the smile for a user welcome. The users come again only need of new information and this time the need of users marketing angle a vital role.

5. Libraries need to grow: According to Dr. S. R. Ranganathan 5th law of library science is "Library is a growing organism". Due to the explosion of information in global area, more information available in the market and this information are old very fast. Libraries have faced the continuing challenge of the outcome information. The challenges has par the good marketing efforts take care of all resources it can be done in an efficient way.

6. Improving our Image: A good reputation for the library it may be involve warm and friendly relations with the community, good facilities, high service standard, good discipline, a well-qualified staff and good results. As use such marketing efforts can help us in improving our image through improved the services.

➤ Dr. Ranganathan concept of Marketing of library services through five laws of Library Science

Books are for use : This first law itself promotes that each book accessible in the library is for use. The library book access services are closed access, and then it is a dead investment of the organization. Hence the book access services are open access because every user comes to the every book. Library staff should take plan and attract their users to read more and more books. But while giving more books to the users, they should see how return at that of time. The library staff should tell the users what are the

books available, it should be placed on the prominent place, may be entrance of the library where every user come and see.

Every Reader his book: This second law of library science, here reader of the library is main factor. The library staff must focus to the need of readers' requirement and their satisfaction. It is true that library cannot satisfy each and every reader, however efforts should be taken by the staff to satisfy users' maximum.

Every book its reader: This third law of library science, according to this law that every book which is purchased by library must get reader. To find a reader of every book of library the staff should conduct such programme for the users.

Save the time of a reader: This fourth law of library science, according to this law to save the user time to very important. The library staff should organize the information in such way to search it promptly. Readers should not waste their time in searching the information in the library.

Library is a growing organism: This is fifth law of library science; here more significance is on evolutionary growth of the library. However librarians take care of how library collection grows with qualitatively not in quantity. Today's e-books are more popular and easy to access.

Marketing Strategies of Library Services: Marketing strategy is an internal part of the marketing plan. The strategy necessary includes in Location and Segmentation, Targeting and positioning. The library has many services and product that it can market. Every library needs to identify what it wishes to market and how. In designing the marketing mix and developing the marketing plan, the so-called 7Ps have become to libraries – product, price, place, promotion, participants, physical evidence, and process. According to K Sharma and S Bharadwaj (Sharma & Bharadwaj 2009), 7Ps of Marketing Strategies of libraries are:

Table 1. Seven P's

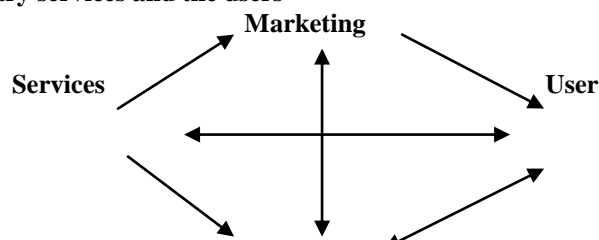
Product:	Product and Services of the general reference and information service department.
Price:	Pricing of use of the library is usually that of the time and effort the user spends travelling to the library, as well as the time and effort spent.
Place:	Place of services, based upon knowledge of the market of library, is essential in order to identify users and their discrete information needs and wants. To expand the service area, the library may have branches, bookmobiles or electronic access.
Promotion:	Promotion includes utilizing persuasive information about general information services, and communicating this information to target market segments that are potential users.
Participants:	All human actors who play a part in reference and information services, delivery, namely the library personnel.
Physical Evidence	The environment in which the reference and information services are delivered that facilitates the performance and communication the service.
Process	The procedures, mechanisms and flow of activities by which the reference and information services are acquired.

Users - Top Priority: The library new users do not know about the rules and regulation of the library, therefore it is duty of Librarian and staff to give orientation for the rule and how to use of the library. We are using to marketing concept and send the services and product to the new user and find the problem of users. This represents the evolution of marketing to the user-driven. We must always remember the following points:

Users are the most important people to be served in library. Users are not dependent on the library; rather the library depends on them. Users are not just from outsiders but part of the library. Users are not just statistics, but also they are human beings. Users are the people who bring their wants and needs and we are there to meet their information needs exceedingly.

Quality Services: The most important of the quality of our services, the ultimate judge of the quality by the user. The users has decided by the quality of our services in the terms of stock size, annual budget, physical facilities, library staff and services. But these are some of the essential criteria for providing quality services; it advantages the service itself that users look for. Quality service in part depends on how well various elements function together in a service system.

Relationships between library services and the users



Quality

These elements include the user who perform the specific service in the service chain, the equipment that supports these performances and the physical environment in which the services are provided. The best achieving services of management concept is termed as Total Quality Management.

Conclusion: Today the modern library is now generally called an information market and the library user is a consumer of information. Information is a vital resource for development and research of any nation. Marketing is essential in making the proper planning, designing and use of such services and products for the better and optimal use of information. The library should give priority to provide excellent user service enhancing its image as information provider in the information era. The library and information services should be user oriented in order to satisfy their information needs effectively. Marketing of library and information services includes user's priorities, responsiveness, expectations, quality of services, individuality, relationship, professional skills and competencies, value-added services, etc. The ultimate aim of marketing here is to provide the right information to the right user at the right time.

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APPLICATIONS OF MODERN TECHNOLOGY IN LIBRARY SERVICES - QR CODE

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Abstract

This deals with the use of QR codes, especially in Libraries. For that purpose, I generate some QR Codes & submit it amongst students & check how it is useful for students. In present paper, process of generating QR codes is also given. Also explain Number of its applications in all fields.

Introduction -.The full form of QR code is Quick Response code. The QR code technology is just like the barcode technology. The differences between barcode technology and QR code technology is that barcode technology can handle the information only in horizontal direction and QR code technology can handle the information in both horizontal and vertical direction. QR code technology is widely used as a medium to deliver a message to end users. The QR codes are mainly used by libraries for the purpose of promoting their services. Nowadays the QR code technology is widely used by many libraries for providing quickly access to their resources.

Keywords - QR Code, QR Code Reader, Barcode Technology

About QR Code - QR code stands for Quick Response code. It is a two-dimensional bar code and can easily read by QR code reader software. It was first introduced in the year 1994 by the Denson Wave- Toyota Motors subsidiary. QR code can be read through device which has the QR code reader facilities like the mobile phone

• Process of generating QR codes: The process of generating QR Codes is very simple. There are many QR code generators easily available on the web.

Steps for generating QR code for any document

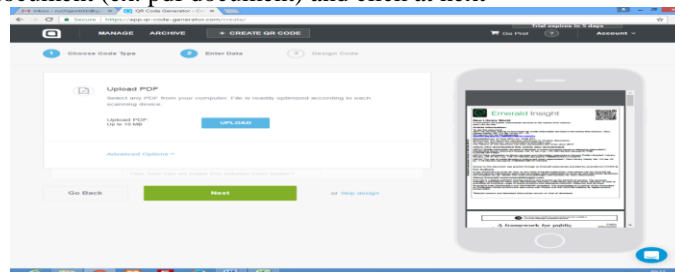
First one needs to select QR code generator webs



Need to select one of the desired navigation tools (like PDF, URL, images, text, MP3 etc.)



Uploading the desired document (ex. pdf document) and click at next



Click at done





Now file is ready to download and save



T. Y. B. Sc Phy. Chem., Math Syllabus Syllabus M. Sc Chemistry Question Papers of M. Sc Chemistry
Job Oriented & News Papers

Benefits of QR Code : • It is available for free, one can create the QR code using free software • It is very fast to access the information embedded with the code • Easy to read the QR code • The nature of QR code is versatility
Limitations of QR Code

• Lack of familiarity among people and users
240 Applications of Modern Tools and Technology in Library Services • Need of scanning device. If you want to access the information in the QR code, you should have a device that supports the QR code scanning facility • It takes time to scan the code embedded in the QR code • You need a QR code reader software

Conclusion- Libraries are known as a treasure house of knowledge by having its high quality and rich information resources which are freely provided for academic user community. With the increase use of mobile technology, library shall implement mobile based QR code technology to connect user community with information resources. This technology reflects greater impact on academic community. Now QR codes have appeared in magazines, newspapers, branded products ,wrappers of different food products ,cashless shopping, retail stores and several other places. If there is availability of QR codes in libraries , students can easily access it ,scan it ,read it . Hence QR codes also being very useful for libraries, to enhance its collection.

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ROLE OF LIBRARIANS IN THE E-GOVERNANCE ERA

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Abstract

Rapid developments of Information and Communication Technology (ICT) have changed the traditional concept of library development across the globe. Modern libraries are more dynamic and reach their users without any geographical barriers. In this Internet era, libraries are fast moving towards digital mode and are accessed universally. With the advent of WWW, e-libraries are redesigning their services to borderless world and are becoming lifeline of the scholarly community. They are no longer information dominant and a huge number of information can be exchanged through some new types of academic exchange models and network exchange platforms. It can be Open Access, Wikipedia, Weblog, and Institutional Repositories. These models play an active role in electronic data exchange system. It facilitates to link users by providing knowledge, technology and research. In brief, digital libraries promote interaction and improve knowledge sector globally.

Keywords: librarian's role in e-governance era, e-governance, distant learning, open access

1. INTRODUCTION: The Internet has dramatically changed the way to disseminate information among wider scholarly community faster than ever before. Digital repositories fill the knowledge thrust regardless of social class or ethnic background. It facilitates an economical opportunity for scholarly communication. By providing e-learning facilities among users that gives better solution for the users. E- Libraries have taken steps to convert their physical collection to e- repository for better service. Innovative, high-quality, internationally respected research is available via digital repositories. Scholars are knowledge creators and actively contribute their research outcome to the society through e-libraries and at the same time access their scholarly literature.

2. Librarian's Role In The E-Governance Era Change is a fact of life in all professions. Librarian's role too changes dramatically in this electronic era by providing user education to information literacy. Librarians need to obtain new skills, technology while improving existing skills. This paper has discussed the reasons behind the change and what skills that librarians need to have to fulfill the current role in the e-governance era.

2.1 What does it make a Librarian's Role Significant Today? Librarians act as a bridge between user and the repository. The advent of WWW has enabled librarians to change their role to an entirely digital mode that beat many of the challenges created by space, time, and geographical distance. Librarians support their users to access any information, any where at any time without walls. Their role has changed from traditional information tools such as books, journals to e-books, e-journals, e-data bases and virtual trainings. Continuous learning and resource sharing has become a major role of librarian's today.

E-Governance

3.1 Definitions: The Application of information technology (IT) to the process of government function to bring about simple, moral, accountable, responsive, and transparent (SMART) governance that works better, costs less and capable of fulfilling the dreams of the citizens never before (Majumdar, 2005). Majumdar indicates that IT application makes better environment for their citizens. E-Government is the use of information and communication technologies (ICTs) to improve the activities of public sector organizations (Heeks, 2002). Libraries need not appear as excess packages to governments in an e-government partnership. Libraries have well-trained information professionals and increasingly ICT-literate staff who can work with government to create content and provide information services to the population (Mutula, 2005).

3.3 Features of e-Governance: e-Administration: improving government processes by cutting costs, managing performance, making strategic connections within government, and creating empowerment e-Citizens and e-Services: connecting citizens to government by talking to citizens and supporting accountability, listening to citizens and supporting democracy, and improving public services.

E-Society: building interactions beyond the boundaries of government by working better with business, developing communities, building government partnerships, and building civil society

4. Distant Learning: With the application of ICT in libraries, access to information has become more dynamic for the scholars who need to gain specialized knowledge. Modern ICT tools has changed traditional teaching methods and made distance learning education more effective and efficient by providing multimedia data repositories which can serve as continuously changing up-to-date information. ICT facilitates closer cooperation among libraries and distant learning communities. Therefore, it improves quality of people's life providing easy access to range of information which need for their day to day lives. This range of information can be produced by the entertainment industries such as TV, music, films/movies etc. ICT in libraries has become more effective tool into the dissemination of information to the rural communities in the developing countries.

5. E-Learning: The Internet has dramatically changed the history providing e-learning for the scholarly brains, reaching unreachable breaking the walls. It has become a new way to disseminate information among wider scholarly community faster than ever before. E-learning fill the knowledge thrust regardless of social class or ethnic background. It facilitates an economical opportunity for scholarly communication without any geographical barrier. E-learning gives better solutions for the users, focusing on distant education.

5.1 Challenges for e-Learning: Users face many challenges when accessing e-society information through WWW. Those are namely information overload, poor web site design, misinformation and budgetary

constraints. At this point, user's need librarians help to overcome this situation. Librarians are more efficient to do the deep web searches to fulfill their user needs.

5.2 Benefits of e-Learning: For learners, e-learning knows no time zones, and location and distance are not an issue; In asynchronous e-learning, students can access the online materials at any time; Synchronous e-learning allows for real time interaction between students and instructors; E-learners can use the internet to access up-to-date and relevant learning materials, and can communicate with experts in the field in which they are studying; Situated learning is facilitated, since learners can complete online courses while working on the job or in their own space, and can contextualize the learning; Online materials can be updated as per the needs of the learners, and learners are able to see the changes at once, and; When learners are able to access materials on the internet, it is easier for instructors to direct them to appropriate information based on their needs (Sharifabadi, 2006). Sharifabadi clearly described the benefits of the e-learning by providing facts for the effective communication and learning beyond the old method of learning system.

6. OPEN ACCESS: Internet is bridging the knowledge gap between information rich and poor. Financially wealthy libraries always purchase significant number of knowledge databases, journals, books etc both online and offline for their customers than poor libraries. Open access helps to distribute available resources freely. This facility is a greater benefit to the developing country sector where scholars/students couldn't access available information due to financial constraints. Open access system facilitates free access of information globally without any geographical barrier. Existing copyright laws, a lack of access to Internet based knowledge, lack of proper support from relevant authorities can be mentioned as few prevailing restrictions to access knowledge in developing countries. A major constraint is lack of awareness on current literature. An ocean of information is produced by universities, research institutes, learning academies such as journals, books, theses and dissertations, working papers etc. This literature can be defined as grey literature and most of the time poorly organized or indexed and not on electronic form. Therefore it is very important to introduce open access policies in universities and other academic institutions in developing countries to make use of their research output. Open access to knowledge has given birth to e-learning.

7. E-Libraries/E-Librarians in Global Context: ICT has given global power for communication and sharing for librarians as well as libraries. It covers whole planet earth facilitating satellite communication, connecting maritime cables across major oceans, mobile phone networks, terrestrial networks, Infra-red connections etc. ICT reduces the digital divide between the information rich and the information poor. The emerging new technologies have revolutionized the methods of information storage and retrieval in the library field. In this ICT era more and more libraries in the world make use of these new technologies for storage, retrieval and dissemination of information in more effective way.

8. Web 2.0 Applications: Web 2.0 is described as second generation of World Wide Web (WWW) which facilitates online collaboration and sharing among users by way of social networking, wikis, instant messaging and social tagging etc. Web 2.0 is called 'Warm Web' as it provides interactive dialogues such as instant messaging, streaming media, blogs, news feeds, tagging, social networking services (Facebook, My Space, LinkedIn) etc. It is clear that Web 2.0 has been used for educational and expansion of library services, Library web sites have become more flexible and adaptable by introducing Web 2.0 features. It allows librarians and users to understand their changing roles with the new technologies.

9. Usage Of Mobile And Handheld Devices For Information Access: Usage of mobile phones, voice, SMS, and chat (Yahoo messenger, Skype, Google talk etc) have become more popular among community as it offers easy accessibility. The challenge facing on SMS is that it carries a limited amount of information as well as users need basic level of literacy to understand these messages. The web has become most dynamic information delivery method to the users as it delivers information according to their needs. But the users need to have the IT knowledge to get optimum use of the web. Mobile and handheld devices are developed within every citizen in this electronic era. This has done providing free trainings, opening multimedia training centers, and ICT access points, ICT courses in universities etc. There is a greater development in each sector such as e-banking, e-governance, e-libraries, e-marketing, E-commerce, e-business and e- medicine (channeling services), e-agriculture in developing countries with the emergence of WWW. Technology transfer of above sectors brought new life especially to the communities. Telephone based information delivery services used to improve the life style of rural communities in developing countries.

10. Conclusion: In this modern electronic era, librarians are rapidly adopting new technologies to access and distribution of information globally. Libraries are known as gate way to the knowledge and digitization of entire knowledge which make it open to the globe without any geographical barrier, paving the way for e-governance. Mr. Sam Pitroda, Chairman, National Knowledge Commission (NKC), India said, e-governance was not about computerizing existing processes.

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APPLICATION OF WEB 3.0**Dr. Ravindra Pandurang. Adav**, *Librarian the New College, Kolhapur***Abstract**

The present paper review of the application of Web 3.0. It highlights the evolution of different phases of Web 3.0 application. This papers various tools, features, pros and cons of Web 2.0 are elaborated. Particularly, technologies of Web 3.0 like its need, fundamentals, structure, objectives, components, advantages and benefits are mentioned. Web 1.0 sites are driven and the user has no way to increase their involvement or interact with the interface. Web 2.0 sites allow for user interaction and participation by having a user-friendly interface where one can edit and publish the existing information. The term Web 3.0 describes sites where computers will be generating raw data on their own. A comparative study of the each stage of Web is done.

Keywords: Web 2.0, Web 3.0, Technologies

INTRODUCTION: We Ever since the invention of Web by Tim-Berners Lee in the year 1989, it has rapidly expanded and evolved indifferent phases, namely, Web 1.0, Web 2.0 and Web 3.0. The transition from Web 1.0 to Web 2.0 was a significant phase in terms of information because Web 1.0 is all about one-way information, while Web 2.0 is a two-way model. The advent of various networking sites, such as Blogger, Twitter and Face book, during the phase of Web 2.0, has revolutionized the way in which the information can be shared and collaborated among multiple users. The next generation Web, known as Web 3.0, is the combination of the features of both the phases and contains a few more features. This article discusses the evolution of different phases of Web, in general, and Web 2.0 and Web 3.0 and its technologies, in particular.

WEB 2.0: The transition of Web1.0 to Web 2.0 is experienced due to rapid speed of the information technology. Web 2.0 is the interactive version of web-based communities and social networking websites such as Face book, Orkut, LinkedIn, etc. It also included video sharing, wikis, blogs, mashups, etc. The second generation of web is commonly referred as Web 2.0. The examples of Web 2.0 include web-based communities, hosted services, web applications, social networking sites, video sharing sites, wikis, blogs, mashups, and folksonomies.

Tools of web 2.0 The following important and most popular communities are:

Social Networks

Application of web 2.0 and web 3.0 *Face book and Orkut* These are general social networking website where people just interact with friends, relatives, teachers and mentors too. There are many such SNS available. *LinkedIn, Apna Circle, Eacademy, etc.* These are professional SNS, especially for business and professional purposes.

Twitter The most popular websites, most of the celebrities and business leaders tweet on this. This is micro blogging and short update website. **Blogs** Generally, blog is type of website maintained by an individual, wherein an individual can share thoughts, photos and videos about events and some cases where other people can comment on it. **Micro Blogging** These are SNS wherein the user can write short thoughts about 140 words and other people can follow the blogs. Twitter is most popular micro blogging SNS. It got immense popularity due to events like 26/11 terrorist stack on Mumbai.

RSS and Aggregators RSS means – Really Simple Syndication. It is a family of web feed formats used to publish frequently updated works – such as blog entries, news headlines, audio, and video – in a standardized format. With this small RSS, the person can have updated real-time information.

Video Sharing YouTube is again the most popular website wherein people can share video, download videos and comment on them. People share knowledge and experience via YouTube.

Photo Sharing Flickr is a website that is popular for photo sharing service and also to comment on photos.

Wiki Wiki is a website that allows the easy creation and editing of any number of interlinked web pages via a web browser using a simplified markup language. They are typically powered by wiki software and are often used to create collaborative websites, to power community websites, for personal note taking, in corporate intranets, and in knowledge management systems. Wiki can use as a dictionary, knowledge bank, etc.

Features of web 2.0 Users can modify the available content. Using Web pages to link different users. Content can be shared more efficiently. Information can be obtained by subscribing to a Web pages's RSS. Apart from this, the subscriber can receive updates on any development in the Web page as long as there is access to the Internet. It allows one to access Internet through not only the computer but also mobiles, television, etc.

Pros and Cons of Web 2.0 Web 2.0 is highly interactive and lot of Gen X and Y are getting well-versed with it. Using Web 2.0 has many advantages as well as many disadvantages.

Some Pros It helps in faster and interactive communication. Thousands of Gen Y are getting attracted towards SNS as it is the need of the hour to stay fresh in corporate interaction. Individual's identity and credibility can be checked on SNS.

Employers are getting potential talent from SNS with very small investment.

Some Cons Safety of the data on web is the biggest problem as hackers are breaking into legitimate accounts on social networking sites. Credibility of information on the websites is still questionable. Web 2.0 is one of waste of time as it is distracting employees and killing productivity.

DEFINITION OF WEB 3.0: Nova Spivack, CEO of Radar Networks, one of the leading voices of the new age Internet, defines Web 3.0 as the third decade of the Web (2010-2020) during which there would be several major complementary technology trends which will each reach a new level of maturity simultaneously. In other words, it can be explained as third-generation of the Web which is enabled by a combination of various emerging technologies like: Transformation of the Web from a network of separate applications and content repositories to a seamless and interoperable one.

Need for web 3.0: When we browse the Web for some information, it first displays links of some websites, which may or may not be apt for us. One has to try using various combinations of keywords to get the relevant information. The Web only scans for the keywords specified by the user. Therefore, it is very important to have a platform that reduces the time spent in searching the solutions and help us to arrive at a better solution. In Web 2.0, the answers are displayed in all the contexts, except the actual one which the user is searching. This difficulty can be overcome in Web 3.0 as it helps the user to arrive at the answer which he wants. Web 3.0 is an answer to the problems mentioned above. The whole process of search is expected to change once Web 3.0 is brought in to the picture.

Benefits of Web 3.0? A huge benefit of Web 3.0 is the move towards being able to access data from anywhere. This is mainly being driven by the heavy usage of smart phones and cloud applications. The idea here is to make sure that the user can access as much data as possible from anywhere, not just their home. Technology is trying to expand this idea in ways that allow TV's to pick up on user data, and allowing smart phones to access data on your computer. For designers like me who typically forget their jump drives, this is an amazing and useful advancement!

Fundamentals of web 3.0: Some experts say that Web 3.0 is like a personal assistant which has information about practically everything. This is the reason that it is also called a 'giant database'. In Web 2.0, the Internet has been used as a means for providing connection between people while in Web 3.0; it is used to make connections with information. This can be better explained with the following example. If one wishes to go on a vacation with an estimated budget of \$3,000, by using the current Web technologies, one has to browse through some sites to get the required information about the expenses to be incurred on travel package, place of stay, sightseeing, etc.

Structure of web 3.0: Web 3.0 has a totally different structure when compared to the earlier versions of the Web. The basic structure is characterized by semiotics and semantics. Semantics refers to the study of meaning in communication, whereas, semiotics is the study of sign processes (semiosis), or signification and communication, signs and symbols, both individually and grouped into sign systems. It includes the study of how a meaning is constructed and understood. **Objectives of web 3.0** The following are the basic objectives of Web 3.0: To provide a ubiquitous Web which facilitates accessibility of the net to anywhere and anytime with the available device. **Components of web 3.0:** Web 3.0 comprises two main platforms: Semantic technologies and social computing environment. Web 3.0 adopts the semantic technologies and open standards which can be applied to the current Web. The main focus of social computing environment is on human-machine synergy which is required in organizing a large number of social Web communities.

Advantages of web 3.0: Improves Data Management: Management of data in websites is a complex process, as combining data from various structures requires knowledge of many applications and, in some cases, the computer may or may not be able to understand some data. In such cases, it becomes very difficult to link data for obtaining the required input. This problem can be resolved to some extent with the adoption of semantic Web because it first describes the relationship between different sets of data which makes it easier for the computer to understand the relationship and integrates them easily for obtaining the desired output. **Web 3.0 supports accessibility of Mobile Internet:** Globally, the number of subscribers for mobile devices was likely to touch four billion by the end of 2008. The global mobile penetration rate was expected to touch 50% during the same period. However, with the advent of 3G technologies, which facilitates easy access of Internet in the mobile devices, this figure is likely to touch the rate of 60%. Hence, the demand is likely to be increased for Web 3.0 because of its superior quality. It is expected to play a very important role in enhancing the accessibility of the Internet through mobile devices. Web 3.0 is based on Cascading Style Sheet (CSS) Standard, which helps in reducing the size of the page to less than 20kb. **Web 3.0 Stimulates Creativity and Innovation:** The main point in Web 3.0 is the flexibility of linking different databases. The information and knowledge datasets can be utilized equally by the systems, as well as human beings, thereby enhancing their efficiency. This encourages innovation processes which, in turn, help in the generation of ideas and also in R&D to create a new model. **Web 3.0 Encourages Factor of Globalization Phenomena:** Web 3.0 aims at building and standardizing various data structures through a common programming language known as Resource Description Framework (RDF). This is the standard model for exchanging data on the Web. RDF is written in XML, which facilitates easy exchange of information among different systems. This breaks the barriers bandwidth, poor display of Web on mobile devices, etc. **Web 3.0 Enhances Customers' Satisfaction:** With the help of 'Artificial Intelligence', Web 3.0 helps the organization to improve the level of their customers' satisfaction in terms of Customer Relationship Management (CRM). Through this, customers can have access to entire information

about the product that is being offered by the company on its Web page. This improves the company's image in the market and as a result, more customers can be attracted. **Web 3.0 Helps to Organize Collaboration in Social Web:** Nowadays, most people have registered themselves with the various social networking sites. Many Weblogs have emerged as a part of these sites. By Web 3.0, the information available can be linked through RDF. This process helps in creating a list of conversations across blogs and mailing lists. With Web 3.0, the users can experience a totally novel form of Internet because it can be accessed on different devices. It also offers a rich application tier with more logic. **Web 3.0 Technologies:** In today's Internet dominated world, every business organization has recognized the need for having an effective Web 3.0 site. In the present always-on world, a company's website plays a very critical role in competing with others and in attaining success. The following are some of the technologies employed in Web 3.0: Artificial Intelligence. Automated reasoning. Cognitive architecture. Composite applications. Distributed computing. Knowledge representation. **Figure 2: Comparison between web 1.0, 2.0 and 3.0**

CONCLUSION: Ever since the invention of Web in 1989 by Tim Berners-Lee it continued to develop and Web 3.0 is useful. Web 3.0 is very helpful for employees in organizations to learn, interact and communication fast. The tools allow people to chat online, share thoughts using blogs and also to share videos. The main purpose of Web 3.0 is to extend the ability of application to maximize the benefits obtained from resources available from WWW community with the help of linked data, devices and people across the Web. In a Web 3.0 world, the Internet will be totally different to the users as the content and applications can easily accessed at their, thus breaking away from the traditional format. .

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APPLICATIONS OF INFORMATION TECHNOLOGY AND ITS USAGE IN LIBRARIES

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Abstract

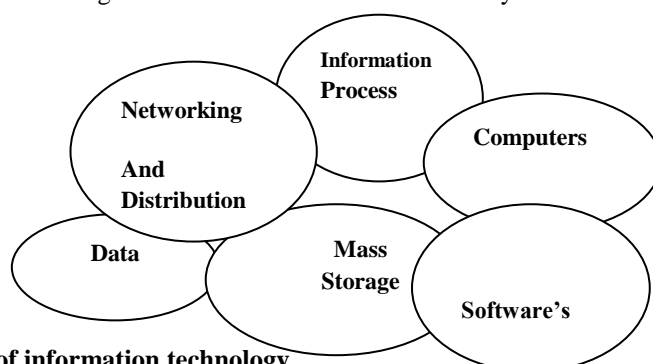
Information Technology (IT) has its impact on almost all the disciplines, especially computer and telecommunication technology have highly revolutionized in the field of Library and Information Science. It provides several new materials, media and modes of storing and communicating the information. Electronic Libraries (Digital Libraries) reduces the dredger of repeated manual efforts in library routine. By use of digital users can access information irrespective of time and location of the information source. The cost and lack of enough training are the main problems faced by the library professionals to use of IT in libraries.

Introduction: Information is an indispensable for human development as air is essential for survival of all living organism on earth, including human beings. The pace of change brought by new information technologies has a key effect on the way people live, work and play worldwide. The increasing role played by information technology in the development of library services for an active reaction to the challenges of the information service providing. The paper attempts to discuss the fast development of information technology and its application in the library services. Information Technology enabled services fulfill the information needs of the users at the right time in the right place to the right person.

Information: Information is regarded as an important resource for all human activities. The right information from the right source, to the right user at right time is everybody's right. Information is the product of human brain an action. The simple meaning of information is – knowledge, intelligence, facts or data, which can be used, transferred or communicated. Information is the result of experience, observation, interaction and reading. Thus, the information created should be made available to the users. Therefore, there is a need to provide the information to required users at appropriate time. The information requirements of users depend on social, economic, political, scientific, technological and psychological changes appearing in the society from time to time. Therefore the information professionals are required to develop skills in organizing and arranging the information and provide the same to the needy users. Information is universal it is known to all men in all languages, there may or may not be precise or apt word in a language to describe the term 'information' but surely it is there. We receive the information throughout the day. According to Shannon and Weaver 'Information is any stimulus that reduces uncertainty', another definition by Ching-Chin Chen and Peter Hermon defines information as 'all knowledge's, ideas, facts, data and imaginative works of mind which are communicated formally and or informally in any format'

3. Information Technology: According to the Webster's New Encyclopedia, 'Information Technology is the collective term for various technologies involved in the processing and transmission of information they include computing, telecommunications and microelectronics'. According to ALA Glossary 'Information Technology as the application of computers and technologies to the acquisition, organization, storage, retrieval and dissemination of information'.

3.1 Components of Information Technology Technological change is becoming deriving force in our society. Information technology is a generic term used for a group of technologies. Following are the major components of information technologies as most relevant in modern library and information system.

**Components of information technology**

4. Applications of Information Technology in Libraries Accessioning, classifying, cataloguing are some of the back office activities in the library. Some of these activities have undergone computers because of application of information technology.**4.1 Book Selection:** Various vendors list may be in database form. Book waiting for selection can also be in a computer database. A list of books under selection can be generated and circulated among selection committee members by e-mail their web-site. Selected books can be accessioned.**4.2 Classification:** In this activity classification scheduled are available on CD-ROM. Some software can be generated which help on screen classification. Such software can even be saddled with artificial intelligence.

4.3 Cataloguing: Authority control tools can be used for cataloguing. In its new form a library can use the Internet to transmit newly catalogued bibliographic records to some agency specialized in authority control that can process the records through its system. **4.4 Book Search, Issuing and Reservation:** Request for a book can

be checked for availability on the shelf. When the book is available, the same can be issued to the reader. If not available then it may be reserved. The book can be issued electronically by making use of bar code strip pasted externally on the book. **4.5 Serial Control:** List of serials can be maintained as a database, subscription renewal, and complaint against non-receipt of periodicals, to check availability of back volumes. **4.6 OPAC and web-OPAC:** Online Public Access Catalogue is developed to meet of the library users. In a simple term, it is the Machine readable catalogue in place of card catalogue. Users will have the facility to access the library house-keeping operations especially circulation facility and it will also facility the user to directly access the Machine readable bibliographic database of the library. Web-OPAC is the new OPAC serving as a gateway to the resources not only held the respective library but also to the holdings of other participating libraries without limiting to local collection but going beyond further to regional, national and international levels. **4.7 Metadata:** The term metadata means 'data about data' i.e. a set of information which remains in some intentional, hierarchical relationship with another set of information. So it is a summary of data about some other data. Another concept is that it is machine understandable information for the web. **4.8 Library Networking:** Library networking means a group of libraries and information centers are interconnected for some common pattern or design for information exchange and communication with a view to improve efficiency. It is possible through use of information Technology. **4.9 Digital Libraries:** In the present age of technological advancements, digital libraries offer a solution to three most fearsome challenges facing traditional, academic libraries today viz., economical survival, shortage of space and management of materials. They further open up vast new range of possibilities for information sharing and quick distribution. **4.10 RFID:** Radio Frequency Identification (RFID) is the technology that is stated to replace barcodes in library applications. It is form of identification that is contact-less and does not require line of sight. The technology, though new to libraries, has been in use in other sectors for more than 2 decades. The RFID tags are placed in books and generally covered with a property sticker. Antennas of different sizes, based on application, are used to read the tags and manage the various library functions. The RFID solution is a revolutionary application of Automatic Identification and Data Capture (AIDC) technology.. **4.11 Audio-Video Technology:** It including photography, microfilms, microfiches, audio and tapes, optical disk etc **4.12 Institutional Repositories:** Institutional Repositories (IR) are publications that originate locally from within the university community such as theses, dissertations, reports, conference papers and seminar papers. ICT has made it possible not only to provide better access to these resources but also to ensure the preservation of the resources.

55. Role of Libraries: In the modern knowledge society libraries have a new role and there are various types of library models. In the modern society, where the use of electronic services a d web based information sources constantly increases, libraries are managed in a more democratic way, have more flexible communication system and work organization and their service development is based on the quality and user-orientation of services. In the modern knowledge society libraries have a new role and there are various types of library models. There are as follows:

- ⇒ **Traditional library as a memory institution**
- ⇒ **Library as a learning and research centre**
- ⇒ **Library as a cultural and communication centre**
- ⇒ **Electronic library**
- ⇒ **Digital library**
- ⇒ **Virtual library as library without walls**

Libraries had been performed many important roles in the past agrarian and industrial societies. But those roles were limited in scope. In the 21st century, libraries have to perform pivotal roles in disseminating and sharing the culture of knowledge. IN this age of knowledge libraries should be repositories of all of the knowledge and information accumulated by human kind. They will have to store all kinds and forms of material and information and disseminate beyond the geographical boundaries. Today's advanced technology is enabling libraries to accomplish this immense task. The modern libraries certainly cannot be passive repository for books and other printed material.

6. Conclusion: In adopting IT or ICT in libraries they overcome several problems. But the use of IT is inevitable so as to keep abreast of latest developments. Society has positive response if the libraries provide user services in a most convenient way. Coping with the technology is going to remain a continuous challenge. Fruitful results can be obtained as when we make best use of developed technologies.

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BEST PRACTICES AND ACADEMIC LIBRARY SERVICES

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Abstract

Information and communication Technologies (ICT) played an effective role in functioning of academic libraries and imparting education through various ways to its users. The developments in ICT have changed the user's expectations from the academic libraries in different ways. In modern era with the help of ICT libraries are trying to satisfy their user's expectations. To meet the end users demands effectively, the academic libraries need to identify and adopt good practices and benchmarks. Librarians are using their innovative ideas to attract the library user and to convert non user to user and users to active users.

Introduction: Information and communication technology has become an integral part of education system in India. The transformation of education sector is not possible without the use of ICT. Today's educational concept is appearing various types of resources are made available, relationship between learners and educators are emerging. Every college must have a good library and it occupies a prominent position in the college campus. The advanced technology has greatly revolutionized the field of library and information services. In the present electronic information era, the role of the library professional has to meet the demands of both the technology and information revolution. The library has a considerable share in acquisition, processing, organization and dissemination of knowledge. The technological advancement has great potential in increasing the efficiency of internet has changed the role of libraries. It reduces the routine work of the library in retrieving and dissemination the information. Today's libraries have to offer multiple services and change their roles keeping in view the fast growing information user expectation and demands. Academic libraries are also using modern ICTs to automate their core functions, implement, effective library cooperation, resource sharing network and developed institutional repository.

What is Best Practice: Best practice is a form of program evaluation in public policy. While some research and evidence must go into determining a practice the "best" it is more helpful to simply determine if a practice has worked exceptionally well and why. Instead of it being "the best", a practice might simply be a smart practice, a good practice, or a promising practice. This allows for a mix and match approach for making recommendations that might encompass pieces of many good practices. Best practices are used to maintain quality as an alternative to mandatory legislated standards and can be based on self assessment or benchmarking.

Definition: Oxford Advanced Learners dictionary describes best practices as.-The quality of high standard, excellence highly improved outstanding par excellence series. It means way of doing something that is usual or expected way in particular organization or situation guidelines for good practices. The ODLIS (online dictionary of library and information science) describes best practice as follows.- Best practices depend on many factors such as institutional goals, pedagogic requirements, global concerns, local contexts, nature of learners, competencies of staff and infrastructural facilities.

Role of College Libraries: The college libraries as an effective instrument for the improvement of educational standards will able to make its presence feel and to an extent its influence on the academic community academic libraries play indispensable role in the dissemination of information of knowledge. The college library is open to the members of faculty, students and researcher's .

Impact of ICT in library services: Library is a store house of knowledge and with advent of ICT information explosion the concept of library has been changed. ICT is the collective term for the carious technologies involved in the processing and dissemination of information. Internet and web technology plays a vital role in library related activities for acquisition ,cataloguing ,classification, circulation ,serial control and resource sharing .A document or message sent through electronic system may contain text images, graphics and other type of information resources.

Goals and Objectives of the Best practices: Technological developments have important implications for libraries .The main objectives are as follows.Provide a suitable atmosphere for reading and searching.Feasibility of information technology implementation in libraries.Creating awareness about library resources and facilities.

National Assessment and Accreditation Council (NAAC) and Best Practice: National Assessment and Accreditation Council (NAAC) is an autonomous institution established by the university Grants Commission of India, to assess and accredit institutions of higher of higher education in the country. The NAAC was established in 1994 with its headquarters at Bangalore.The NAAC has circulated the guidelines for expanding the scope of ICT in university and college libraries. To some of the best practices that can be enhance the academic information environment and usability for college libraries are as follows.Using self developed integrated library software with all modules.Complete computerization of in house services.Internet access facilities.Information literacy program.Organizing book talks.Displaying news paper clippings on the library notice board.

Career /employment information services.

Library and information on college prospectus: Every academic year, the college gives all information about library in the prospects. It includes the information about library membership, working hours, rules, staff,

collections, e- resources, facilities and detailed information about various sections and types of library services. New enrolled students are benefited by getting information of library.

User orientation Program: In the beginning of every academic year, the library organizes user orientation program for the students. The aim of this program is to make students familiar with various sections of the library, rules, the procedure of issuing, returning books, books in racks, reading room facility, periodicals, internet facility, use of online, journal database and other non print resources. Orientation program enables the user to make effective use of library resources.

Book display program: Book display program is the best activity of library which helps and provide and opportunity of users to know the various types of information resources available on a particular aspect in a library.

Book Bank Scheme: The library provides book bank facility to the needy students. The rules and more information about the scheme are displayed on notice board.

Reprography Facility: Reprography facility is available for all types of users i.e. UG and PG student's faculty member's research scholars as well as to the visitors.

Organizing book exhibition: Library organizes book exhibition from time to time. The main aim of the exhibition is to cultivate reading habits. Reputed publishers and book sellers are invited to display recently published books on these occasions.

Counseling centre regarding competitive examination:- Library is a soul of every educational institute; users are also main part of library users come to library for searching information regarding their career or educational development. Today competition is going on top level, students must be aware of this situation. In this context library and librarian play an important role to solve problems.

Best user award: Best user award is given to the students whose library maximum time. Best user is identified from the data collected through the attendance register and continuous observation of the librarian. **OPAC:** The online public access catalogue (OPAC) is made available to the readers, details of books such as title, author, publisher, accession no. , subject, series, etc.

Information Literacy Program: Information Literacy Program to promote information literacy among the all community. Training in locating documents using OPAC. Users made to familiarized with software and downloading printing records from the internet.

Conclusion: The best practices will help for improving quality of library services. This will create best images of the library and library profession in the society. The best practices should bridge the gap between library and user for maximum utilization of the resources. In this electronic age , users expect quality services form the library is a potential independent force for achieving academic excellence. **References**

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ELECTRONIC RESOURCES BUILD TODAY'S LIBRARIES

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Abstract

Libraries of modern era use ICT, Web Resources, Electronic Collection, Online information for their Users and enabled as hub of modern resource . Present Paper indicates information of various Electronic resources, services for users, various benefits and various types.

Keywords: *Electronic resources, ICT, E-learning, Digital library, academic Libraries, Hybrid Libraries.*

Introduction: The Words like ICT, Internet, World Wide Web etc. has effected all sector of human life. It may personal life, social life, educational life etc. In easy word we can say present world is of E-environment Digital, Electronic and Web based is common word used by majority of authors and it is called an organized collection of online or digital information on specific subject area of universe Knowledge. This smart technology gives opportunities in our field of Library and Information Science. It enables us (library professional) to give more updated information to our library users. The E-resource or web based resources can be used any time and at any place with most people utilizing user friendly devices like smart Phones and tablets. It not only reduces size of libraries but also develop rich storage of information. The government has taken various polices to introduce e-information services like National Knowledge Network (NKN), Digital India, Knowledge related institution in the country. National Program on Technology Enhanced Learning (NETEL), e-pathshala, Info port for a subject gateway for Indian Electronic –Resources, e-content in 71 Subjects at postgraduate level multimedia e-learning platform, E-Kalp (a Project on creating digital –learning environment etc.The creation digital infrastructure, delivering services digitally and digital literacy).

E-Resources Concept: The word E-resource/ Web- resources/e-document is coined since 1985 and it is resource which is exist in an electronically and accessed by the computer or devices like smart phones and Tablets etc. with the help of internet online. The use of information in digitized form is increase very fast in this smart web era.

E-Resource Definition: We may be define Electronic Resources as “Those informative document that require computer, smart phones and Tablets etc. electronic devices for access anywhere with the help with internet.” For Example E-Book, E-Journals, databases, indexing and abstracting databases Etc. some of the most frequently use.

Need of Electronic Resources: We face very fast speed of each and every field of human being where no time to spend freely in the age of information explosion. We have need of Electronic Resources because as fallow.The World of today is known as IT Oriented. Access of information is become technical. Information change with Value based and cost based ,Quick access gives preference first.Information change its nature and forms traditional to ultra modernized.Problem of space management in libraries Etc.

Advantages Use and Impact: E-Resources are always influencing the development of new modes of scholarly communication. They overcome the Geographical limitations associated with print media. Specially E-resources are helpful to distant learners who are limited time to access libraries. E-collections are very helpful and useful to all type of institution and individuals to get instant, relevant, comprehensive information at door step membership of consortia may also purposeful in meets the financial problems of institutions. Some pinpointed advantages are as follows.Unlimited concurrent use.Easy to use.Physical space saving.Reading, forwarding, saving, downloading and Printing.Speedy and Multi access.Reuse.Manpower saving. Time saving.

Services: Electronic Resources are become strong hand for academic world. Libraries are the direct incentives to the development of educational, social and cultural activities in the country. Libraries financial problems because all rise prices that’s why need is increase to search something substantial has to be done in order to facilitate access to scholarly resources to uses Especially research scholars due to emergence of many local regional, national , international resource sharing knowledge network initiatives throughout the world in the universities and institutions of higher learning institutions have started optimally utilizing the resources for example like UGC-INFONET, INDEST-AICTE, NKRC,FORSA (Forum for Resource Sharing in Astronomy and Astrophysics), IIM Libraries, HELINET (Health Science Library and Information Network.) Inter University centre (IUC-DAEF Consortia for Atomic Energy), CSIR e-journal, Consortium , ICMR and N-List Programme of MHRD/UGC (INFLIBNET). Etc. scholarly electronic information resources including peer revied journals, data bases, abstracts, Proceedings etc.

Types of Electronic Resources: The Information Professionals of the Libraries and information centers have to change their attitude, style, and skill towards information handling. Information available in different types of electronic resources are as follows.

Electronic Books (E-books)	E-dictionaries
E-manuals	E-Directories
E-manuscripts	E- Encyclopedias
E-maps	E-Glossaries
Electronic Journals (E-journals)	E-Biographies
Electronic Databases	E-Abstracts

Electronic Newspaper	E-Bibliographical tools
E-audio material and E-visual material	E-Index
E-thesis	E-Library catalogue
E-reports	E-data archives ETC.
Personal sites	Weblogs, Start page,
Online dictionary	Wikipedia, RSS Feeds
Textual work	Wikis, Social networking,

Features and Techniques in Web based:

Search: Information finding through keyword search.

Links: Connects information together in to a meaningful information ecosystem using the model of the Web, and provides low-barrier social tools.

Authoring: The ability to create and update content leads to the collaborative work of many rather than just a few web authors. In wikis, users may extend, undo and redo each other's work. In blogs, posts and the comments of individuals build up over time.

Tags: Categorization of content by users adding 'Tags' (short, usually one-word descriptions) to facilitate searching, without dependence on pre made categories collection of tags created by many users within a single system may be referred to as 'folksonomies' (i.e. folk taxonomies).

Extensions: Software that makes the web an application platform as well as a document server this include software like adobe reader, adobe flash player, Microsoft silver light, active X, Oracle java, QuickTime, Windows media etc.

Signals: The use of syndication technology such as RSS to notify users of content changes.

Service provided by web: The following Web-based services and application Demonstrate the foundations of the web 2.0 Concept, and are already being used in certain higher library services this services include blogs, Wikis, Multimedia sharing services, content syndication podcasting and tagging services. It is a worth Nothing that many of this newer technologies are concatenations, i.e. they make use of existing services.

Blog: The term web Blog or blog refer to a simple web page consisting of brief paragraphs of opinions, information personal diary entries, or links, called post, arranged chronologically with the most recent first, in the style of an online journal. Most Blogs also allow visitors to add a comment below entry. For example- <http://www.techcrunch.com/http://www.instpundit.com, http://blogs.warvics.ac.uk/>.

Wiki: A wiki is a webpage or set of WebPages that can be easily edited by anyone who is allowed access. Wiki is collaborative tool that facilitates the production of group work wiki pages have an edited button displayed on the screen and the user can click on this to access an easy- to- use online editing tool to change or even delete the contents of the page in question. Simple hyper text style linking between Pages is used to create a navigable set of pages. E.g.: http://en.wikipedia.org/wiki/Main_Page.

Tagging and Social Bookmarking: A tag is key word that is added to a digital object (e.g. a website, picture or video clip) to describe it. Social Book Marking System is An application of tagging and allows users of 'bookmark' or 'favourites', to store these centrally on a remote service and to share them with other users of the system. A bookmark can belong to more than one category. For example, using tags, a photo of a tree could be categorized with both 'tree' and 'larch'.

Multimedia Sharing: Multimedia sharing is service that allows the users the accessibility not only as consumers but also as contributors in the production of web content. You Tube (video) Flickr (photographs) and Odeo (podcasts) are examples. **Audio Blogging and Podcasting:** Podcasts are audio recording .usually in MP3 format, of talks, interviews and lectures, which can be played either on a desktop computer or on a wide range of hand held MP3devices. A more recent development is introduction of video podcasts (sometimes shortened to vidcast or vodcast): on line delivery of video-on- demand clips that can be played on a PC, or again on a suitable handheld player.

RSS and Syndication: RSS is a family of formats which allows users to find out about updates to the content of RSS-enabled websites, blogs or podcasts without actually having to go and visit the site. Web based services has in fact, the new concept of learning is expected to raise the awareness of environment, peace, social diversity, the concept of global citizens in a global village.

Challenges: Efficient and quick updates in information, bandwidth, design, effective multiplatform, irregular power supply. However, the use of these technologies needs to be made known to people top to bottom of society. un sufficient government policies for technology provided at the last person of society.

Conclusion: Web Based Technology is used general in eastern countries. Awareness and general use in coma man of these technologies in country like India is coming soon tomorrow. It is user centred and society developing technology.

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ICT BASED LIBRARY AND INFORMATION SERVICES IN ACADEMIC LIBRARIES: A STUDY

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Abstract

The present paper based on survey, conducted through the Google doc and e-mail. This study examined the services offered by libraries with using ICT to their users. This study also examined the sources used for ICT services by the academic libraries and also focused on barriers in providing services through the ICT. For this research, the researcher framed questionnaire for data collection through librarians in keeping view of the objectives of the research. The analyzed data and presented in tables, graphs. Some conclusions also briefly highlighted at the end of paper. The present paper is an attempt to study the existing scenario of ICT based library and information services in the grant-in-aid college libraries affiliated to North Maharashtra University, Jalgaon.

Keywords: - Information Communication Technology, Automaton, Library Services, Information Services, Academic Libraries, Website, E-mail, Blogs, Whats App

Introduction: According to the father of Library and information science Dr. S.R. Ranganathan "Right information to the right user at the right time" In the age of information technology it is very necessary to provide right information to the right user at the right time. Providing Library and information services to the users is a common activity of the library but in ICT era it should be fast to save the time of the users, to the implication of the fourth law of library science quoted by Dr. S. R. Rangathan. We are living in the 21st Century and this century is affected with the science & technology. Internet is the biggest innovation for communication & sharing the information with videos, images, live telecast etc. Now a day's ICT has been the playing important part of every one's life. Today, library and information science changing fact in every aspects of the field. There is increasing awareness of information and communication technology among the librarians. In academic libraries being adapted information communication technology for library and information services. Library and information services are very important task for librarian. Providing library services to its user is common activity, but in the age of information and communication technology, ICT has grown day by day in every field. The higher education also included for providing e-learning through the ICT. Indian government and higher educational bodies also support to libraries in the development of ICT based services. Information and communication technology -ICT has been a means to bring quality services. Systematic planning of its introduction and application will assure that the technology based information services are sustainable, and enhances the ability of library.

❖ **Objective of the Study :** Following major objectives are set for the study.

To know the present status of academic libraries. To find out the library and information services provided to its users through ICT. To identify the types of problems faced by librarians when using ICT. To find out major ICT sources used by librarians for library and information services.

To know the status of library computerization of academic libraries. **Hypothesis:-**The following are the some of the major hypotheses formulated for the study. There is good status of academic libraries. Number of library and information services provided through ICT. Various sources used by librarians for library and information services. The status of library computerization is good.

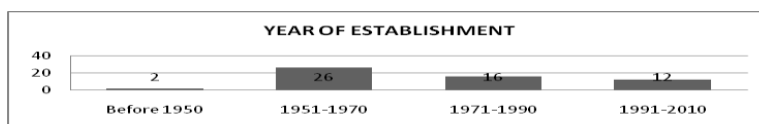
Scope, limitations and Simple Size:- The present study is restricted colleges affiliated to North Maharashtra University, Jalgaon; there are 215 total numbers of colleges but the study has covered only grantable colleges. There are 85 grantable colleges available under the jurisdiction of North Maharashtra University, Jalgaon, the jurisdiction of the university spread in three districts like Jalgaon, Dhule & Nandurbar. It is not feasible to collect large of number data of each and every librarians in the study; therefore samples were selected by using random sampling method.

Research Methodology :- The questionnaire method was used for the present study to collect the necessary primary data for evaluation and assessment. The population of the survey consists of 56 college librarians, colleges affiliated to North Maharashtra University, Jalgaon. The sample size is an important feature of any empirical study in which the goal is to make [inferences](#) about a [population](#) from a sample. In practice, the sample size used in a study is determined based on the expense of data collection, and the need to have sufficient [statistical power](#). The questionnaire was distributed to 85 college librarians using Google doc & e-mail. The responses from the same got 56 (65.88%) received data analyzed and presented in graphs.

Analysis and interpretation of the Data The analysis of the paper is done with the received number of questioner. The responses of the question asked to user are given in the various tables.

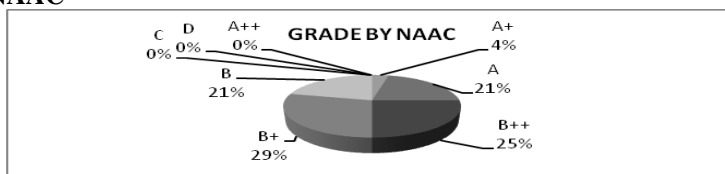
1. Data Analysis

Q.1- Year of Establishment



The above figure shows that 2 (3.57%) colleges were established before 1950 those colleges are considered as old and the remaining 54 (96.42%) colleges are established after 1951.

Q.No.2:- Grade by NAAC



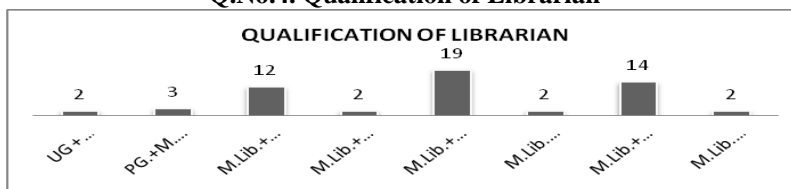
The above figure shows that 0 (0%) colleges were A++ graded by NAAC, 2 (4%) colleges awarded A+ by NAAC, the majority 16 (29%) were graded with B+ by NAAC. There are not single colleges under the grade of C & D. Hence we can say that the majority of the colleges graded by NAAC are under B++ & B+.

Q.No. 3 Year of Last NAAC Accreditation

Sr. No.	Year of Last NAAC Accreditation	No of Reponses	Percentage
1	1996-2001	2	4
2	2002-2007	6	11
3	2008-2013	12	21
4	2014-2017	36	64
		56	100

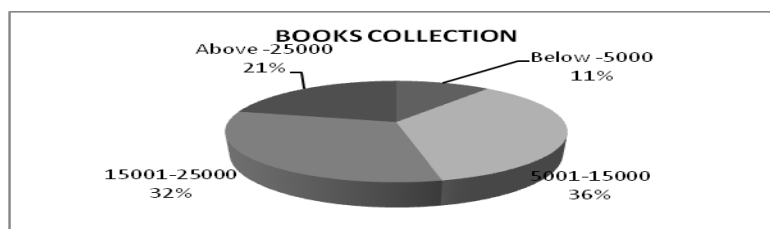
The above table shows that 2 (4%) colleges last accredited in 1996 to 2001 then 6(11%) colleges last accredited in 2002-2007, 12 (21%) colleges accredited in the year of 2008 to 2013. The majority of colleges last accredited in 2014-2017 i.e. 36 (64%). After the analysis we can say the majority of the colleges 36 (64%) last accredited in 2014-2017 year.

Q.No.4. Qualification of Librarian



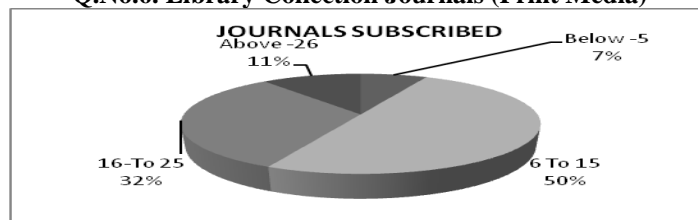
The above figure shows that 2 (3.57%) librarians has UG+M.Lib. qualification, 3 (5.35%) librarians has PG+M.Lib qualification, 12 (21.42%) librarians has M.Lib +M.Phil qualification then majority of librarian 19 (35.18%) has M.Lib. + NET/SET qualification after followed 14(25%) librarians has M.Lib. +M.Phil. & NET/SET qualification, there are 2(3.57%) librarians has M.Lib. +NET and Ph.D. degree. In the conclusion we can say that the majority of librarians have M.Lib. +NET/SET qualification.

Q.No.5. Library Collection-books (Print Media)



The above figure shows that 6 (11%) libraries has book collection less than 5000 then 20(36%) libraries having collection of books in the range of 5001 to 15000, 18 (32%) libraries have 15001-25000 collection of books then 12(21%) libraries hold more than 25000 collection. Majority of libraries included in the 5001- to 15000 range of book collection.

Q.No.6. Library Collection Journals (Print Media)



After the analysis of above data the above figure shows that 4 (7%) libraries has subscribed less than 5 journals , 25 (50%) libraries subscribed 6 to 15 journals then 18 (32%) libraries subscribed journals in the rage of 16 to 25. There are only 6 (11%) libraries who subscribed journals more than 26. After the analysis of data we can say that majority of libraries subscribed journals in the rage of 6 to 15.

Q.No.7. Library Collection –Magazines (Print Media)



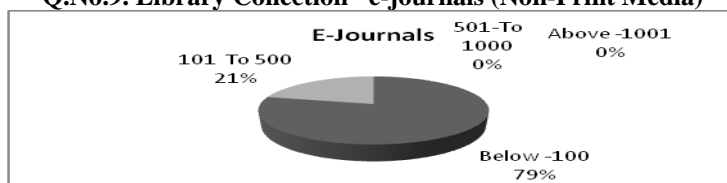
After the analysis of above data the above figure shows that 8 (14%) libraries has subscribed less than 5 Magazines , 38 (68%) libraries subscribed magazines in the range of 6 to 15 & it is majority of libraries. Then 6 (11%) libraries subscribed magazines in the rage of 16 to 25. There are only 4 (7%) libraries who subscribed magazines more than 26.

Q.No.8. Library Collection –e-books (Non-Print Media)

E-Books	No of Reponses	Percentage
Below -100	44	78
101 To 500	8	14
501-To 1000	2	4
Above -1001	2	4
	56	100

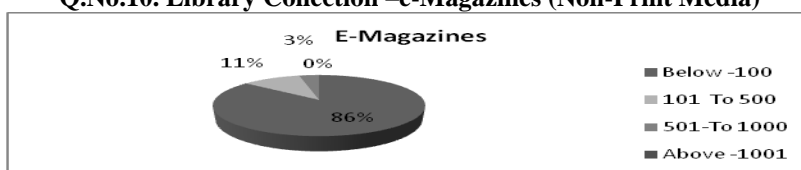
Above table shows that 44 (78%) libraries has below 100 e-books collection then 8(14%) libraries hold 101- 500 e-books in their collection 2(4%) libraries has in the range of 501 to 1000 range . 2 (4%) having collection of e-books more than 1000 .

Q.No.9. Library Collection –e-journals (Non-Print Media)



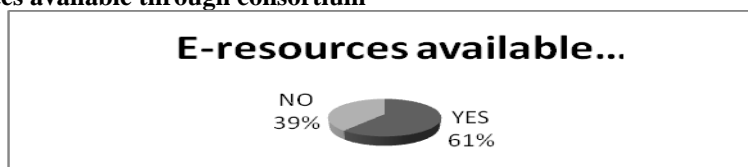
Above figure shows that 44 (79%) libraries has below 100 e-Journals collection then 12 (21%) None of the libraries hold more than 500 e-journals in their collection.

Q.No.10. Library Collection –e-Magazines (Non-Print Media)



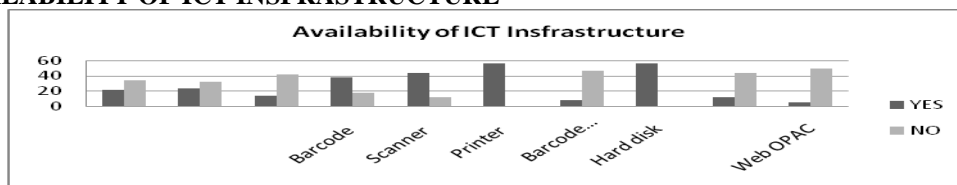
Above figure shows that 48 (86%) libraries has below 100 e-magazines collection then 6 (11%) libraries hold 101- 500 e-magazines in their collection 2(3%) libraries has in the range of 501 to 1000 range of e-magazines . There is not a single library having collection of e-magazines more than 1001.

Q.No. 11.E-resources available through consortium



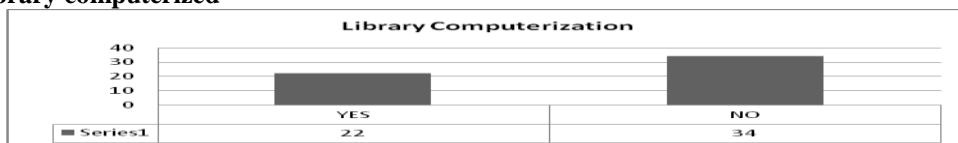
Above figure shows that 34 (61%) libraries has e-resources through consortium and 22 (39%) libraries has not subscribed any consortia.

Q.12. AVAILABILITY OF ICT INFRASTRUCTURE



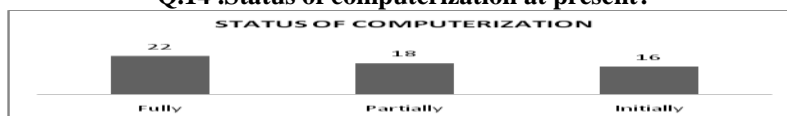
Above figure shows that 22 (8%) libraries has LDC Projector in their library, 24 (9%) libraries having photocopier machine & 14 (5%) libraries hold digital camera in their library, 38 (13%) libraries has barcode reading then 44 (16%) libraries having scanner in the library. Then -56 (100%) libraries having printer and hard disk in the libraries. 9 (3%) libraries have Barcode printer, 12 (4%) libraries hve library website then 6 (2) libraries has web OPAC.

Q.13. is library computerized



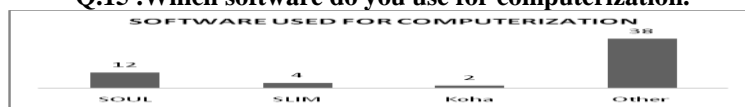
Above figure shows that 22 (39%) libraries done the work of computerization then 34 (61%) libraries yet not completed the computerization of the library

Q.14 .Status of computerization at present?



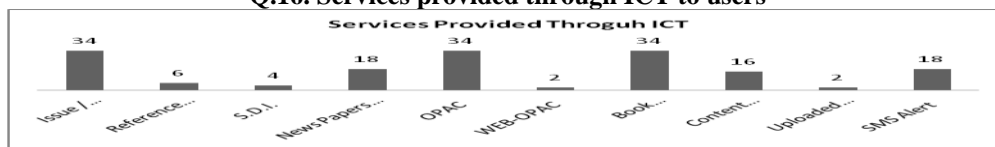
Above figure shows that 22 (39%) libraries done the work of computerization then 18 (32%) in partially completed and 16 (29%) libraries are in initial stage of computerization.

Q.15 .Which software do you use for computerization.



Above figure shows that 12 (21%) libraries are using SOUL software then 4 (7%) libraries used SLIM for computerization , 2(4%) libraries used open source software i.e Koha , there is majority of libraries 38 (68%) libraries used other than SOUL , SLIM & Koha for computerization.

Q.16. Services provided through ICT to users



Above figure shows that 34 (60.71%) libraries are providing issue/ return of book service with using ICT then 6 (10.71%) libraries use ICT for offering Reference services , 4 (7.14%) libraries used ICT for offering S.D.I. Service , 18 (32.14%) libraries send news paper clipping using ICT, 34 (60.71%) libraries has OPAC facility , 2 (3.57%) libraries has web OPAC facility then 34 (60.71%) libraries use ICT for book reservation also, 16 (25.57%) libraries use ICT for content information , 2 (3.57 %) libraries uploaded information on website , 18 (32.14%) libraries offered SMS Alert service to the users.

Q.17. Use of ICT sources for services.



Above figure shows that 38 (67.85%) libraries always used website as ICT source for proving services 14 (25%) libraries use some times , 4 (7.14) libraries rarely used website as ICT source for service, we can say than 67.85 % libraries always used website for providing services , 47 (83.92%) libraries always used e-mail source for providing services then 7 (12.5%) libraries sometimes used e-mail as a ICT source for proving service , 24 (42.85%) libraries always used what's App as ICT source for service.

Conclusion: Providing Library and information services to the users is a common activity of the library but in ICT era it should be fast to save the time of the users, to the implication of the fourth law of library science quoted by Dr. S. R. Rangathan. There are few colleges established before 1950 & the majority of colleges established in the year 1951 to 1971. There are majority of colleges awarded grade B+ & B++. Majority of Librarians have good academic higher qualification.

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ROLE OF MARKETING IN ACAEMI LIBRARY IN 21ST CENTURY

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Abstract

21st Century world is an "Information World". In the information world a new concept is developed that is "Information Explosion". Information society is a unique society which consumes as well as generates knowledge and information. At every second generates new information and after before second information becomes old information. Information is a commodity, wealth and product. Information is regarded as an important resource for all human activities. Library is called as information centre as well as information market. Users' are expecting correct and current information from libraries and information centres. The concept 'marketing' is popularly applicable in the library and information centres or agencies. The library marketing is useful for product or resources (conventional or non-conventional) and services. Concept marketing is not new for LIS (Library and Information Science) sector because it is used in past 1870s. Marketing and revenue generation concept developed fast due to globalization, industrialization and collaboration in business sector and LIS sector. This paper describes marketing concept or marketing, applications of marketing in academic library, changes in 21st century, advantages and disadvantages of marketing.

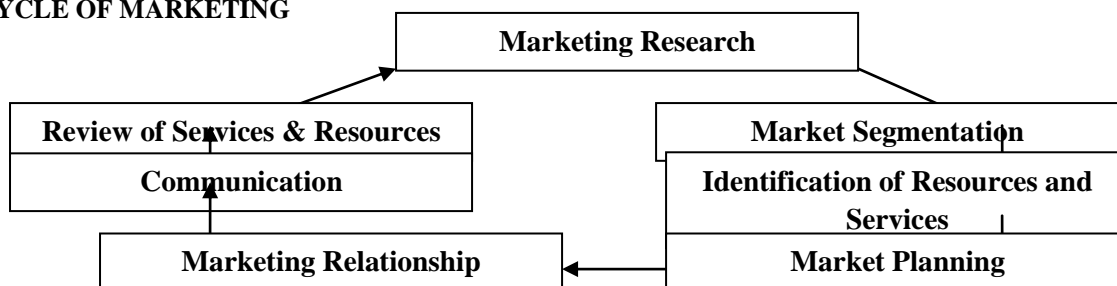
Keywords:-Marketing definition and concept, application or marketing mix, tools or means, changes in 21st century in library, advantages and disadvantages of marketing.

INTRODUCTION: - Academic libraries involve school, colleges and university libraries. Any library has different users'. In academic libraries users'' are students staff, researchers and other users' related to institution objective of academic libraries given books reference service, current and essential information to their users'. Due to information explosion new information generate at second and after a second generated information becomes old, so expectations of library users' are increased to fulfill their expectations, librarian use some tools like marketing. Marketing is related to only business but this is misunderstanding because marketing is related to library science also. It is a new concept Renborg (1997) said that marketing is not new to libraries it is old as modern librarianship and origin of marketing dates back in 1870s.

CONCEPT OF DEFINITION OF MARKETING: Marketing is systematic approach to identify specific users' needs, providing services to attend these needs and encouraging users' of need to act. The major facous is on matching customer with quality service an through community involvement. It is an ongoing process anticipates the need for change.

EXPLORING SOME DEFINATIONS OF MARKETING:- American Marketing Association (AMA) : "Marketing is a process of planning and executing conception, pricing, promotion and distribution of ideas, goods and services to create exchanges that satisfy individual and organisational objectives." The process of planning and executing conception pricing, promotion and distribution of ideas, resources and services to create exchanges that fulfil individual and organisational objectives for satisfy the users' demands of needs use marketing in library marketing is more essential for academic libraries today due to given challenges.

Process of Marketing In Academic Library :- Marketing is process for academic libraries it involves developed connection between users' and library in the medium of services, resources (conventional and non-conventinal) and programs. The library and librarian must represent its value in meeting or fulfill needs of users' through resources and services. Marketing is process based on cycle and perform it.

CYCLE OF MARKETING**APPLICATION OF MARKETING IN ACADEMIC LIBRARIES OR (MARKETING MIX 8 P'S)**

Marketing is not a new concept in library science. Marketing is used by samual Green, Melvil Dewey, John Cotton Dana, Dr.S.R.Ranganathan, Kotler Philips and Levy and others in past time. Marketing strategy is comprehensive integrated and co-ordinated plan that combines with P's marketing elements. i.e. 4 P's, 5 P's, 7 P's, 8 P's. Marketing mix P's or applications are changing as per environment and it is observed that 4 P's are extended up to 8 P's.

4 P's - Product, Price, Place, Promotion.

5 P's - Price, Promotion, Place, People, Process.

7 P's - Product, Price, Promotion, Place, Packaging, People and Positioning.

8 P's - Product, Place, Process, Productivity and Quality, People, Promotion, Physical Evidence and Price.

Above 8 P's are given in popular marketing book by Lovelock and Wietz (zolo) they added additional P's to address topic of interest in service marketing are described below :-

Product - Product means, information resources and information services given by librarian or information centres. E.g. Online database, referral service, ILL.

Place – It includes place, time as well as method and channel used. Time saving of users' and give online service quickly in 24/7 in time. i.e. online club.

Process – It includes contact, reminders, registrations and subscriptions. Services must be designed with method and sequence by action in mind.

Productivity and Quality – Providing resources and services is not enough but these services and products must be effective and high quality for satisfaction of users'.

People – It includes staff, they are become volunteers interacting with users'. Staff member are given training and motivation for giving services to users'.

Promotion – Communication is a key of quality services, so communicate with users', be friendly and give knowledge about our product and services using orientation program for using tools google and databases.

Physical Evidences – The appearances of facilities includes building, landscapes, shelving furnishing, equipment, staff members are good for given services.

Price – It is cost of users' many facilities are given by library free but some facilities given by library with cost. E.g. ILL, night drop box service in Cambridge libraries. Sidgwick libraries (beside short loan) in many Cambridge departmental libraries.

MEANS OR TOOLS OF MARKETING:-

Personal Skill – Librarian apply personal skill with technological skill for marketing. Your skill which includes personal skill. i.e. talking to convincing the user and communicational skill and representing skill will the deeply effect the rating of library given by the users'.

Library Brochure – Library brochures give guidance about library and information product and services of library.

Notic Board – Current information provides to users'.

Newsletters and Leaflets – These are excellent medium for marketing of library. Newsletters give information about important websites, new journals and online services leaflets and guides can be handed out and show on notice board or mails or whats app.

New Arrival Display – For marketing new arrival books show the users' through notice board.

MARKETING CHANGES IN THE 21ST CENTURY: - According to Philips Kotler & Keller (2005) Philosophical shift are coming in marketing management for 21st century. They have searched five changes and can be applied to marketing for libraries.

From marketing does the marketing to "Everyone does the marketing" – In the past though the libraries have marketing department but they were less effective in doing their work since libraries user completely dependent on directory board to run promotions.

From organizing by Product units to organizing by users' or customer segments – There should be an overall development of conventional and non-conventional resources and services and communication by the library because according to literacy one arrow can not hit all different targets at one time, this implies any tool or plan made by library can achieve only one target not all targets at one time hence an overall development in library is the need of time.

From building brands through advertising to building brands through performance and integrated communication – Recently a misconception has been developed that marketing means only use of media such as advertisement and publicity campaign but libraries have over come this problem and now are focusing on the concept of meaningful communication such as read – A-thon with technologies and regular medium.

From focusing on Profitable Transactions to focusing on customer or users' lifetime value – Today libraries are playing an important role in explaining importance or reading culture to their users' and once users' are attracted towards reading culture library can refocus on their aim of making profit through their resources and services given by libraries.

For being Local to being 'Global' – Both global and local performance of library in all aspects should be at such potential that it can be recognized beyond the local level that is library should be uplifted at global level. Go with traditional methods and they should have tendency to accept new technological conceptual changes taking place in today's world. In this way library and staff becomes local to global.

ADVANTAGES OF MARKETING – Library achieve their tasks and goals easily through marketing.

Technological marketing is useful for giving services to users' in short time and save the time of users' and servants. E.g. E-books, E-services, E-resources and traditional services in library. Marketing is useful for reducing the communication gap between users' and library servants. (staff), Librarian and Staff survey the needs of users' through marketing and fulfill them in short time. A symbiotic relationship is developed between users' and library staff and servants.

DISADVANTAGES OF MARKETING :- Lack of Funds – deficiency of funds and improper economical budgets or plans given by or performed by government or that institute. Due to increase in price of resources and services especially of books, online services, technology there has been a very low percentage of making considerable profit by library.

Lack of Time – Quality services are provided by librarian but the institute and its higher authorities simply neglect the hard work performed by librarian staff.

CONCLUSION: - Marketing concept is not new for library science because it was used in past time from 1870. Today's economical world library called information market. Library products are their conventional and non-conventional resources and services given to their users' (customers) and fulfill their needs of information. Now days a vast reforming is talking place in the sector of library science especially libraries are fighting for their rights by protesting a chief act perform by any educational institution i.e. small portion of budget provided to libraries for its welfare and its development. Libraries are also protesting legally against the poor. Funds which are unable to fulfill the users' need and expectations from library and hence these two major faults are responsible for development of dis-attraction in the mind of users' towards library. Thus, library science has been making a lot of hardship to overcome these two problems at least after all the observations it has been considered that concept of marketing is the golden tool for overcoming all the problem faced by library and its staff. Marketing Library Services (MLS) will provided information to professionals for all types of libraries in which MLS gives specific ideas for marketing and suggestions for planning resources and services, making money and increasing n library, library marketing is useful for play in creating awareness in library services and products through librarians efforts or staff efforts. The golden key for success of libraries in 21st century is excellent and effective marketing which guides readers or users' through a series of tools and resources so they can create their own plans concluding with an exploration of resources, services, provided by library and staff of library.

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RESOURCE SHARING IN LIBRARIES: A VITAL ROLE OF LIBRARY INFORMATION

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Abstract

Resource sharing is nothing but sharing of library resources by certain participating libraries among themselves on the basis of the principle of co-operation. This is applicable in sharing of documents, manpower, services, space and equipments. This paper mainly highlights for What is Resource Sharing?, Why Resource Sharing?, Ways, Means & Methods: Definition, Objectives, Needs, Areas for Co-Operation & Resource Sharing, Components, Requirements, Concept, Advantages, Criticism, Barrier, Steps to Promote Resource Sharing through Network, Library Consortium and their types & functions, Advantages and disadvantages. Keywords / Descriptors: Resource Sharing, Steps to Promote Resource Sharing through Network, Library Consortium.

1. Introduction: Today, the object of resource sharing has changed the old concept of resource sharing due to multi-dimensional growth of published documents in recent past, increasing cost of books and subscribing periodicals, advancement of new technology for information processing and dissemination are some of the fundamentals factors which require information resource sharing among the libraries. From a long time, libraries were practicing information resource sharing among libraries. Besides entering into inter-library loan practice, libraries thought seriously of resource sharing for the proliferation of information which is the outcome of the rapid growth of publications and staying in the limited budget they are trying to integrate libraries cautiously for resource sharing in their principle of collection development.

2. Definition of Resource Sharing: The activities that result from an agreement, formal or informal, among a group of libraries (usually a consortium or network) to share collections, data, facilities, personnel, etc., for the benefit of their users and to reduce the expense of collection development 213 International Research: Journal of Library & Information Science | Vol.3 No.1, Apr. 2013 “A mode of operation whereby the functions are shared in common by a number of libraries”.

3. Objectives of the Resource Sharing: Allen Kent, Bhargava (1986) stated the objectives of resource sharing networks as: “Library user should have access to more materials or services providing level service at less cost, increased service at level cost, or much more service at less cost.” Sharing of the burden of purchasing materials and processing the materials sharing of services. Human expertise, to extend the accessibility of resources to diminish costs to promote exploitation of resources to avoid duplication and save the finances. Increase availability of resources Promote full utilization of resources.

3.1. Needs for Resource Sharing: Information Explosion No library is self-sufficient Language barrier, Limitation in fund Diversity in users need. Increase in user population & Quality of library service Inflation & Acquisition, Universal bibliographic control Growth of Knowledge in different subjects. Rapid increase of literature and growth of publication cost of publications. Increasing trend of new born subjects and specialization. Increase in the number of members of user community teachers, scholars and students in universities. Lack of environment to make use of available computer and communication technology for efficient and production use in libraries.

3.2. Areas for Co-Operation & Resource Sharing: 214 International Research: Journal of Library & Information Science Vol.3 No.1, Apr. 2013 Co-Operative acquisition, Co-Operation in technical processing of books, Inter-library loan at various levels, Local, Regional, State, National, International levels. Co-operative storage centers, Union catalogs Documentation centers Document procurement Centralized acquisition of periodicals sharing of staff and Regional centers.

3.3. Components of Resource Sharing: Parket points out the five components of resource sharing resources, directories, communications, users and management, Network. Depending on the native or resource sharing activity, the resources component may be existing collection of books, journals, special collections and non book materials. The directories component consists of the index or detailed listing of the resource component for library network users. The communication component consists of the link among the participating libraries as modes in the network The user component of a library network vary according to the nature of the resource sharing activity The fifth component “network” will be provided by an administrative which carry out four basic function At least five network components may be identified in the process of resource sharing. They are resources documentary, manpower and technology, management and users. It requires special skill to run successfully the processes involved in networking.

3.4. Requirements for Resource Sharing: Every library is required to have computers, electronic database and connectivity of data communication network to enact resource sharing. A computerized database of bibliographical 215 International Research: Journal of Library & Information Science | Vol.3 No.1, Apr. 2013 records of library materials is to be developed to provide a broad perspective about in various libraries in the network. Other than hardware and software following facts should be taken into consideration to make resource sharing effective and successful. They are Willingness to share & Commitment to share Planning Preparation Policy guidelines and firm acceptance. Technical compatibility Trained manpower Proper monitoring and

feedback Ensure proper mechanism. Transport, Courier, Network, Other communication facilities. Do not look for immediate benefits, Involve all those concerned Frequent meetings reliability Review.

4. Advantages of Resource Sharing: Resource sharing satisfies the fourth law of library science, Resource sharing is very economical. Resource helps to save the library space Standardization in classification and cataloguing is possible. Resource sharing avoids duplication of documents and work. Acquire library materials. Share holdings Provide researchers with an increased number of research materials. Avoid duplicate purchases and Ensure collection of special material and services. Establish efficient communication systems; develop an information marketing mechanism through cooperation and control of the quality of collections.

4.1. Criticism of Resource Sharing: If all libraries depend on resource sharing, no library will have books to lend, if co-operative acquisition doesn't operate well, serious gaps in the collection of a library will result. Without the sophisticated technology, resource sharing would have very limited value; Cost consideration may not permit resource sharing. The reaction of the publishing trade, if their sale gets reduced large libraries have to share a greater burden of lender rather than borrower which is not beneficial to them.

4.2. Barrier to Resource Sharing: Cost involved in computer network, skilled manpower Psychological, cost of publications, Loss of autonomy Owning is still preferred. Traditional / Institutional barrier. [217 International Research: Journal of Library & Information Science | Vol.3 No.1, Apr. 2013.] Lack of institutional and external support, legal and administrative urgent requirement are hardly met, lack of determination and dedication difficulty in mutual agreements.

5. Essential Factors Affecting Networking/Resource Sharing: The major factors that affect the networking of libraries are availability of computerized data- bases. Availability of communication facilities (computer, telephone, satellite communication, reprography, fax, e-mail, etc) Standardization of library organizational practice, availability of financial resources. Efficiency in the governance of net-work, basic agreement.

5.1. Steps to Promote Resource Sharing through Network: As we have seen networking of libraries is essential for sharing of library resources, the same should be promoted at local, regional, national and international level. Following steps are to be taken to promote resource sharing through Networks: Important libraries, information centers and institutions get their catalogues and bibliographies prepared in machine readable form to provide computer aided information services to users and promoting automation of the functions in their libraries such as cataloguing, circulation, preparation of bibliographies, union catalogue, etc. To promote sharing of resources among the libraries in India by developing and— disseminating information and by offering computerized services to the users. To optimize information resources utilization through shared cataloguing, interlibrary— loan services, catalogue production, collection development and avoiding duplication in acquisition to the extent possible. Encourage cooperation among libraries, documentation centers and information centers— so that pooled resources can augment weaker resources centers.[218 International Research: Journal of Library & Information Science , Vol.3 No.1, Apr. 2013.] The promotion of non-bibliographic databases in India, especially by National. Informatics Center has enabled institutions to perfect computer and networking technology. In house functions like acquisition, cataloguing, classification, serial control, circulation, SDI, current awareness services, etc; the network should support these library operations and the libraries should use the data in the central port for this purpose. The participating libraries should follow the rules and regulations of the network and be willing to create bibliographic records according to standards laid down. Anglo-American Cataloguing Rules (AACR-2) should be used as the code for cataloguing. It will help in creation of standard records. Library of Congress Subject Headings (LCSH) should be used as a guide for creating subject descriptors. Other thesauri available on specialized subjects could also be used whenever needed in specialized libraries. The network should provide technical assistance to participating libraries in the creation of bibliographic databases. A panel of experts should be maintained for providing assistance to libraries. A central host machine should be installed for creating a union catalogue, combining catalogues of all participating libraries. As libraries in India use mainly Dewey Decimal Classification (DDC), Universal Decimal Classification (UDC) and Classified Catalogue Code (CCC) for classification of books, it would not be within the means and worth the effort to have one classification scheme in all participating libraries. The network should promote inter-library service and sharing of foreign periodicals should be attempted. As far as possible, foreign exchange should be saved on avoidable duplication titles. A courier service should be established to support the sharing of resources. All serials should also be published in electronic format and the availability of serials in electronic format, either outline or CD-ROM. Most of the abstracting and indexing services have cumulated the entries forming into databases, which can be searched online. [219 International Research: Journal of Library & Information Science, Vol.3 No.1, Apr. 2013] Networking activities should increase in India. Government should take an interest in this field. Some of the important networks established are NICNET, I-NET, ERNET, SIRNET, INFLIBNET.

6. Responsibilities for Information Resource Sharing: Cooperative collection development among the member libraries & Cooperative processing of information resources acquired through the consortium Creation of virtual digital library covering all the e-information resources available in member libraries by networking of those libraries Compilation of bibliographical and/or full-text database of the holdings of the member, libraries,

both print and non-print Sharing of information resources, both traditional and digital, of member libraries, through network or document delivery service as the case may be Allowing reciprocal borrowing by the members of all libraries of the consortium. Digitization of valuable and rare collections of member libraries available in printed, format and providing access to such materials to the members of all the libraries of the consortium Supporting member libraries for setting up institutional repositories, e-print archives, electronic theses collection, etc.

Conclusion: With the explosion of knowledge and constraints on the financial resources, resource sharing has emerged as an important thing or necessity. Moreover, the problems of space, standardization, professional development of the staff, challenges posed by new technologies, and drastic cut in the library budgets have aggravated the problem of the present day librarianship. In India, Resource Sharing, in true sense of the term, has not yet developed in a big.

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USE OF E-RESOURCES BY THE FACULTY OF H.V.P.MANDAL'S COLLEGE OF ENGINEERING AND TECHNOLOGY, AMRAVATI: A STUDY

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Abstracts

The present paper is an attempt to study the use of e- resources, its awareness among the faculties, and the places where the users are accessing these resources. E-resources are easily available and quick to use. After analysis and evaluating the collected data this paper presents the findings of a survey about the awareness and use of electronic resources by faculty members of HVP M's college of engineering and technology.

Keywords:- e-Resources, e-journals

Introduction:- Electronic resources are the electronic information sources, which are collections of digital or electronics format. Those are accessed on various electronics device like compute, smart phone, tab etc. in different forms. The range of electronic information resources is wide; it provides information in the form of full text databases, e-journals, e-discussions, image collections or any multimedia form through the internet. From last few years, is taking radical changes in the process of collection of information, storage of information and organized, retrieved of information. Due to use of these e-information sources in the library for handling information process, has taking various products and services to the scene and used for fulfill information needs and efficient retrieval of information. At present era availability of e-resources in a library is not big problems but their use in proper and maximum way is thinking. Hence this paper examines the existence of various e-resource databases in library of HVP Mandal's College of Engineering and Technology, Amravati.

About College Hanuman Vyayam Prasarak Mandal, Amravati was founded as National, Social, and educational organization in the year 1914. H.V.P.Mandal's College of Engineering and Technology, Amravati was established in 2002 to impart quality technical education at affordable cost. All necessary infrastructure and technical man power in the form of faculty and staff is provided to cater the needs of quality education. The outcomes of the efforts are distinguished visible in the form of becoming one of the best institutes of the region. The HVP M's college Central Library, i.e. "HVP M's Library and Information Center" (often abbreviated as HVP M'LIC) is situated in "Dyanmandir Building". The two storey building is located in the campus of HVP M's. Total area of the library is 550 Sq. Mts. Central Library plays a vital role in furthering the academic and research mission of college, and facilitates creation and dissemination of knowledge. The range of services is offered by the library. Beside holding an excellent print collection of over 22475 volumes of books with 5813 title, 64 journals, The library made a significant progress during the year, its provides access to over 3550 electronic books, electronic journals databases in sciences, engineering, technology, humanities, social sciences and management trough, J-GATE, PROQUEST-SCINCE, DELNET and National Digital Library Consortiums. The library continued to offer its services to teaching faculty, nonteaching staff, management members of institute and student members from H.V.P.M'S college of engineering and technology.

Objectives of the Study

To examine the uses of electronic resources by the faculty members

To examine the attitude of the faculty members towards use of e-resources

Methodology: In this study only faculty members were considered the as object. For getting findings of study, questionnaire was distributed to a 103 faculty members of UG and PG department. For the purpose of collecting data questionnaires were circulated to faculty members of each department of college. For the objective researcher has analyzed the received data from questionnaires and Personal interviews methods. Based on this analysis, the findings of the study are submitted in the form of conclusion.

Analysis of Data: Out of 103 faculty members of engineering college, 87 (84.46%) responded with the filled in questionnaire. The data collected through the questionnaires was scrutinized, classified, and analyzed and tabulated for better understanding.

The Gender-wise classification of the respondents of HVP M College of Engineering and Technology is shown in the table 01. The **Gender** wise classification of respondents reveals that the position of respondents is 52 (50.48%) male faculties and 25 (24.27%) is female.

Table 1 : Gender-wise Users Distribution

Sr. No.	Male Users	Female Users	Total
01	52	25	87

The use of library depends on the facilities offered to its user. The college library offers facilities in respect of accessing desired information to users through library tools. From the table 2, it has been found that 31.06 % of the users have been using library facilities every day followed by 21.35 % users once in a week. 14 users (43.68 %) have using library twice in a week and 10.67 % users thrice in a week. Remaining 4.85 % once in a fortnight and only 2.91 % users have been using library facilities once in a month.

Table. 2: Utilization of the library facilities

Sr. No.	Frequency	No. of respondents	percentage
1	Every day	32	36.79%

2	Once in a week	22	25.28%
3	Twice in a week	14	16.09%
4	Thrice in a week	11	12.64%
5	Once in a fortnight	5	5.76%
6	Once in a month	3	3.44%
7	Occasionally	00	00
Total		87	100.00%

Library users are the basic pillar in the development of libraries. Considering this, data is collected regarding the Purpose of the respective faculties. Faculties come to the library with various purposes like study, research or entertainment and the basic purpose of library is to provide reference and course materials to the users. Hence we know the purpose of the faculties.

Table 3: Purpose of visits to the library

Sr. No.	Purpose	No. of respondents	percentage
1	Study	74	85.05%
2	Research	22	25.28%
3	Teaching	65	74.71%

The above table reveals that 74(85.05.00 %) respondents visit the library for study purpose. For Research purpose 22(25.28 %). Similarly 65(74.71%) users visit the library for teaching purpose. This question was posed for to study the expectation of the users for the numbers of computers are available in the Digital library section

Table 4: The sufficient no. of computer is available in the Library.

Sr.	No. of computer	No. of respondents	percentage
1	Sufficient	71	81.60
2	Not Sufficient	16	18.40
Total		87	

Table 4 shows the sufficient no. of computer is available in the library. From the table 4, it is cleared 81.60 % responded staff illustrate sufficient no. of computers are available in the Digital library section, however 16 (18.40 %) staff indicate insufficient no. of computers are available in the library. These 16 respondents staffs are suggested that no. of computers increase up to 25 no. in the Digital library section. Type of internet connectivity response is shown in the Table 5. Intention of question was to know the awareness of internet connectivity available in the library, whether faculties are aware for the use of online Reference sources. The table reveals that the majority of respondents 184 (73.60 %) used internet connectivity of Broad Band. As 48 (19.20 %) use dial-up and the remaining are related to lease line, VSAT, Radio link.

Table 5. Type of Internet connectivity

Sr. No.	Internet Connectivity	No. of respondents	percentage
1	Dialer up		
2	Leased line		
3	V-SAT		
4	Broad Band		
5	Any other		
Total			

To study the purpose of faculties regarding use of internet in the library of HVPM's COET. Table 6 displayed the responses of faculties to using Internet, from table it is it reveals that 79 (90.80 %) faculties use internet for educational purpose, however 75 (86.20 %) of users use internet for checking E-mail. The similarly 23 are use for accessing social network. It is also revealed that 10 and 03 faculties related to chatting and entertainment respectively.

Table 6: Purpose of using Internet

Sr. No.	Purpose of use of Internet	No. of respondents	percentage
1	Educational purpose	79	90.80
2	Checking E-mail	75	86.20
3	Social Networking	23	26.43
4	Chatting	10	11.49

5	Entertainment	3	3.44
6	Other (please specify)	00	00

Table 7 Awareness of reference sources available in library

Sr. No.	reference sources	No. of respondents	percentage
1	e-Books	79	90.80
2	e-Journals/	83	95.40
3	Online Encyclopedia	45	51.72
4	Dictionary	37	42.52
5	Dissertation and seminar reports	65	74.71

The strength of the library is the good collections available in the library. Library includes books Journals, reports, multimedia resources, reference books etc. Table-7 displayed the Awareness of reference sources available in library collections. The results of the analysis are shown in the Table 7. It reveals that, maximum faculties i.e. 83(95.40%) are aware of e-Journals and 79(90.80%) faculties are aware of e-books. Similarly 45 faculties are aware of online encyclopedia, whereas 37 (42.52%), 65(74.71%) faculties are aware of directory and Dissertation and seminar reports respectively.

Table 8 : The awareness of an e- sources

Sr. No.	Responses	No. of respondents	percentage
1	Yes	87	100%
2	No	00	00
Total		87	100%

Table 8 represents the awareness of an e- sources are available in the library. It is clearly indicates that out of 87 users, all 87 (100 %) users were aware of e-resources subscribed by the library,. The result is positively towards regarding awareness of e-resources by the faculty members. The result of table 8 indicates that all 100% user were aware about the e-resources available the library. On this basis the table 9 is shows that e-journals and e databases were the most popular in faculties, so used of them is more by the teachers, according to their responses which are 81 (93.10 %) and 76 (87.35 %), respectively. It is followed by use of e-books 31.03% are used Further 3.44 % responses used the e-encyclopedia.

Table 9: Type of E-Resources have use more

Sr. No.	e-resources	No. of respondents	percentage
1	e-Books	27	31.03
2	e-Journals	81	93.10
3	e-Databases	76	87.35
4	e-encyclopedia	3	3.44

e- Resources have become important sources for teaching and research, which is very useful for faculty members to increase and developed their knowledge. From this question we have attempted to find out result on the use of place of e- resources use.

Table 10: Place of use the e- resources available in the library

Sr. No.	Access Place	No. of respondents	percentage
1	Home	19	21.83
2	Department	75	86.20
3	Library	57	65.71
4	Computer center	35	40.22
5	Cyber Café	00	00

The using e-resources by the faculty member of college are reflected in Table 10. The analysis shows that, more number 75 (86.20 %) of respondents prefer own department as the place of access to the e-resources. It is also shows that 57(65.71%) respondents were using the use of e-resources at library and 35(40.22%) of users access e-resources at college computer center. Use of resources at the home is 19 (21.83%), whereas no users use it at other places.

Table 11: Purpose of using e-resources

Sr. No.	Purpose	No. of respondents	percentage
1	Educational	81	93.10
2	Paper publication	45	51.72
3	Project work	21	24.13

4	Exchange ideas	5	5.74
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We have find that many purpose are used of e-resources by faculties such as educational purpose, for articles publishing, project work or for seminar presentation etc. All these data is shown in the Table 11. The table reveals that, 81(93.20%) faculties use the e-resources for educational purpose, and then 45 (51.72%) users use it for paper presentation. Moreover 21 users use it for project work, and only 5.74 % faculty use e-resources for exchange ideas.

Conclusions:- The growth of electronic technology has facilitated the convergence of new electronic devices and resources. These e-resources have made it easier to search reading material that is useful for teacher's study. From this survey it is confirmed that faculty members are aware of the e-resources and various types of e-resources, e-database, and e-journals. It is conclude that the faculty members are using the available e-resources satisfactorily and to keep themselves up-to-date in their subject area. For this purpose library develop new and necessary recourses to provide better services to their user. This study is also shows the use of e-resources is very common among the teachers of HVPM Engg, college. It is observed that the availability of e-resources in te college library is sufficient for all the existing disciplines.

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WEB BASED SERVICES IN COLLEGE LIBRARY

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Abstract

Library services provided by using web technology are referred as web based library services. Internet & web technology has changed the traditional method of providing library services & resources to its user. Library is only one of many institutions changing in the face of technological advances. The present paper explain various concepts like Web (www), Library services. Web based library services, Web services etc. Paper also described in briefly background of Web based library services. Different web based services i.e. Library web portal, library web page, Web OPAC, Access to Database, E-mail, Ask-a- Librarian, Bulletin Board Services, Web forms, Virtual library Tour, Web based user educations, Real time services are highlighted & discuss in briefly. Advantages and disadvantages of Web based services, Challenges are also mentioned. The Indian scenario of Web based services has also taken in briefly.

Keywords :- Web, Website, Web Based Services, Library Services, Library web portal, Library web page, Web OPAC, Database, E-mail, Ask-a-Librarian, Bulletin Board Services, Web forms, Virtual Library Tour, Real Time Services, Web based user Education etc.

Introduction :- With the emergence of Internet, more specifically the world wide web (www) which is one of its major services has completely revolutionized the way to communicate, studying, teaching, business, employment, education, healthcare & more. It has a major impact on the publishing & information delivery system in 21st Century. Similarly in case of libraries too, application of internet and web technologies have changed the way the libraries operate & provide information services to users.¹ Entire services of library has changed in respect of accessing, processing & retrieving of information. Today libraries are also interested to share resources among other libraries to satisfy the users.²

What is World Wide Web (www) ? World wide web is one of the services of the internet. It is a way of accessing integrated information in the form of web pages over the medium of internet with the help of web browsers. World wide web is a global network of internet servers which provides access to interlinked documents locally and remotely. It is a vast network of linked hyper text files stored on computers throughout the world that can provide computer users with information on a huge variety of subjects. The information can be in the form of regular text, hypertext, pictures, sounds, userents , news groups & other types of data. To access such information from web, client program is necessary like Internet explorer, Firefox etc, which is called browser. Within the web, the information is stored in pages. Each page can hold not only information but links to other pages. In each page a particular word or sequence of words highlighted item & the other information related to that words in some other pages. This means that there is a link between the highlighted item & the other information , the service is called hypertext. When any-one wants to follows a link, the browser will find out where it is and connect the web server at that location, request the new page & then display it on the screen.⁶

What Library Services ? Some of commonly existing library services⁷are cataloguing, classification, circulation services, reservation, renewal, new arrivals, current contents, current awareness, service, selective dissemination of information, reference services, document delivery service, interlibrary loan services, externally purchased database, CD-ROM databases, access to other library catalogues, access to online databases, internally published newsletter, reports & journals, bibliographies, indexing & abstracting services & so on. Such services can be provide in web environment with the help of web technologies.

What are Web Services ? Web Services are software components that communicate using pervasive, standard based web technologies including HTTP & XML-based messaging. Web services are designed to be accessed by other applications and vary in complexity from simple operations. Since they are based on open stands such as HTTP and XML-based protocol. Web services are hardware, programming language rage & operating system independent. This means that applications written in different programming language & running on different platforms can seamlessly exchange data over internets or the Internet using web services.⁸

What are Web Based Library Services ? Web based library services mean the services provided through particular website accessible on internet which provide integrate access to the multiple databases. According to (Madhusudhan, 2011) "Web based library services means library services provided using internet as medium and library website as a gateway with the help of integrate library management system." White (2001) has defined ⁷ "Web based services as an information services in which users ask questions via electronic means e-mail or web-form." Web based library services provides users with the convenience of accessing information in their own time, saving them travelling cost & time and new options for answering reference questions.

Why Web Based Library Services ? Web Based Services are established due to following reasons.^{9b} Ensuring the needs of users & the accessible information sources are suitable matched at all time. Delivering those information sources to the users in a timely & appropriate fashion. Ensuring the information provided is high quality, accurate & appropriate.

Type of Web Services. Following are different types of web services.^{9b}Licensed / Purchased full content (journals, books, audio, maps etc.) Licensed / Purchased databases.

Web Based Library Services -

Background :- At beginning library was just a store house of books & other documents. General people were not allow to use that document. After long time library started document delivery service and circulation came into picture. From middle of the 19th century there were drastic change of library services. A large number of different services came into the picture. Computer came during the middle of the 20th century, the mode of library services changed dramatically. It became information service and new kind of offline service came into picture & last one decade of 20th century it was started to provide online service. If we try to find out the history of web based services, we would like to say that it was 1960 we can think as a first step. In the USA among the pioneers of large scale bibliographic processing by the computer, the National Library of Medicine, which launched MEDLARS service in 1963. It was the first large scale system made available to the general public without any restriction. Even today it is one of the most widely used service in the world. It become online during 1970 under the name MEDLINE. In this way during 1970's libraries made proper use of computers in various library operations & lounched local system successfully due to availability of improved computer technology & collaboration between libraries & computer specialist.

Web Based Services in College Library :- Access to Database, Bibliographic & Cataloguing Service. Bulleting Board Service Push based services

Advantages of Web Based Services : Following are the advantages of Web Based Services.²⁵

It saves the precious time of the users. A large number of users can be helped simultaneously by using Web based library services. Less dependent on the library staff for getting the required information. No need of library staff in large numbers to carry out library work & services. Availability of information in different places & also in different formats.

Disadvantages of Web Based Services :- Following are disadvantages of Web Based Services.²⁶ A huge volume of information is generated every time. No order or rules are imposed on the generation, distribution, access & use of this information. No fully compressive record of the different documents is available at the moment.

The Indian Scenario :- Till 1970, the computers²⁷ in the country were, by & large, mainly used for scientific calculations, business applications, scientific calculations, business application, decision making & data processing. In 1971 V. A. Kamath & N.M. Makwad of the Library & Information Services of BARC conducted an extensive survey through questionnaire with the primary object of finding out of what extent the computer are used too library operations & information handling. On the basis of the replies received, they draw the following broad conclusions. 'There is only one library having computerized procedures for procurement, one for charging & discharging, two for cataloguing, four for preparing library addition lists & one for preparing union catalogue of periodicals.' Even in 1976 computerization did not increase substantially, only a dozen or so organizations & institutions were involved in computer applications of library & information services. Among them were : INSDOC, BARC (Bomby) TIFR, PRL (Ambedabad), DRTC, IIT, NIC, NALC etc. In India, The govt. of India directory of official websites²⁷ among them 23for Indian universities, 12 college websites. Each of having good libraries but few of them providing Web based services. The IIT's, IISC & IIM are the best of them which are providing Web based service in true sense. Otherwise most of the libraries specially University Libraries are not up to the mark & most of them are providing only OPAC service not more than that. While OPAC²⁷ have been accepted widely in the west, they have not gained the same degree of acceptance in India. The design & development of OPAC in India is of very recent origin & it can be said as the early nineties development.

Challenges :-²⁹ The participating libraries should have the infrastructures for providing services to their users. The librarian should take one more step further instead of just providing access to the internet. He or she should take the responsibilities of evaluating the web resources for providing the effective. The librarian should have depth knowledge about the web resources & the search engine which will give the real power to the reference librarian to answer the queries .The librarian should create a web directory of the internet resource so that it can be used or referred to by a user whenever it is needed for providing the services. The users of the library should be given training & explanation about internet & the search option.

Conclusion :- Librarian should take a leadership role in providing better Web-based library services to their techno savy users. Librarian should perform the role as coach & collaborator, guide the student, teaching user how to search effectively & helping them judge the quality & usefulness of the information that they meet with. For perform this role, he should take full advantages of Internet & web facilities. Services are the heart of any kind of library. The web technology & Internet has changed the traditional method of offering library & information services. Web technology & Internet has also changed the way of information is stored, retrieved & communicated in the library. College Library must use these technology to improve the efficiency & effectiveness of services.

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BEST PRACTICES IN COLLEGE LIBRARY: SPECIAL REFERENCE TO SHAHADATA TALUKA

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Abstract

The paper throws light with the introduction to the best practices followed in college libraries in Shahada taluka. Why innovative best practices in college libraries, provision of E-Resources, ICT Facilities in library, Library Automation, Inter Library Loan, Library Website, General Knowledge & Competitive Examination, Book Exhibition, Best Library User Award, Book Bank Facility, Orientation Programs and News Paper Clipping Service etc.

Introduction: The Present information and communication technologies have made a tremendous impact on the functions of the academic libraries. The development and changes in ICT have changed the user's expectations from the academic libraries in different ways. The way to build a library in collections and offer services to the end user's very from the recent to past exercises. Thus to effectively meet the demands of the end users, the academic libraries need to identify and adopt good and best practices. The college library and information resource center acts as a vehicle for disseminating information and related computer technologies through the best practices among its users. (Umesh, 2012)

Meaning and Definition of Best Practices: Best practices are nothing but developing tailor made services, reaching beyond with available, resources and delighting the customers, quality of high standard, excellence and highly improved, outstanding, par excellence services. It means way of doing something that is usual or expected way in a particular organization or situation, guidelines for good practices. (Vaishnav, 2013) ODLIS (Online Dictionary of Library and Information Science) "In the application of theory to real life situations, procedures that, when properly, applied consistently yield superior result and are therefore used as reference points in evolution of the effectiveness of alternative methods of accomplishing the same task. Best practices are identified by examining empirical evidence of success."

Objectives of the Study: The major purpose of the present study to identify the Best Practices followed in college libraries in Shahada taluka.

Scope of the Study: The present study is confined to the best practices in the college libraries in the Shahada taluka. The present study is limited following colleges are: Vasantrya Naik Arts, Commerce & Science College, Shahada. Sonamai Shikshan Prasark Mandals, Arts Mahila College, Shahada.S.T.Cop. Science College, Shahada.PSGVPM's, Arts, Commerce & Science College, Lonkheda, Shahada.PSGVPM's, D.N.Patel College of Engineering, Lonkheda, Shahada.Gram Vikas Sanstha's Arts College, Bamkheda.Shree Saibaba Bhakta Mandals, Arts College, Mhasawad.

Methodology: The survey method is one of the most effective and sensitive instrument of research survey method can produce much needed knowledge, survey method for the study of adopted survey research design to elicit responses on the best practice of college libraries in seven college libraries in Shahada taluka.

Best Practices followed at college libraries in Shahada Taluka:Provision of e-resources: Libraries in present scenario should not much depend upon traditional printed books. There is a provision facility and awareness of e- resources in the libraries. 71% college libraries is subscribing N-List from last five years and 43% college libraries not provision of e-resources in Shahada taluka.



Figure 1 N-List (National Library and Information Services Infrastructure for Scholarly Content)

Library Automation: It is not possible to all academic libraries to become a digital library or electronic library. But today the demand and needs of the library users are changing; they need services within moment minutes. 86% libraries have automation and use of Library Manager Software for library automation, and 14 % Library has not automation in Shahada taluka .

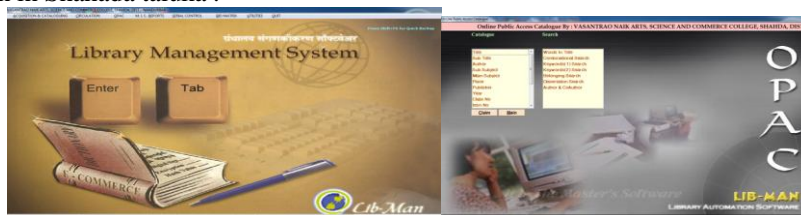


Figure 2 Library Automations (Use of LIB-MAN Software)

ICT Facilities in Library: Information Communication Technologies growing very fast in all sectors, Libraries are not exception for this, so 70% College libraries are providing internet services to the users and 20% libraries are not available ICT facilities in the library of Shahada taluka.

Library Website: 29% College Libraries can create a separate website for libraries where readers can get maximum information about libraries, its services and its resources from remote places. In order to help readers should create a portal of different useful links of e-books, e-journal and database. Designing library website it is not easy task. A maximum college authority denies the permission for this. There are so many free website, portals, browsers; search engines ex. www.sites.google.com.

71% college libraries not done separate website in Shahada taluka college libraries.

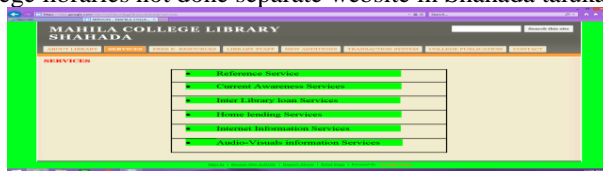


Figure 3 Library Website (Use of www.sites.google.com.)

Inter-Library Loan: 57% College Libraries there is an agreement of inter library loan with one nearby college library and 43% college Libraries not done to Inter- Library Loan.

Book Exhibition: Arrange book exhibition on different occasion display rare book, new added books or books of particular subject which are available in the library. This will lead to increased awareness among readers about knowledge wealth the library possess they can demand the books accordingly. So 57% college libraries organized book exhibition at least one academic year since last five years. 43% college libraries has not arranged book exhibition in college.



Figure 4 Book Exhibition

General Knowledge or Competitive Examination: All of us very well know that library is soul of every educational institute; users are also main part of library. Users come to library for searching information regarding their carrier or educational development. Today competition is going on top level, students must aware of this situation. In this context library and Librarian should play an important role to solve their problems. Library should have very rich collect of competitive examination. Library should invites to guest lecture for guiding to students for preparing the competitive.(Sathe,2015) So 43% Libraries arrange competitive examination and 57% libraries are not arranged competitive examination in Shahada Taluka, but he is provided information for competitive examination.

Career Opportunity Centre/ Newspaper Clipping Point: There is a separate notice board for career opportunity advertisement, newspaper clipping, important articles etc. so 29% Library has provided this service for students. 71% libraries not provided separate notice board these services but available career opportunity information's in the libraries.

Best Library User Award: 03 college libraries are provided best library user award from last five years, and 04 college libraries not provided best library users award of college libraries in Shahda taluka.

Library Feedback: College libraries conducting library feedback forms from students from last five years; and improving library services as per users demand. So 71% libraries conducting library feedback forms and 29% libraries not conducting library feedback form.

Users Orientation Programmes: 71% college libraries conducting to orient a newly enrolled student for the facilities and services provided by libraries in Shahada city. Library users regarding library and library facilities, services, its collection and how to access information available in the library.

Conclusion: Use of technology in designing and delivering the information products and services has always made good results. Hence adopting new techniques and tools in imparting user education may be best practice in extent of use of library services. Thus the best practices adopted should bridge the gap between the library and the users for effective and maximum utilization of the resources, which will result in the advancement and promotion of higher educational goals; vision and mission of the library.

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ICT BASED LIBRARY SERVICES WITH REFERENCE TO ACADEMIC COLLEGE LIBRARIES AFFILIATED TO NORTH MAHARASHTRA UNIVERSITY, JALGAON

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Abstract

The use of computers for library operation avoids respectively jobs and saves considerable amount of time, resources and labour. It also speeds up technical processing and information services. ICT has been a means to bring quality services. Systematic planning of its introduction and application will assure that the technology based information services are sustainable, and enhances the ability of library. The basic aim of present study is to highlights how much libraries have been exaggerated with the advent of Information and Communication Technology (ICT) based products & services and their priorities have been shifted to on ICT for instance library automation.

Keywords: Information and Communication Technologies, Library Services, Library Automation, Digital Archives, Library 2.0, Mobile Services of Library

Introductions: Information is the major key to every individual success. In academics, library is the store house of information of any kind tending towards knowledge acquisition and research enrichment. The integration of ICT in libraries was not just only to add beauty to the library services but also to facilities library functions in an easy and faster means. It has been observed that some of the main objectives of applying ICT to library services have not being properly disseminated to the library users mostly postgraduate students and also library staff. The emergence of ICT is one of the wonderful gifts of modern technology which has brought great changes in the history of Library and information science. Application of ICT to library and information work hand-in-hand.

North Maharashtra University, Jalgaon: The North Maharashtra University, Jalgaon, established on 15th August, 1990 under the Maharashtra Universities Act, XXIX of 1989, started its academic and administrative functioning from the academic year 1991-92. Within the span of 3 years, the University is recognized under section 2 (f) in 1991 and 12 (B) in 1994 under the University Grants Commission (UGC) Act, 1956. The jurisdiction of the University is extended over three districts i.e. Jalgaon, Dhule and Nandurbar, a predominantly tribal and rural area of Khandesh region. There are **220** affiliated colleges and **04** University recognized Research Institutes/Centres under the jurisdiction of University. Out of these, **01** college is recognized as **College of Excellence**, **05** colleges have been identified as **College with Potential for Excellence** and **01** college has been granted autonomous status by the UGC, New Delhi Board and Government of Maharashtra. (<http://nmu.ac.in/en>, 10/1/18)

Objectives of the Study The objective of the study is to investigate the use of Information and Communication Technology products and services by the users of Academic College libraries affiliated to North Maharashtra University, Jalgaon.

Scope and Limitations: The scope of the study is limited to only selected Arts, Commerce, and Science College Library affiliated to North Maharashtra University, Jalgaon Dist Jalgaon.

Methodology: This is a survey based study in which a structured questionnaire was designed to collect data. Fifty affiliated Arts, Commerce and Science Colleges in Jalgaon District out of that only 20 were selected for the study. These institutes are from Jalgaon district. The questionnaires were distributed among the Respondents, and out of which 20 questionnaires were returned by the respondents. The data collected via the questionnaire were analyzed using simple statistical techniques.

Data Analysis: Data collected through the questionnaire was analyzed and graphically presented and interpreted. ICT based library services require various ICT equipment and technologies. The researcher has asked regarding equipment and technologies available in their libraries.

Equipment and Technologies Available in the Library The Questions were asked regarding Equipment and Technologies available in the libraries, and the responses received was tabulated in Figure No.1

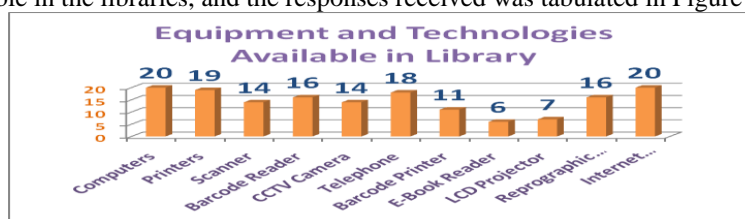


Figure No.1. Equipment and Technologies Available in the Library

The figure No.1 shows equipments and technologies present in the libraries. Maximum Librarians were provided with the facilities like computers, internet/WiFi, Printer, Telephone, Barcode reader, reprographic machine, Scanner, CCTV Camera and Barcode Printer. Facilities like LCD projector was available to few librarians. Only very few librarians were provided with E-book readers also to avail library services.

ICT Based Library Services: The questions was asked about ICT based library services provided in their library, the responses received were presented in Figure No. 2

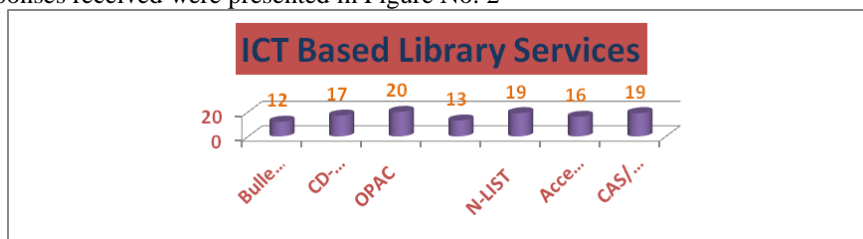


Figure No: 2 ICT Based Library Services

It could be seen from Figure No. 2 that majority of librarians were providing OPAC,N-LIST CAS/SDI and CD-ROM services to the users. Many of them were providing access to Bibliographic databases. Very few librarians were also providing services like access to, web OPAC services and bulletin board service to their users.

ICT literacy among Library Professionals: The questions was asked regarding ICT literacy among Library Professionals, and the responses received is shown in Figure No.3

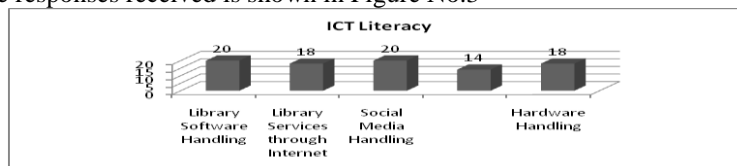


Figure No. 3: ICT literacy among Library Professionals

It can be noted From the Figure No. 3, that all the library professionals under study were able to handle automation software. Majority of library professionals were able to manage social media for providing library services. Some library professionals were knowledgeable enough to provide library services through internet and handling hardware. Only a few knew about digital library and institutional repository software.

Problems faced by the Librarians for availing ICT Based Library Services: The questions was asked about problems faced by the Librarians for availing ICT Based Library Services, and the responses received have been tabulated in Table No.4

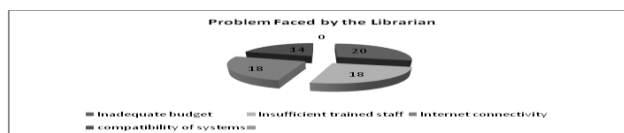


Figure No. 4: Problems faced by the Librarians for availing ICT Based Library Services

It was noted from the Figure No. 4that most of the librarians were facing problems regarding inadequate budget, insufficient trained staff. Majority of the study was conducted in the rural area, it was observed that internet connectivity was good enough as very few librarians were facing problem for internet connectivity.Remaining librarians were having problems like compatibility of systems.

Satisfaction Level: The questions was asked regarding his/her satisfaction level and the responses received have been presented in Table no. 1

Sr. No.	Satisfaction Level	No. of Respondent	%
1	Excellent	18	90.00
2	Good	2	10.00
Total		20	100.00

It can be observe from the Table No 1 that 90% respondents accepted it to be excellent, while only 10%respondents considered it to be good and no one respondent considered it to be poor. It means the librarians working with the help of ICT technology very smoothly.

Conclusion: Most of the libraries were providing ICT based library services such as OPAC, bibliographic services, CD ROM, access to bibliographic databases etc. to the users. It was observed that creation of digital libraries, institutional repositories and web OPAC, which are the current trends in the library services, were lacking in the libraries under study. The problems faced by most of the librarians while providing library services were inadequate budget, insufficient trained staff, incompatibility of systems, etc. It can be concluded that the libraries were good enough in providing ICT based library services from the platforms like social media, internet as well as using library automation software and hardware.

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PRESERVATION AND ACHIEVES

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Abstract

The present paper aims at the new inventions in the field of library sciences and especially in relation to technology. Nowadays there are the drastic changes in every field of technology and library science is not an exception to it. Technology plays very important and crucial role in each and every field so in library. The well-equipped library is an integral part of every institution. In the present paper the researcher explained in detail about the technological advancement of libraries in relation to preservation and archives. The researcher studied the concept of preservation, its process, factor and strategies with minute details. The researcher also studied archives, digital archives, archives link etc. and come to the conclusion that the librarians must take initiative and active involvement in the field of preservation and archives.

Keywords: library, preservation, archives, digital technology

Introduction: Preservation of resources is the mostly neglected in the electronic library. In the digital process, preservation has little scope for the longevity of optical disks, magnetic tape and other new, fragile storage media. The viability of digital image files is much more dependent on the life expectancy of the access system. Librarians may exercise a large measure of control over the life expectancy of digital image data through the careful selection, handling, and maintenance of rugged, well-tested recording and storage systems.

Preservation: Digital preservation is the need and demand of time. Preservation of digital information is to be required more constant and ongoing attention than preservation of other media. This regular input of effort, time, and money to handle vast technological and organizational advance is considered the main stumbling block for preserving digital information.

The Preservation Process:-

Articraft: - Preservation is most successful when an artifact can be maintained in its original form and kept useful.

Image: Good preservation maintains the exact images contained within the artifact. There are many ways of preserving images, with different definitions of what constitutes an image and what constitutes adequacy.

Information: The lowest level of preservation retains the characters contained within a book or periodical, but loses the image and the artifact.

Strategies: In 2006, the online computer Library Center developed a four-point strategy for the long-term preservation of digital objects that consisted of: Assessing the risks for loss of content posed by technology variables such as commonly used proprietary file formats and software applications. Evaluating the digital content objects to determine what type and degree of format conversion or other preservation actions should be applied. Determining the appropriate metadata needed for each object type and how it is associated with the objects.

Providing access to the content. There are several additional strategies that individuals and organizations may use to actively combat the loss of digital information.

Refreshing: Refreshing is the transfer of data between two types of the same storage medium so there are no bit rate changes or alteration of data.

Migration: Migration means transferring data to newer system. This may involve conversion of resources from one file format to another (e.g., conversion of Microsoft Word to PDF or Open Document), from one operating system to another (e.g., Windows to Linux) or from one programming language to another (e.g., C to Java) so the resource remains fully accessible and functional.

Replication: Creating Xerox or duplicate copies of data on systems is called replication. Replicated data may introduce difficulties in refreshing, migration, versioning, and access control since the data is located in multiple places.

Emulation: Emulation is the replicating of functionality of an obsolete system. Examples include emulating an Atari 2600 on a windows system or emulation Word Perfect 1.0 on a Macintosh.

Metadata Attachment: Metadata is data on a digital file that includes information on creation, access rights, restrictions, preservation history, and rights management. Metadata attached to digital files may be affected by file format obsolescence.

Trustworthy Digital Objects: Digital objects that can speak to their own authenticity are called trustworthy digital objects (TDOs). TDOs were proposed by Henry M. Gladney to enable digital objects to maintain a record of their change history so future users can know with certainty that the contents of the object are authentic.

Digital Sustainability: Digital sustainability encompasses a range of issues and concerns that contribute to the longevity of digital information. Digital sustainability concentrates less on the solution and technology and more on building an infrastructure.

Creating Digital Archives: Even in rigorously controlled situations, the digital information may be lost without the initial awareness on the part of the originator of the importance of archiving. Practices used when a digital object is created ultimately impact the ease with which the object can be digitally archived and preserved. In addition, there are several key practices involving the creator that are evolving within the archiving projects.

Acquisition and Collection Development: Acquisition and Collection Development is the stage in which the created object is “incorporated” physically or virtually into the archive. The object must be known to the archive administration. There are two main aspects to the acquisition of digital objects – collection policies and gathering procedures.

Collection Policies: In most countries, the major difference in collection policies between formal print and electronic publications is the question of whether digital materials are included under current deposit legislation. The collection policies answer questions related to selecting what to archive, determining extent, archiving links, and refreshing site contents.

Selection: In the network environment, any individual with access to the Internet can be a publisher, and the network publishing process does not always provide the initial screening and selection at the manuscript stage on which libraries have traditionally relied in the print environment.

Archiving Link: The extensive use of hypertext links to other digital objects in electronic publications raises the question of whether these links and their content should be archived along with the source item. This issue has been addressed by the selected projects in a variety of way. Most organizations archive the links but not the content of the linked objects. The decision about archiving the content of linked objects is based on its selection guidelines. If a linked item meets the selection guidelines, its contents will be archived, otherwise it will not be.

Refreshing the Archived Contents: In case where the archiving is taking place while changes or updates may still be occurring to the digital object, as in the case of on-going Web sites, there is a need to consider refreshing the archived contents. A balance must be struck between the completeness and currency of the archive and the burden on the system resources. Obviously, the burden of refreshing the content increases as the number of sources stored in the archive increases.

Gathering Approaches: There are two general approaches to the gathering of relevant Internet-based information-hand-selected and automatic. In the case of the NLA, the sites are reviewed and hand-selected. They are monitored for their persistence before being included in the archive.

Intellectual property Concerns: Intellectual property remains a key issue in the acquisition process. The approaches to intellectual property vary based on the type of organization doing the archiving

Conclusion: Today’s world is the world of knowledge, creativity and technology. With more creativity and innovation there is more knowledge generation and expansion. And one most important thing in it is how to store this expanded and generated knowledge. But for it we have technology at our ease. With the help of technology and technological means we can store the knowledge at its maximum level. We have few technology assisted techniques like preservation and archives with which we can create miracles in the field of library sciences. And the same purpose of the researcher is depicted in the present paper.

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DIGITAL CONTENT MANAGEMENT SYSTEM

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Abstract

Given the lack of standard building component, in several cases digital library applications are built from scratch using ad-hoc approaches to implement all required components. On the other hand, our claim is that the development of ad-hoc software modules for each new digital library is not convenient. It is necessary to define and design standard software components in order to support the design and effective implementation of Digital Library Applications. Specifically, in this paper we will focus on the definition of a content management system that offers typical functionalities required by digital library applications.

Introduction: The Digital Library (DL) technology emerged during mid 90ties as a combination of different technological results, mainly in the area of Database Management and Information Retrieval, and as an application of these technologies to the management of libraries. The term digital library has been subject of a certain confusion concerning its interpretation and use. Sometime it has been used to refer the accessible digital content of a library. Sometime it has been used to indicate a specific application built to make accessible a specific digital content. Sometime it has been related to a set of software tools that can be used to ? This work was partially supported by the ECD project (Extended Content Delivery) [9], funded by the Italian government, by the VICE project (Virtual Communities for Education), also funded by the Italian government, and by DELOS NoE, funded by the European Commission under FP6 (Sixth Framework Programme). We would like to thank Paolo Bolettieri, Franca Debole, Fabrizio Falchi, Francesco Furfari, and Bertrand Le Saux for their valuable contribution to the MILOS implementation.

Current status of digital library applications: Regrettably, often the Digital Library Applications are monolithic software modules built for a single Digital Library. Existing Digital Library Applications just require documents to be inserted and metadata to be generated before being ready to be operative for document searching and retrieving. Furthermore, the digital library technology is today limited to manage specific types of digital objects and specific metadata description models. This implies that existing DL Applications can be hardly adapted to different application environments and to different metadata description models. Indeed, many DLAs were built having in mind a specific application and, in many cases, a specific document collection. Thus, the result is an ad-hoc solution where all components of the DLA (the data repository, the metadata manager, the search and retrieval components, etc.) are specific to a given application and cannot be easily used in other environments. Digital library applications often offer predefined workflows, metadata schemes, and document formats, that cannot be changed to be adapted to specific application scenarios and end-user requirements and no customizations can be performed for adapting the user interface to the specific scenarios.

Future perspective for digital libraries: Many researchers think that the DL technology could be applied, in the future, well beyond the restricted scope of today applications. To estimate the potential of DL technology, in Figure 1 [16] an information space is considered, with one dimension representing the level in which users and tasks are predefined and known in advance, and the other dimension representing the level in which the data has a known and well defined structure. In this information space, it is possible to distinguish the characteristics of Digital Library applications from typical Web and database applications: Typical Web search engines assume very little about users, tasks, and the data they deal with. Consequently, they occupy a relatively small part of the space. On the other hand, database applications have strong assumptions about users, tasks, and data.

Management Systems Content for Digital Libraries Multimedia: Digital library applications are document intensive applications where possibly heterogeneous documents and their metadata have to be managed efficiently and effectively. We believe that the main functionalities required by DL applications can be embedded in a general purpose Multimedia Content Management System (MCMS). If we make an analogy to the database field, the MCMS is the analogous of a Database Management System (DBMS) in the domain of document intensive applications, as for instance digital libraries, see Figure 2. DBMSs are software tools specialized to support database applications like banking systems, billing systems, etc. MCMSs are software tools specialized to support applications where documents, embodied in different digital media, and their metadata are efficiently and effectively handled.

5 MILOS: an example of content management system for multimedia digital libraries: An example of content management system for multimedia digital libraries, which satisfies the requirements and offers the functionalities discussed in previous section, is MILOS (Multimedia dIgital Library Object Server). MILOS [12,10] has been developed by using the Web Service technology, which in many cases (e.g. .NET, EJB, CORBA, etc.) already provides very complex support for "standard" operations such as authentication, authorization management,

Designing and building digital library application with MILOS: Designing and building digital library application with MILOS In order to verify and demonstrate the flexibility and efficiency of MILOS in managing different heterogeneous DL applications, we took four data sets used by four different existing DLs and we built from scratch the corresponding DL application on top of MILOS. The data sets that we considered consist of

documents and metadata of very different nature: the Reuters data set [4], the ACM Sigmod Record dataset [5], the DBLP data set [1], and the ECHO data set [11]. These data sets and the corresponding MILOS powered DL applications are described in next subsections. The DL applications that we built use the same MILOS installation and all data sets were stored together.

ACM Sigmod Record and DBLP data sets: Both the ACM Sigmod Record data-set [5] and the DBLP data-set [1] consists of metadata corresponding to the description of scientific publications in the computer science domain. The ACM Sigmod record is relatively small. It is composed of 46 XML files (1Mb), while the DBLP data-set is composed of just one large (187Mb) XML file. Their structure is completely different even if they contain information describing similar objects. For these two datasets we built just one DL application from which both data are accessed. We exploited the mapping functionality of MILOS for having the requests of the application correctly translated for the two schemas. We associated a full text index to the elements containing the titles of the articles, and we associated other value indexes to other frequently searched elements, such as the authors, the dates, the years, etc.

ECHO data set : The ECHO data set [11] includes historical audio/visual documents and the corresponding metadata. ECHO is a significant example of the capability of MILOS to support the management of arbitrary metadata schemas. The metadata model adopted in ECHO, based on IFLA/FRBR [7] model, is rather complex and strongly structured. It is used for representing the audio-visual content of the archive and includes among others, the description of videos in English and in the original language, specific metadata fields such as Title, Producer, year, etc., the boundaries of scenes detected (associated with a textual descriptions), the audio segmentation (distinguishing among noise, music, speech, etc.), the Speech Transcripts, and visual features for supporting similarity search on key-frames.

Conclusion:- This paper proposed an approach to build Multimedia Content Management Systems for digital library applications. The solutions proposed can be used to obtain a system that is flexible in the management of documents with different types of content and descriptions, and that is efficient and scalable in the storage and content based retrieval of these documents. In particular, we described the approach adopted to support the management of different metadata descriptions of multimedia documents in the same repository.

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DIGITAL LIBRARY : ISSUE , CHALLENGES AND FUTURE

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Abstract

21st century web savvy people believe that one day everything ever created by humans will be available online. Call it the myth or a truth it is the future of Digital Libraries. Because there is unlimited real estate in cyberspace and because media can be digitized, we can fill cyberspace with all human knowledge and give everyone access to it. Information in all forms is recognized as a very valuable and powerful resource, forcing information management disciplines to become highly professional and technologically updated. All information in any recorded format can be conveyed in one common format—digital. This paints the vision of a sweeping and awesome potential of “Paperless Society”. This paper is intended to describe the technology trends in digital libraries, discuss key issues involved in digital library implementation, challenges, and provide some new future trends of digital library. The paper takes up the future concepts like Digital Classrooms, Digital Talking Books, Verbal Society, Paperless Society and Untethered Communication

Keywords: Digital Library, Paperless Society, E-Learning

Introduction:- The concept of Digital Library is already a comfortingly familiar not in world but also in India. Every single institution is hosting its own Digital library, so they have been omnipresent all over. However, a single isolated Digital Library is valueless till it is not connected to the world. The library, historically a cornerstone of scholarly endeavor, is reinventing itself in today’s networked society to meet these new demands. Instead of a building that holds books, the library is evolving into an electronic portal to a growing global collection of digital content. The doors to this virtual library are now open 24 hours a day, seven days a week, and the library’s holdings come to the user when needed. Today’s library includes sophisticated tools that make it easy to find the best information resources, delivering them to one’s desktop or mobile computing device at the push of a button. The potential of the internet offers the possibility of universal access to everything. According to DELCOS “Digital libraries should enable any citizen to access all human knowledge anytime and anywhere, in a friendly, multi-modal, efficient, and effective way, by overcoming barriers of distance, language, and culture and by using multiple Internet-connected devices”

What is Digital Library:- According to the American Digital Library Federation, digital libraries are organizations that provide the resources, including the specialized staff, to select, structure, offer intellectual access to, interpret, distribute, preserve the integrity of, and ensure the persistence over time of collection of digital works so that they are readily and economically available for use by a defined community or set of communities. The definition of a digital library can be given as a set of characteristics are as follows. The digital library is a collection of services, collection of information objects, supporting users with information objects, organization and preservation of those objects, availability directly or indirectly, and electronic/digital availability. The primary objective of digital library is to improve the access as well as it also includes the cost saving, preservation, keeping pace with technology and information sharing. A main benefit of digital library is to preserve rare and fragile objects by enhancing their access to multiple users simultaneously. There are several reasons for libraries to go for digitization, but the prime reason for the digitization is the need of the user for convenient access to high quality of information. Other important considerations for the digital library are quality preservation, multiple referencing, wide area usage, archival storage, and security measure. Digital collection, associated technology, and its work/services are the important characteristics of digital library. Stand-alone Digital Library, Federated Digital Library, and Harvested Digital Library are mainly three types of digital libraries are exist

Function of Digital Library:- Digital library collection contains permanent documents. The digital environment will enable quick handling and ephemeral information. Access to large amounts of information to users wherever they are and whenever they need it. Access to primary information sources. Support multimedia content along with text. Network accessibility on Internet and Intranet. Client server architecture. Hypertext links for navigation.

Purpose of Digital Library:- Expedite the systematic development of procedures to collect, store and organize, information in digital form. Promote efficient delivery of information economically to all users. Encourage co-operative efforts in research resource computing and communication networks. Strengthen communication and collaboration between and among educational institution. Take leadership role in the generation and dissemination of knowledge.

Digital library challenges Creating “effective” digital libraries pose serious challenges for existing and future technologies. The integration of digital media into traditional collections will not be straightforward, like previous new media (e.g., video audio tapes), because of the unique nature of digital information, which is less fixed, easily copied, and remotely accessible by multiple users simultaneously. Some specific challenges are resource discovery, digital collection development, digital library administration, copyright and licensing, etc., library of congress specified various challenges for building an effective digital library, which are grouped as broad categories as follows.

Building the resource :-Develop improved technology for digitizing analog materials Design search and retrieval tools that compensate for abbreviated or incomplete cataloging or descriptive information Design tools that facilitate the enhancement of cataloging or descriptive information by incorporating the contributions of users.

Interoperability :-Establish protocols and standards to facilitate the assembly of distributed digital libraries.

Intellectual property :-Address legal concerns associated with access, copying, and dissemination of physical and digital materials.

Effective access :-Integrate access to both digital and physical materials Develop approaches that can present heterogeneous resources in a coherent way Make the national digital library useful to different communities of users and for different purposes Provide more effective and flexible tools for transforming digital content to suit the need of end users.

Sustaining the resource :-Develop economic models for the support of the national digital library.

Digital Libraries and its Future: Digital Libraries can provide text, voice, and image (animation, graphs, photographs, and video), to the end users timely and boundlessly through the Internet. The goal of it is 24 x 7 services anytime and anywhere. The World Wide Web (WWW) plays an essential role in the process. Emerging technologies have made it possible to provide services anytime and anywhere. Libraries, museums and archives are trying to utilize technologies to preserve and distribute valuable information for their users in the form of Digital Libraries. The future Digital Libraries are not a science fiction or the librarian's nightmare, it is actually a dream come true. So the future Digital Libraries can be visualized as a library without a single physical lending item on the shelves, without books in print, library without shelves, just large cooled servers, whirring digital archives linked through digital networks with machines for copying and distribution. The components of Digital Libraries which will play a significant role in near future include: digital objects, metadata, repositories and harvesting, rights management, indexing, resource discovery, searching and retrieving, linking, interfaces and interaction, architectures, and interconnections. DLs are developed in highly distributed environments.

Paperless Society:- The image of a paperless society appears in both science fiction and science research. As computers have dropped in cost, increased in storage capacity, and become easily connected to each other, it seems that the dream of a paperless existence will become a reality. Lancaster and others envisioned a paperless society in which electronic publishing would eventually replace use of the printed word .Data are now available that confirm this trend. Using the total volume of words in broadcasting, publishing, the mails, and telecommunications, it has found that the use of electronic and digital media has grown rapidly, whereas the supply of words in print has leveled off or even declined.

Digital Classrooms: As we move further into the second decade of 21st century, digital services will continue to proliferate. Classrooms that are equipped with the latest digital media have the potential to provide more memorable and stimulating educational experiences. Digital classroom and availability of the wireless laptops makes the library an even more attractive and accommodating space for teaching and study. By increasing the convenience and range of technology available, the library can become a preferred place of study. Students with help of upcoming Digital Libraries will be able to go online and immediately access and play a video that has the exact moment in which was captured. If a student has his iPod he/she can instantly play his online educational course material videos in classroom. for digital content in the classroom will in coming years will increase pressures on Digital Libraries to mount more content. In coming years educators and students will reap the benefits of digital libraries that can be updated in real-time and are not hampered by storage restrictions.

Digital Talking Books: The first steps toward the worldwide transition from analog to digital talking books were taken in Sweden in 1988, when the Swedish Library of Talking Books and Braille (TPB) initiated a project to develop a digital talking book. The core of the concept was the phrase-based storage of audio. Digital talking Book was based on following abilities: Ability to skim the text, phrase by phrase or section by section, where each section is a collection of phrases; Ability to search for different elements in the text-based table of contents; Ability to search for specific pages in the talking book; Ability to place and search for bookmarks in the book; and in a future version, Ability to "underline" and make notes in the talking book.

Conclusion :- Libraries around the world have been working on this daunting set of challenges for several years now. The library/information center has to overcome the inhibitions and look ahead for the betterment of information services to the user community by successfully adopting the digital technology. The need of the hour and keep pace with world. It seems that the days may not far when the whole world would have digital libraries interconnecting all libraries to meet the academic and research needs within the short time. However, before digital libraries took over the library and information network, the country's archives laws needs to be changed to meet the current challenges in the areas of copyright protection of data and prevention of corruption of data. Librarians have discovered that, with a few exceptions, making a business case for digitization and investments in digital technology is more difficult than first envisioned, especially given the technical and legal constraints that must first be overcome.

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DIGITAL LIBRARY TECHNOLOGY IS HELPFUL PART OF UNIVERSITY LIBRARY

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Abstracts

Net savvy people a day, all of humanity has ever created, I believe that in the 21st century will be Available online. Call it a myth or truth is the future of the digital library. Because there unlimited real estate in cyberspace, digital media can be, we can fill cyberspace. All human knowledge and give access to none of it. Various forms of information have been identified as the most valuable and a powerful resource, information management discipline is forcing more Professional and technical updates. All information recorded in any form, can reveal in a common digital format. This is depicted in the vision papers "and the amazing potential sweep Community." This article will discuss the main objective is to describe technology trends in digital library Participation in the implementation of the digital library, and offers some of the new digital future trends Library.

Keywords: - Digital Libraries, University Library, e-Learning,

1. Introduction:- The concept of the digital library is already a comfort in an unfamiliar world, but in India. Everything they have become ubiquitous across the country, so a single company hosting your own digital library. However, It is not connected to the rest of the world has any value in a single isolated digital library. Education is the foundation of life in the history of the library; it is reinventing itself in today's network Community to meet these new requirements. Instead of building on the books, the library is evolving Electronic portals in a digital content, developing the collection. Door-to-virtual Library Week is now open 24 hours a day, seven days, and is the property of the library users when needed. You can easily find the best information on the library, includes advanced tools Resources, to provide for their own desktop or mobile computing device, press the button. Internet offers the opportunity to all potential worldwide. StepDELCO "digital library of all human knowledge accessible to any citizen at any time, wherever that will be Anywhere, with a friendly, multi-mode, efficient and effective way, by overcoming obstacles of distance, Language and culture, and many of the Internet to connect to the device using the "Still taking the number of active digital future digital library, as has become too complicated All over the world. Needs, expectations, and between different applications the digital library through the concept of user groups with broad participation Comprehensive. Sixth international caliber, 2008, Allahabad, Allahabad, February 28-29 March 1, 2008 © INFLIBNET Centre, Ahmedabad International caliber, 2008 Digital libraries can be defined as a collection of a wide range of future corporate entity Metadata, playlists, including the main source material for the purpose of intellectual property, learning Objects, data sets, and digital repository - organized and managed manner.

2. Digital Library and Its Future helping in University Library:- The digital library of text, voice and image (animation, graphics, photos and videos) can offer by the end of the relevant wireless network. Its purpose, go-clock service from anywhere. World Wide Web (www) plays an important role in the process. New it is technically possible services anytime, anywhere, has to offer. Libraries, Museums Trying to use technology to save and distribute valuable information for archives its digital library in the form of a user. It really is a digital library of the future, not science fiction or a librarian's nightmare A dream comes true. So, you can see that there was a digital library is a library in the future Financing projects in the body of the wardrobe, no printed books, just not great on library shelves Cooling Digital Archives whirring servers, copy machines connected by a digital network And distribution. Includes elements that play a significant role in the future of digital libraries: Digital Objects, metadata repository and harvest, rights management, indexing, resource discovery, Search and rescue, linking, interfaces and interactive architecture and interconnected highly distributed development environment. Especially in terms of how long the understanding, the future has been subject to speculation and controversy And a day of information, representation and access are stored.

3. Paperless Society:- The image appears in both science and science paperless society. The Computers, the cost will increase storage capacity to fall, and become easily attached It seems that the dream has become a reality for other papers. Lancaster, who envisioned a society, paperless electronic publishing will eventually Instead of using printed text. The data is now available to confirm this trend. Application Broadcast, publishing, news, and then the amount of Telecommunications, is it found in the use of electronic and digital media is growing rapidly, and supply Print word has stabilized or declined. The digital outputs will lead to the release of academic information and social papers. It is simply, in all print and digital text to be replaced, because the library because it is said, Construction projects will soon disappear. Support for Microsoft's Gordon Bell and Jim Gray fifty years, "nearly all predicted spatial information network. Including all the knowledge works.

4. Unrestricted Contact:- Uncontrolled growth of communication, anywhere, visually, "When are most likely to help achieve anytime, anywhere "access to digital content, wall removal, and we still have the traditional salad Library settings, despite decades of research DL. Unrestricted communication skills this refers to the combination of wireless and mobile technologies. It includes a variety of personal information Equipment and wearable computing devices demonstrated tremendous growth in the past, Years. Cellular phone or mobile phone, which is almost unheard of in the 1980s, is now using Millions of users around the world. According to

market research, user Cable service to 15 times faster than the basis for the development of wireless communication services.

5. Digital Classroom:-We enter the second decade of the 21st century, digital services will continue to spread. And provide greater efficiency must be equipped with the latest digital multimedia classrooms Irritation memorable and educational experience.

Analysis:- We are provided to following some questions to University library users and collected from 115 users for further statistical analysis. This is our limitations of our study. We used survey method and random sampling method for this analysis. The conclusions and statistical analysis are follows:-

Q.1.Are you used digital material in library campus regularly?

Sometime Used	Always Used	Never Used
30	78	7

In this above figure shown more than 68 % University library user used the digital materials in library campus.It means usages of digital materials is always than 85 %.

Q.2.Are you used your smart cell phone or palm tab for your e-learning in our library campus?

Yes	Not
111	4

In modern India smart phone or android phones used for digital use or e-learning is very high shown in above figure.

Q.3.Are you agreed that Digital Library system are verses to Traditional (Printed) library?

Extremely Not Agreed	Very Not Agreed	Somewhat Not Agreed
88	24	3

In that figure shown that digital library are not verses to our regular library it is always supporting or complementary to traditional library.

Q.4.Are you satisfied about availability non-print media of our library?

Good	Fair	Poor
89	22	4

This figure shows that every library is having lot of non print media available for better use of our library users.

Q.5.Are you satisfied about Web Based OPAC facility in our library?

Yes	No	Neutral
109	4	2

In our digital library era that best searching tool is Web based OPAC.OPAC are helps to all users for best searching tool like author, title or subject or publisher.

Conclusions:- In this paper, the digital classroom, digital audio books, oral, similar to Future Concepts Community, social and uncontrolled automobile communication.

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DIGITAL LIBRARIES AND FUTURE

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Abstract

A digital library is the new structure of the traditional library. The digital libraries trend comes into the 21st century. Virtual library, the digital library is the same concept. There are many reasons for digitization of libraries, but the main reason for digitization is that it is essential to reach user's good quality information. Author has discussed digital library, its benefits, failure, and future.

Keywords: Digital libraries, traditional library.

Introduction: S.R. Ranganathan (1892–1972), an impressive librarian and master, is considered the father of library science, wrote “five laws of library science”. In his fifth law, he said, that a library is a growing organism. Today is the world of technology, technology impacts falling all over .similarly technology has influenced the academic libraries. Due to technological impacts users are changing, content is changing, research is taking new forms so digital libraries must be the necessity of time. Digital library is the transfer form of books, periodicals, articles etc. into digital information format. Flexibility and reliability is the most important parts of digital information. Nowadays libraries can be facing the problems of increase in books and journals' price, less budget, incapability to provide multiple copies. The Digital Library has a digital representation of its objects. Digital libraries are popular as a digital version of the library.

Definition of digital libraries : According to the American Digital Library Federation, “ digital libraries are digital organizations that provide resources to the special staff, choose, structure, intellectual access, define, dispense, maintain honesty, and secure consistent timing of digital work so that it can be set up by a defined community”. The definition of digital libraries is as follows. Digital libraries are a collection of services, information collection, organizing information items, protection of those things, electronic availability and direct or indirect availability.

Advantage of digital Libraries: The main advantage of digital libraries is to save rare and fragile goods and increase access to many users at the same time. There are many reasons for digitization of libraries, but the main reason for digitization is that it is essential to reach user's good quality information. Other important items for digital libraries include quality protection, multiple references, archived storage, and security measures Digital collection, related technologies, and its functions are important features of the digital library. The purpose of the digital library is to improve access and maintain value addition, protection, and technology and information retention.

Development of digital libraries:Some important points have been considered for the development of digital libraries:1) Digitization: convert paper and others in digital format.2) Edit original digital works like electronics books, journals and databases.3) Access contents available in digital form4) Digital libraries access digital sources like electronic books, journals, databases, lectures, websites through licensed.5) Some technical requirements for digital libraries include hardware (like scanner, input devices computer / output devices), software, network and display technology. All the above are important parts of digitization.

Digital Library: tales1) Internet is a digital library2) If there is a digital library network, then any user can access resources from time to time. In such a situation, the Internet can be called a digital library.

3) Many library users access the digital library resources at the same time 4) Digital libraries will provide more access, anywhere, at any time.5) Price is concerned, sources of digital resources available better than print libraries are better.

Digital Library Challenges: Some of the important challenges are resource search, digital library administration, licensing, copyright

1) Develop improved technologies.2) Design search and recovery tools.3) Establish protocols and standards to promote digital libraries.4) Develop financial models to support national digital libraries.

5) A whole access to both digital and physical content.

Digital Library future and Failures

Digital Library future: The benefits of digital libraries are now recognized as way of accessing books, archives and different types of images easily and quickly, Traditional libraries have limited space; Digital libraries have the ability to save more information, so that they need small space just for digital information. The price of maintaining a digital library may be much less than the traditional library. Digital Conversion is one of the key benefits to users. The user of the digital library does not need to go to the library; People around the world easily reach the same information as long as the internet connection is available. One of the main advantages of digital libraries is that users access information 24/7, so that users can get information on providing the right network connectivity.The same resources can be used by many organizations and students. The user is able to use title, name and subject to search the entire collection. The digital library provides a fairly user-friendly interface, which can be right click on resources. Digitization is not a long solution for physical collection but it is successful in providing access to copies for reduced content from repeat users. Protection and conservation of data in digital libraries is an important issue. Although traditional librarieshave limited space, digital libraries have the ability to store moreinformation; Just so that they need to have less space for digital information .Some

features of the objects, mainly the quality of the images, can be improved. Digitization can increase clarity and cause visual errors such as stain and dirt. It saves precious times of users and is easily available. Also less dependency on library staff for getting information. It is fast publication and no need of large number of library staff for library works and services.

Digital Library Failures: There are also some disadvantages to the digital library, which are follows:

1) User authentication of access 2) Digital protection 3) Training and development. 4) Huge information generated every minutes 5) Use is limited due to copyrights act and licensing agreements 6) Access is currently unavailable due to problems and internet connection

Conclusion: The main purpose of the library is to provide quality services for to satisfy users with right information at the right time. The digital library is a trend, due to the digital library we actively transfer information but central purpose remains same i.e. to serve and teach to find users. Librarians play a leadership role in the digital library. Libraries all over the world have been working on this digital trend for many years. Libraries / Information Centers have to work using digital technology successfully, time needs to be taken and the initiatives have to be taken to improve the information services of the user community by making time for them and progressing the world simultaneously.

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DIGITAL LIBRARIES & FUTURE

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Abstract

A selective survey of current digital Libraries available on the web was undertaken, identifying which search features are present, The survey indicates that current digital libraries. Suggestions are made for enhancing the searchers effectiveness of digital libraries. This paper discusses the Digital Libraries & Future.

Keywords: *Digital Libraries, Dialog, Data star, www, OPAC.*

Introduction: The concept of digital libraries emerged in 1892 from the early ideas of Paul outlet in ways to cease to violent wars eliminate national boundaries, and allow humanity to become balanced He discussed in his book called "Birth of the information Age" about how to interlink millions of documents, images, audio and video files to gather so people could search in one system, He called in the "Mundaneum".

Definition of a traditional library: A building or room containing collections of books, periodicals, and sometimes films and recorded music for people to read, borrow, or...Collections of books and periodicals held in such a building or room. A digital library is an organized collection of resources made accessible to a defined community for reference or borrowing. It provides physical or digital access to material, and may be a physical building or room, or a virtual space, or both. A digital library is a library in which collections are stored in digital formats (as opposed to print, microform, or other media) and assessable via computers. The digital content may be stored locally, or accessed remotely via computer- networks. A digital library is a type of information retrieval system. "A potentially virtual organization, that comprehensively collects, manages and – that comprehensively collects, manages and –preserves for the long depth of time rich digital content, and offers to its targeted user communities specialized functionality on that content, of defined quality and according to comprehensive codified policies" The term digital libraries was first popularized by the NSF/DARPA Digital Libraries Initiative in 1994.

Academic repositories: Many academic libraries are actively involved in building institutional repositories of the institution's books, papers, theses, and other works which can be digitize or were 'born digital'. Many of these repositories are made available to the general public with few restrictions, in accordance with the goals of open access, in contrast to the publication of research in commercial journals, where the publishers often limit access right.

Digital Library Initiatives in India: India is in the experimental stages of digital libraries. Barring the Health Education Library for people (HELP), Mumbai, the Tata Institute of Fundamental Research (TIFR), Mumbai, IIT kharagpur, and National centre for science Information (NCSI), Bangalore, a majority of libraries provide bibliographic access only. IASLIC-LIST and the LIS-FORUM, along with the electronic newsletter, INFOWATCH Provide professional information. Information today and Tomorrow, INFLIBNET News letter, and the DESIDOC Bulletin of Information Technology (D-BIT) are a few other sources of current information on the use of ICTS and networks in INDIA. Research and development activities regarding digital libraries are being under taken in some institutions, for example, at the Deduction and Research network (ERNET) of Department of Electronics. Gol (<http://www.doe.ernet.in>) and the electronic library being developed at the Indian National Scientific Documentation centre (NISCAIR), New Delhi (<http://www.NISCAIR.org>). A brief account of some of the resources and services is presented below.

Searchable databases on the web from central Library of Indian Institute of Technology, Kharagur (IIT- Kgp) (<http://144.16.192.18> or <http://libweb.iitkgp.ernet.in>) Digitization at IIT-kgp Library initiated at the – beginning of 1990s. IIT-kgp is one of the six premier institutions of quality education in engineering and technology, the Indian Instituted of Technology (IITS) Electronic current awareness bulleting 'Info watch' beginning in July 1996 by the University Grants commission (UGC). (<http://144.16.72.150/ncsi/servies/lis-archive.html>)

The situation in India regarding digital libraries is very peculiar. Many government agencies, as well as institutions, mostly in the public sector, are engaged in some sort of work - regarding the digitization of libraries. Examples clearly indicate that the potential of ICTS for developing digital libraries has not been fully realized by the Goal.

Advantages: The advantages of digital libraries as a means of easily and rapidly accessing book, archives and images of various types are now widely recognized by commercial interests and public bodies a like. Traditional libraries are limited by storage space; digital libraries have the potential to store much more information, simply because digital information requires very little physical space to contain it. As such, the cost of maintaining a digital library can be much lower than that of a traditional library. A lower than that of a traditional library. A physical library must spend large sums of money paying for staff, book maintenance, rent and additional books.

No physical boundary: The user of a digital library need not to go to the library physically; people from all over the world can gain access to the same information, as long as an Internet connection is available.

Round the clock availability: A major advantage of digital libraries is that people can gain access 24/7 to the information.

Multiple accesses: The same resources can be used simultaneously by a number of institutions and patrons. This may not be the case for copyrighted material: a library may have a license for “lending out” only one copy at a time; this is achieved with a system of digital rights management where resources can become inaccessible after expiration of the lending period or after the lender chooses to make it inaccessible (equivalent to returning the resources).

Information retrieval: The users is able to use any search term (word, phrase, title, name, subject) to search the entire collection Digital libraries can provide very user-friendly interfaces, giving clickable access to its resources.

Preservation and conservation: Digitization is not a long term preservation solution for physical collections, but does succeed in providing access copies for materials that would otherwise fall to Degradation from repeated use, Digitized collections and born-digital objects pose many per derivation and conservation concerns that analog materials do not please see the following “problems” section of this page for examples.

Space: Whereas traditional libraries are limited by storage space, digital libraries have the potential to store much more information; simply because digital information required very little physical space to contain them and media storage technologies are more affordable than ever before

Added Value: Certain characteristics of objects, primarily the quality of images, may be improved Digitization can enhance legibility and remove visible flaws such as stains and discoloration.

Easily accessible: Digital libraries should enable any citizen to access all human knowledge anytime and anywhere, in a friendly, multi-modal, and efficient and anywhere, in a friendly, molt-modal, efficient, and effective way, by overcoming barriers of distance, languages, and culture and by using multiple Internet-Connected devise. **The Future:** Large scale digitization projects are underway at Google, the Million Book project, and Internet Archive. With continued improvements and Internet Archive. With continued improvements in book handling and presentation technologies such as optical character recognition and eBooks, and development of alternative depositories and business models, digital libraries are rapidly growing in popularity. Just as libraries have ventured into audio and video collections so have digital libraries such as the Internet Archive. According to Larry Lennon, Director of Information Management Technology at the nonprofit corporation should be for National Research Initiatives, “all the problems associated with digital libraries are wrapped up in achieving”.

Conclusion: There will be continuing expansion of digital library activities. IIS and computer science professionals face challenges that will lead to improved systems. More and more libraries will have departments and programs in the digital library arena. Digital libraries will build upon work being done in the information and data management area.

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ROLE OF LIBRARIAN IN E-GOVERNANCE ERA': FROM COLLEGE STUDENTS APPROACH

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Abstract

Present study is acquired major part of the government system. It is true combination of the system and library. Researcher adopted the survey method and for selecting the sample from population lottery method of random sampling is used. The population of the present study comprises science Students of L. K. Dr. P. R. Ghogrey Science College, Dhule (M.S.). The sample of 180 college students (in which 90 male students and 90 female students) was selected from L. K. Dr. P. R. Ghogrey Science College, Dhule, Maharashtra State, India. There are deciding two major objectives: to study the approach of college students towards role of librarian in e-governance era and to compare the approach of college students towards role of librarian in e-governance era. Tool used in present study is "Scale for Measuring Role of Librarian in E-governance Era". Major finding shows that there is a positive approach of male and female science college students towards role of librarian towards e-governance; Female mean value is greater than male mean value so from it is concluded that female approach is greater than male approach towards role of librarian in e-governance era.

Keywords: e-governance, era, approach, media, ruled, e-reports, e-database, bibliography.

INTRODUCTION: Government is a body selected by the people for people, and who wish to rule on people with transparently. Transparency is the key points of the government ruled. In democracy there are values to the government and the median of selection is through election. Today there is 21st century and we found maximum changes into that electronic media are one of important medium. Government planned for people and want to provide their plans to people that time for saving time and implement urgently electronic media should used. Various technologies are used in electronic media. So that technology is called e-media and government which is used this technology is called e-governance.

RATIONAL OF THE STUDY: E-governance is a part of country administration. Today's world is technological and need advanced knowledge. Libraries are source of providing this type of knowledge. The function of libraries encompasses new type of information resources, new approaches to acquisitions, new methods of storage and preservation, new approaches to classification and cataloguing, intensive use of electronic systems and networks and dramatic shifts in intellectual, organizational and electronic practices. The term e-resources came from digitalization. Today in libraries e-collections are increased. Digital libraries are providing effective service to the user like e-books, e-journals, e-content, e-reports, e-database, bibliography etc. In library there are two major pillars, one is user and second is provider. Now users are demands new trends therefore provider need to provide latest system to the users because user is main pillar of library management.

OBJECTIVES To study the approach of college students towards role of librarian in e-governance era. To compare the approach of college students towards role of librarian in e-governance era.

HYPOTHESIS There is no positive approach of college students towards role of librarian in e-governance era. There is no positive approach of male college students towards role of librarian in e-governance era. There is no positive approach of female college students towards role of librarian in e-governance era. There is no significance difference between mean score of the approach of college students towards role of librarian in e-governance era.

METHODS AND PROCEDURES:

METHOD OF RESEARCH: Considering the objectives, hypotheses and the nature of data to be collected, the survey method was adopted in the present study.

SAMPLING: The population of the present study comprises F. Y., S. Y. & T. Y. B. Sc. Students of L. K. Dr. P. R. Ghogrey Science College, Dhule (M.S.). The sample of 180 college students (in which 90 male students and 90 female students) was selected from L. K. Dr. P. R. Ghogrey Science College, Dhule, Maharashtra State, India; by using Lottery method of random sampling technique.

TOOL: For the measuring the approach of the science college student "Scale for Measuring Role of Librarian in E-governance Era" was self developed by researcher.

Table 1: Showing Interpretation of Science Students' Approach towards Role of Librarian in E-governance Era

Items	Interpretation	Range of Marking
	Very High Positive Approach towards Role of Librarian in E-	130-105
	High Positive Approach towards Role of Librarian in E-governance	104-79
	Moderate Positive Approach towards Role of Librarian in E-	78-53
	Low Positive Approach towards Role of Librarian in E-governance	52-27
	Very Low Positive Approach towards Role of Librarian in E-	26-0

ANALYSIS OF DATA AND FINDINGS: After collecting the data the interpretation done by following way:

Objective 1: To study the approach of college students towards role of librarian in e-governance era. Results pertaining to the first objective indicated the following Approaches of science college students towards Role of Librarian in E-governance Era:

1.1 Interpretation of Male Science Students' Approach towards Role of Librarian in E-governance Era

Table 2: Showing Interpretation of Male Science Students' Approach towards Role of Librarian in E-governance Era

Items	Interpretation	Range of	Number of Male	Percentage
	Very High Positive Approach towards Role	130-105	49	54.44
	High Positive Approach towards Role of	104-79	27	30
	Moderate Positive Approach towards Role	78-53	14	15.56
	Low Positive Approach towards Role of	52-27	0	00
	Very Low Positive Approach towards Role	26-0	0	00

From the above table, it be concluded that

- I. 84.44% male student showed High Positive Approach towards Role of Librarian in E-governance Era. In this level 54.44 % male students showed very high positive approach towards role of librarian in E-governance era.
- II. 15.56% % male student showed Moderate Positive Approach towards Role of Librarian in E-governance Era.
- III. None of the male students showed Low Positive Approach towards Role of Librarian in E-governance Era.

1.2 Interpretation of Female Science Students' Approach towards Role of Librarian in E-governance Era

Table 3: Showing Interpretation of Female Science Students' Approach towards Role of Librarian in E-governance Era

Items	Interpretation	Range of	Number of Female	Percentage
	Very High Positive Approach towards Role	130-105	72	80
	High Positive Approach towards Role of	104-79	14	15.56
	Moderate Positive Approach towards Role of	78-53	04	4.44
	Low Positive Approach towards Role of	52-27	00	00
	Very Low Positive Approach towards Role of	26-0	00	00

From the above table, it be concluded that

- I. 95.56% female student showed High Positive Approach towards Role of Librarian in E-governance Era. In this level 80 % female students showed very high positive approach towards role of librarian in E-governance era.
- II. 15.56% % female student showed Moderate Positive Approach towards Role of Librarian in E-governance Era.
- III. None of the female students showed Low Positive Approach towards Role of Librarian in E-governance Era.

1.3 Interpretation of Science Students' Approach towards Role of Librarian in E-governance Era

Table 4: Showing Interpretation of Science Students' Approach towards Role of Librarian in E-governance Era

Items	Interpretation	Range of	Number of Students	Percentage
	Very High Positive Approach towards	130-105	121	67.22
	High Positive Approach towards Role of	104-79	41	22.78
	Moderate Positive Approach towards Role	78-53	18	10
	Low Positive Approach towards Role of	52-27	00	00
	Very Low Positive Approach towards	26-0	00	00

From the above table, it be concluded that

- I. 90.00% student showed High Positive Approach towards Role of Librarian in E-governance Era. In this level 68 % students showed very high positive approach towards role of librarian in E-governance era.
- II. 10% student showed Moderate Positive Approach towards Role of Librarian in E-governance Era.
- III. None of the students showed Low Positive Approach towards Role of Librarian in E-governance Era.

For getting the objective-1 there are need to analyze the hypotheses. So for getting objective-1 hypotheses are tested as per below:

Hypo-1: There is no positive approach of college students towards role of librarian in e-governance era.

Table 5: Data Analysis in Mean, 't' Observation & Hypothesis Acceptation/Rejection

No.	Mean	Data		Significance	Observation	Hypothesis
		't' obs	't' tab			
180	107.03	23.00	1.97	0.05	't'obs>'t'tab	Ho-1 Rejected

From the above table, for degrees of freedom (df) 179 observed 't' is 23.00 and the critical table value of 't' is 1.97. Observed 't' is greater than table 't' value, it shows significance difference between observe 't' and table 't'. It means hypothesis 1 is rejected. It shows that there is positive approach of college students towards role of librarian in e-governance era. Therefore, above hypothesis no. 1 is rejected. The mean value is 107.03, it shows very high positive approach of college students towards role of librarian in e-governance era.

Hypo-2: There is no positive approach of male college students towards role of librarian in e-governance era.

Table 6: Data Analysis in Mean, 't' Observation & Hypothesis Acceptation/Rejection

No.	Mean	Data		Significance	Observation	Hypothesis
		't' obs	't' tab			
90	101.63	12.36	1.98	0.05	't'obs>'t'tab	Ho-2 Rejected

From the above table, for degrees of freedom (df) 89 observed 't' is 12.36 and the critical table value of 't' is 1.98. Observed 't' is greater than table 't' value, it shows significance difference between observe 't' and table 't'. It means hypothesis 2 is rejected.

It shows that there is positive approach of male college students towards role of librarian in e-governance era. Therefore, above hypothesis no. 2 is rejected. The mean value is 101.63, it shows high positive approach of college students towards role of librarian in e-governance era.

Hypo-3: There is no positive approach of female college students towards role of librarian in e-governance era.

Table 7: Data Analysis in Mean, 't' Observation & Hypothesis Acceptation/Rejection

No.	Mean	Data		Significance	Observation	Hypothesis
		't' obs	't' tab			
90	112.43	23.76	1.98	0.05	't'obs>'t'tab	Ho-3 Rejected

From the above table, for degrees of freedom (df) 89 observed 't' is 23.76 and the critical table value of 't' is 1.98. Observed 't' is greater than table 't' value, it shows significance difference between observe 't' and table 't'. It means hypothesis 3 is rejected. It shows that there is positive approach of male college students towards role of librarian in e-governance era. Therefore, above hypothesis no. 3 is rejected. The mean value is 112.43, it shows very high positive approach of college students towards role of librarian in e-governance era.

Objective 2: To compare the approach of college students towards role of librarian in e-governance era.

For getting the objective-2 researcher have formulated following hypothesis:

Hypo-4: There is no significance difference between mean score of the approach of college students towards role of librarian in e-governance era.

Table 8: Data Analysis of Mean, 't' Observation & Hypothesis Acceptation/Rejection

Students	No.	Mean	Data		Observation	Hypothesis
			't' obs	't' tab		
Male Student	90	101.63	4.50	1.98	't'obs<'t'tab	Ho4 Rejected
Female Student	90	112.43				

From the above table, for degrees of freedom (df) 178 observed 't' is 4.50 and the critical table value of 't' is 1.98. Observed 't' is greater than table 't' value, it shows significance difference between observe 't' and table 't'. It means hypothesis 4 is rejected. It shows that there is significance difference between mean score of the approach of college students towards role of librarian in e-governance era. Therefore, above hypothesis no. 4 is rejected. Male student's mean value is 101.63 which shows high positive approach and female students mean value is 112.43 which shows very high positive approach towards role of librarian in e-governance era. Female mean value is greater than male mean value so from it is concluded that female approach is greater than male approach towards role of librarian in e-governance era.

RESULTS: 84.44% male student showed High Positive Approach towards Role of Librarian in E-governance Era. In this level 54.44 % male students showed very high positive approach towards role of librarian in E-governance era. 15.56% % male student showed Moderate Positive Approach towards Role of Librarian in E-governance Era. 95.56% female student showed High Positive Approach towards Role of Librarian in E-governance Era. In this level 80 % female students showed very high positive approach towards role of librarian in E-governance era. 15.56% % female student showed Moderate Positive Approach towards Role of Librarian in E-governance Era. 90.00% student showed High Positive Approach towards Role of Librarian in E-governance Era. In this level 68 % students showed very high positive approach towards role of librarian in E-governance era. 10% student showed Moderate Positive Approach towards Role of Librarian in E-governance Era.

DIGITAL LIBRARY: BOON OF INFORMATION ERA

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Abstract

The present paper discuss and throws lights on concept of Digital Library in information era and also discuss features, aims, objectives, need, components, merits and demerits of Digital Library .It also deals the different definitions of well-known Authors of Digital Library.

Introduction and Background Digital Library: “Digital Library” has a multiplicity of probable meanings, ranging from a digitized collection of material that one might find in a traditional library through to the collection of all digital information along with the services that make information need and useful to all possible users. Nowadays library material is include information stored on physical carriers such as micro film, video, tape CD ROM ,DVDs etc. As the WG discussed possible scenarios and challenge problems to drive our discussion of matrices, we found the need to come to at least a loose agreement on the scope of the digital library. This document is intended to serve that purpose. Much of the question about the scope of the term is how broad a view should be taken of the digital library. Does it encompass all of information management or is more tightly constrained view appropriate. In this document, and for the purposes of the deliberations of the WG, we choose to take a very broad view. This is driven by the recognition that to do otherwise would require setting boundaries that are fairly artificial. The structure of this document is as follows. In the first section, a brief definition of the term “Digital Library” is given, as a set of characteristics. The remainder of the document elaborates each of those characteristics.

Concept and Definitions of Digital Library :A digital library is an electronic library ,Information is acquired, store, and retrieved in digital form(Modern form),Digital Library is a group of interlinked workstations connected to high speed networks.Digital Library includes text, photographs, drawings, artwork, numeric data, and images with sound.

Definitions: There are many definitions of a ‘Digital Library’ terms such as ‘Electronics Library’ an ‘Virtual Library’ are often used synonymously. The elements that have been identified as common to these definitions are: According to *Wiederhold*“A digital library is popularly viewed as an electronic version of a library where storage is in digital form, allowing direct communication to obtain material and copying it from a master version”

According to *Oppenheim and Smithson* digital library is:

“An information service in which all the information resources are available in computer process able form and the functions of acquisition, storage, preservation, retrieval, access ad display are carried out through the use of digital technologies.”

Components of the Digital Library

Following key components are necessary for the Digital Library. Gateway registry/metadata,Building content and tools (TULIP,PEAK, Core Journal, Text initiatives, Electronic Reference Shelf, Visual Image projects),Production services,Conversion and preservation,Research and development ,Requirement for digital libraries

Aims, Objectives & Goals of Digital Library ,To provide library services and information services to its users, anywhere, anytime, anyplace (24x7).Better utilization of the resources as the Digital Library is time and space independent .Share the resources globally.To increase the access both online and offline

To preserve the documents and manuscripts,To collect, store organize, access, information in digital form ,Better and value added library services.The overall objective is to provide efficient, economic, qualitative, and pin pointed services.To have the maximum storage of information and retrieve information .Space saving .Resource sharing through networks.To provide remote logon facility

Impact of Digital Libraries:Improved use of Information, Reeducation of Digital Library,Brings information to the user, Improved searching & manipulation, Improved facilities for information sharing
Timely access to information ,

Need of the Digital Library in the Information Era : Information Explosion:There is explosion of information generation and publication , Searching problem in traditional libraries In traditional libraries, it not easy to find the pinpoint information to the right user at the right time

Low cost of technology: Technology needed for digital library is decreasing and efficiency is increasing.

Environmental factors: The use of electronic resources decreases the paper publishing and it automatically saves the trees.

New generation needs: Today users are demanding information in electronic form and minimum time.

Features of the Digital Library: It focuses on providing access to primary or complete information not merely indexes.It supports multimedia content.It Provides User friendly interfaceIt Provides access to very large

collection of information. Network accessible. It supports the advance search & retrieval. Enable link representation to local, external object. Clearly separates the user interface by employing client server architecture.

Merits of the Digital Library: Information Retrieval, Cost, Multiple Access, Networking, No Physical Boundary, Preservation and Conservation, Space, 24 x 7 Service

Demerits of the Digital Library: Initial Cost Is High, Copyright, Technological Obsolescence (Hardware & Software), Physical problems, Environment of Library, Trained manpower, User education and training, Security against hacking & sabotage

Challenge of the Digital Library in the information Era: An equal challenge is the ability of individuals and organization to devise ways that use technology effectively, to absorb the inevitable changes, and to create the required social frameworks. The world of information is like a huge machine with many participants each contributing their experience, expertise, and resources. To make fundamental changes in the system requires interrelated shifts in the economic, social and legal relationships amongst these parties. Digital libraries depend on people and cannot be introduced faster than people and organizations can adapt. This applies equally to the creators, users and the professionals who support them. The relationships amongst these groups are changing. With digital libraries readers are more likely to go directly to information without visiting a library building or having any contact with a professional intermediary. Authors carry out more of preparation of a manuscript. Professionals need new skills and new training to support these new while others can be taught. Since librarians have a career path based around schools of librarianship, these schools are adapting their curriculum but it will be many years before the changes work through the system.

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Building Digital Library of Captured Educational Experience – George D. Abowd, Lonnie D. Harvel & Jason A. Brotherton

ROLE OF DIGITAL LIBRARY IN THE ACADEMIC COLLEGE LIBRARIES: AN OVERVIEW

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Abstract

This paper is the overview role of digital library in academic college libraries. The aim of this paper is to examine current trends in the development of digital libraries with particular reference to the academic college libraries. Digital library is not a single unit, but a complex of multi unit. Which provides instant access to all information for all sectors of society from anywhere in the World. The objective of the present paper is to highlight the importance of the digital libraries, characteristics, functions, services of the digital libraries in academic libraries.

Keywords: Digital Library, Information Technology, Electronic Libraries.

Introduction: Enabling technologies resulted in moving libraries and information centers in the digital age. Previously, librarians had to depend largely on their own staff to prepare in-house operation carried out in the library. But, in digital library age information is readily available. A digital Library is a very complex and dynamic entity. It is complex entity because it is completely based on ICT systems and the concept is recent origin. The main aim of digital library is to provide ready access to acquire the required information at right time, to the right user, at right information. The collection of digital library is not limited to document surrogates, they extend to digital artifacts that cannot be represented or distributed in printed formats. Therefore, Digital Library is not a single unit, but a complex of multi unit. Which provides instant access to all information for all sectors of society from anywhere in the World. The concept of digital library is as old as the electronic computer self. The digital libraries are basically information storage and retrieval mechanisms. Therefore, digital libraries have opened up a very large window of opportunity to spread knowledge across a very wide population. Now a day, digital libraries are used heavily by a wide spectrum of users. Thus, the role of digital library in the spreading of knowledge is well known. They play a vital role in the development of the Academic College libraries. These Libraries are occupied a privacy place in the dissemination of current and up to date information to needy clientless. Digital Libraries are very useful to Researchers, Scholars, and Scientists and for the Post Graduate students and the others also. The Objective of the present paper is to highlight the importance of the digital libraries, characteristics, functions, services of the digital libraries in academic libraries.

Meaning and Definition of Digital Library: Digital Libraries do not mean libraries in the classical sense, but a network of multimedia systems. A typical digital is a media library is a group of distributed repositories that users see as a single repository in digital form. The term Digital Library has been defined by many different ways. It is a library different people in many different ways. It is a library in which the holdings are found in digitized form. It is a library that exists, without any regard to a physical space or location. It is a technology way to bring together the resources of various libraries and information services, both internal and external, all in one place. So users can find what they need quickly and easily. There are many definitions of a 'Digital Library'. A Digital Library is consisting of digital materials and services. The digital materials are items that are stored, processed and transformed via digital devices and networks. According to Don Waters defined that "Digital Libraries are organizations that provide the resources, including the specialized staff to select, structure, offer intellectual access to, distribute, preserve the integrity of and ensure the persistence over time of collections of digital works so that they are readily and economically available for use by a defined community or set of communities". According to Edward A. Fox "A Digital Library is machine readable representation of materials which might be found in a university library together with organization intends to help users to find specific information". Hence Digital Library is a library which exists solely in the digitized form.

Purpose of Digital Library: The purpose of a digital library system are--to expedite the systematic development of the means to collect, and organize information and knowledge in digital form.-to promote the economical and efficient delivery of information to all sectors of society.-to encourage co-operative efforts which leverage the considerable investment in research resources, computing and communications network.
-to strengthen communication and collaboration between and among the research, business, government, and educational communities. -to take an international role in the generation and dissemination of knowledge in areas of strategic importance.
-to contribute to the life-long learning opportunities for all.

Objectives of Digital Library: The objectives of digital library as mentioned below are--to collect, store, organize and access information in digital form via communication channels.-to meet the requirements of users by providing better services.-to provide personalized and retrospective services in efficient way.-to have large digitized database.-to save the time of library staff by avoiding routine jobs.
-to provide coherent view of all information within a library in any format.-to serve widely dispersed communities throughout the network.-to minimize massive storage and space problem of large libraries.
-to reduce cost involved in various library activities.

Characteristic features of Digital Library: The characteristics features of digital library are--search for a particular journal or newspaper article-search for some full text book titles.-browse electronic resources by subject.-access many full text journal and newspaper articles both on and off-campus.-find good websites

relevant to your subject area or on topic.-Users are usually elsewhere than the information they want, and often wish to correlate things from several sources.-Different patrons are permitted different actions and to see different parts of each collection.-To find specific information, each user must understand the catalog structure.-The catalogs may describe items not actually held as part of the collection at hand.-The catalog and the collected items are used differently and not necessarily housed in the sameplace.

Functions of Digital Library: The functions of digital libraries are as below--provide access to a very large information collection.-support multimedia content.-network accessible.-Provide user friendly interface.-Unique referencing of digital objects.-support advanced search and retrieval.**Services of Digital Library:** The services of digital library are to enable the users to access the information required for their research purpose and also for knowledge enhancement. Digital Library will additionally bring the significant opportunities for the library to improve access and the value. Digital library services include information about all the services, collections, digital courses, library instructions sessions and services through the digital library. Digital library can enhance the services provided to users and also to reach new users. The specific services of digital libraries include providing remote access library sources.-both printed and non-printed, services deliveries and generations information on library.-references services provided by libraries and experts on the webs.

Components of Digital Library: Digital library not only cover text in machine readable form, but also in graphics, photographs, videos and so on. Nowadays most of the printed books are available in the digital form.The three major components of digital library are--Documents-in digital libraries, collections contain fixed and permanent documents in digital form.-Technology- digital library are based on technology.-Work- Digital libraries are to be used either online or offline.

Issues in the Development of Digital Library: The dramatic growth of the internet in recent years has accelerated the pace of change and the debate over the role and future of information intermediary has intensified. There are five areas that need addressing before the digital library can become a readily. They are -- Technical issues-Legal issues -Economic issues -Psychological issues -Educational issues

Role of Digital Library in the Academic College Libraries: Today's era digital products and services are given in every field. Libraries are also not exempted from it. Today most of the academic libraries converted in traditional format to digital format e.g. services, materials, e-books, digital books, etc. In this regard Prime Minister of India Shri Narendra Modiji launched digital India for digital empowerment of citizens. It's national programme conducted by Government of India. Thus libraries are changing their services in digital format.

Advantages of Digital Library: Digital Libraries are visualized as benchmark in the technology and practicing knowledge dissemination. The action words for digital library are 'do something, start getting in voled and must participate'.-Accessibility from anywhere.-Provide access to more information than possible to physically acquire and maintain.-Support both formal and information learning.-Media integration.-Remote access to expensive and rare material.- Greater opportunity for publishing.

Disadvantages of Digital Library:-Costly affair.-Technology obsolescence(Hardware and Software)
-Storage media related.-Trained manpower.-User education and training.

Suggestions: Today, the digital libraries are very essential to every user of Academic libraries to update their knowledge. So that the following suggestions are made--There is urgent need to digitize the library material of every academic college library.-The steps should be taken to evolve the policies regarding digitization.-The Maharashtra Government Higher Education Council and University Grant Commission should provide special funds for digitization of library materials.-The academic college staff should be given training in the digitization process.-There is very much need of co-operation from the college Principals and the Management of College to the Librarians in allrespect. -Lastly, the students and users should also show interest in the utilization of digitized library material.

Conclusions: Librarians act as catalysts in enhancing information flow. Now a librarian has to keeps track of current information in digital form and make them available to the needy user.These are the multiple roles that a modern librarian is required to play. These roles are every interesting yet challenging. It is therefore pertinent on the part of librarian to acquire new skills required for developing and managing the modern library.

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ROLE OF LIBRARIES IN E-GOVERNANCE

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Abstract

Abstract the enabling role of the Information and Communication technology (ICT) in the delivery of services in the public and government sector has gained acceptance. As a result, a revolution in terms of governance is taking place all over. E-Governance assumes greater importance in the context of management of today's governmental structures to achieve rapid economic growth and improved quality of life. The technology and the methods used in E-Governance project provide a roadmap for efficient delivery of services at the door step. In today's time the development of any country depends on the uses of E-Governance and also their penetration. Development of any country can be judge by the scope of E-Governance in that country. It has ushered in transparency in the governing process; saving of time due to provision of services through single window; reduction in corruption, convenience and empowerment. There are many challenges which creating problems for Indian government to run e-governance. In this paper we want to explore the usefulness of e governance for the government businesses and citizen of India.

Introduction: E-Governance is nothing but use of internet technology as a platform for exchanging information, providing services and transacting with citizens, businesses, and other arms of government. E-Governance provides a sound strategy to strengthen overall governance. It can not only improve accountability, transparency and efficiency of 676 KiranYadav&SanatanTiwari government processes, but also facilitate sustainable and inclusive growth. E-Governance also provides a mechanism of direct delivery of public services to the marginal segments of the society in the remotest corners, without having to deal with intermediaries.

Definition of E-Governance: E-governance is an emerging trend to re-invest the ways the government work and a new model of governance would be based upon the transactions in virtual space, digital economy and dealing with knowledge oriented societies. In simple words it is the application of ICTs to governmental functioning to accomplish simple, accountable, speedy, responsive and transparent administration in government. But, E-governance doesn't mean mere computerization of all government office operations or government web-sites on the internet. With the new tools, a networked society's government must completely rethink and re-engineer itself. It is complete transformation of the existing style. Although conventionally the prefix 'e' suggests that an activity is electronic but 'e' also denotes efficiency, effectiveness, empowerment, economic- social development and enhanced services. E-governance is the public sector's use of information and communication technologies with the aim of improving service delivery, encouraging citizens in the decision making process and making government accountable, transparent and effective.

Importance of E-Governance: The importance of e-governance is to enhance efficiency, provide total transparency, high responsiveness, accountability, convenience and accessibility of services and information from the point of view of citizens. From governments perspective it is to abolish corruption, cut in costs, an antidote to 'Parkinson's law' i.e., "works expands to fulfill available". Instant quick reactions in time crisis, easy access to data bases for officials as well as keeping an eye on subordinates and availability of services to public anytime, anywhere. In fact the purpose of e-governance is to develop "an IT driven system of governance that works better, costs less and is capable of serving the citizens as never before". It is to promote good governance and democracy by ensuring participation of and feedback from the public and making the administration SMART (simple, moral, accountable, responsive and transparent).

Role of E-Governance: Network technology has made virtual reality possible, wherein a person can work sitting at home; moreover, in all information processing systems, communication and interaction are facilitated. The application of ICT has been found to be highly useful in governance, which is known as e-governance, or electronic governance. It plays an important role: Increase efficiency by automation, computerization and networking. Supports effective decentralization decision-making by providing an efficient information flow. Increase accountability of public services to agencies to citizens. Improves resource management. Offers the various departments and agencies involved in public service provision, the facility of effective interface with the citizens. Increase the accessibility of individual citizens to information and services and allow them to influence government operations. Provides comprehensive database which helps policy makers to design, formulate and evaluate policies. Facilitates the strategic planning processes which help organization to clearly lay down the objectives, goals, programmers' and projects. Enables reduction of paperwork with the use of e-mail and electronic data interchange. Enables marketization by supplying information related to the market and enhance public service. Public libraries are called public Universities as they play a vital role in informing and educating the public during and after their formal education. Libraries in a free society always perform the fundamental function of keeping the public well informed, which is a pre-condition of e-governance. For quite a long time government has used libraries to inform people of their work and policies. Libraries are essential to the free flow of ideas and to maintaining, increasing and spreading knowledge.

Libraries can play an important role in the promotion of e-governance: Already established libraries especially public libraries can be used as information centers or public kiosks in the absence of basic infrastructure. Internet connections and other equipment can be provided to them on subsidy basis and the public

should be allowed to use them by becoming members of these libraries as is done in several advanced countries like U.S.A., Canada. etc. These libraries can work as depository libraries for all types of government information from where the public can access and monitor the work of its elected officials and policy makers. Libraries can also help to bridge divide in the digital contents by providing special services to the general public. Libraries ensure to freedom to speech, the freedom to read and freedom to view. When the people are better informed, they are more likely to participate in the political process, thus keeping an eye on their elected representatives and making them more accountable. Local and state government needs access to information from comparable jurisdiction in order to do their work effectively and efficiently. **Community information services via the E-Governance:** Services provided at the villager's door steps via the e-governance route can presumably cut out the inherent social biases. India really is a land of contrast. We still have a huge section of the society living in the dire poverty, utter ignorance and illiteracy. The important task of e-governance is to remain in touch with the concerned authorities in villages, blocks, tehsil and districts and even in the Metropolis. Richard Heeks points out that governance is both, the present and the future of developing countries like India, which still have a long way to go. Currently, more than half of India's villages lack telephone connectivity, let alone internet access. **Conclusion:** E-governance is step towards reform in government and administration. These reforms focus on bringing improvements in the service delivery, dissemination of information, transparency, public and private partnership, efficiency and accountability. There is an urgent need for sustainable development, In developing countries like India, it is not easy to fulfill all the pre-conditions. But it does not mean we should not go ahead with e-governance. For the successful working of democracy, the empowerment of its citizen is a pre-condition, which can only be achieved by making people fully informed and aware.

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THE ROLE OF ELECTRONIC POSTGRADUATE PATHSHALA IN ELECTRONIC LEARNING

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Introduction- The Internet has become one of the important ways to get electronic resources as like e-books, e-journals, and Audio, Video materials for research and teaching, learning process both students and teachers. In the technology-based electronic learning encompasses the use of the internet and other information and communication technologies such as smart mobile, laptop, computer and other tools. In the higher educational institutions using e-learning technologies very huge for teaching and learning process. The origin of e-learning term is not certain, it is suggested that the term most likely originated during the 1980. The adoption of electronic learning in education, specially for higher educational instructions has several benefits such as any students can access videos via internet. In the modern digital era various projects launched by various organizations for providing electronic videos as like Information Library Network, Gandhinagar (INFLIBNET) introduced epg pathshala for providing videos on various subjects. Several authors and study has provided benefits and advantages derived from the adoption of e-learning technologies into college, Indian Institute of Technologies and various academic and research institute. Some major studies indicate that e-learning facility is very important to the students, researcher and other academician. With the help of e-learning in education is its focus on the need of individual learners as an important factor in the process of education rather than on the educational institutions.

Definition of e-learning- Nichols- “ Electronic learning as strictly being accessible using technological tools that are either web based, web- distributed, or web- capable.” In this study he indicates that various information and communication technologies are used for accessing video and e-learning they are web based materials. In the modern technological era many web portals are launched by various organizations, agencies, bodies for provide e-learning facility to the students and other academic staff. The use of e-learning not only use content and instructional materials methods delivered via CD-ROM and the internet based resources. In general words we say that many organizations and institutions provide different forms of training and instruction to their employees or students via internet and other related technologies such as video conferencing, e-formats, and computer based learning. E-learning process provide many **advantages** to online and computer-based **learning** when compared to traditional face-to-face courses and lectures.

Advantages of e-learning- The use of electronic learning process for some students who coming to another country to study something is impossible, especially if they want only to study a certain course instead of receiving a degree. E-learning simplifies the process greatly, allowing students from all over the world to complete courses created by professor and other academic staff who world's best universities. E-learning enhances the efficacy of knowledge and qualifications via easy access to the students, researcher and other academic staff and e-learning tools provide very huge amount of information on the various knowledge discipline as like social sciences, sciences, humanities and other branches of knowledge. This benefits of electronic learning to students too, allowing them to communicate and study along with people coming from different cultures. Sure, there are colleges that offer multicultural experience too, but they aren't as diverse as the online learning institutions.

E-learning provide cost effective facility in the sense of that is need for the students or learner travel. It is also provide cost effective service in the sense of that it offers opportunities for learning for huge number of learners with no need for many building. With the help of e-learning process students can access knowledge via internet and without boundaries with 24x7 hours.

EPG Pathshala- An Ministry of Human Resource Development, under its National Mission on Education through Information and Communication Technology (NME-ICT), has assigned work to the University Grant Commission New Delhi for development of e-content in 77 subjects in difference disciplines such as Social Sciences, Basic Sciences, Language, Literature, Engineering technology, Law and hermetical studies at postgraduate level. The content and its quality is the key component of education system. With the help of EPG Pathshala any users can access High quality information, curriculum-based, interactive content in different subjects across all disciplines of social sciences, arts, fine arts & humanities, natural & mathematical sciences, linguistics and languages is being developed under this initiative named e-PG Pathshala. [On the auspicious presence of Hon'ble President Shri. Pranav Mukherjee, Hon'ble HRM Shri. Prakash Javedkar, Hon'ble State HRM Shri. Mahendra Nath Pandey, the e-PG Pathshala Video is shown.](#) e-PG Pathshala: The MHRD, under its National Mission on Education through ICT, has Sanction vide communication No. F.B-13/2011-TEL dated 29th September 2011, Grant in Aid to University Grant Commission for production of e-content in 77 subjects at postgraduate level. This project is very essential for distance learner, students, researcher and other academic people who interest in teaching and learning process. The INFLIBNET provide video on 77 subjects with high quality and free of cost so majority of the students they access for learning purpose. The content and its quality being the key component of education system, it is proposed to create high quality, curriculum-based, interactive content in different subject across all disciplines of social sciences, arts, fine arts & humanities,

natural & mathematical sciences and linguistics and languages. E-content, so developed would be available in open access through a dedicated Learning Management System as well as through Sakshat Portal. Standing Committee, e-PG Pathshal.

Home Page of EPG Pathshala-



The Homepage of EPG Pathshala is very user friendly so any students can access easy so the use of this project is continuously increased.

Subject Category of EPG Pathshala-



Arts and Humanities – With the help of EPG Pathshala any students, researcher and other people can access free of cost video, e-content and self learning with various branch such as Architecture, Comparative Literature, Comparative study of Religion, History, Home Science, M. Planning, Performing Arts and Philosophy. Language- In this subject category any users can access video, download video, download PDF materials on the various sub discipline of language with forging level language and Indian category as like Chinese, English, Hindi, Japanese, Russian Studies, Sanskrit, Spanish and Urdu language. Engineering and technology- In this subject category various discipline include such as Analytical Chemistry, Computational Science, Computer Science, Electronic Science, Human resources Management, Informational Technology, Management, Material Science and Disaster Management. Life Sciences- Life Sciences is the core parts of this projects because of in this category video is very essential for the students so majority of the students use this video, e-text as like Biochemistry, Biotechnology, Botany, food Nutrition and Microbiology. Medical and Health Science- Under this category EPG Pathshala provide various videos, electronic text with PDF on various bran chases such as Bioinformatics, Biophysics, Pharmaceutical science, Physical education, Health and education, Social Medicine and community Health, and Zoology. Physical and Basic Sciences- EPG Pathshala provide videos and electronic text to the students, Professor and other academic people on various subjects as like Chemistry, earth science, Environmental Sciences, geology, Mathematical science, Physics and Statics. Social sciences- Under this Category EPGPathshala provide various subjects on social science. The use of this category is very high because of majority subjects covered in this category.

Subject wise Videos uploads on Web Portal-



Advantages of EPG Pathshala- EPG Pathshala is a project run by Information Library Network and University Grant Commission for providing videos to students, researcher and other professional. This project provide e text, and video on 77 subjects with free of cost and any person can access video and its easily download on the EPG Pathshala portal. EPG Pathshala helps to the scarcities of academic staff, students, including instructors or teachers as well as other person who can interest in education and particular subjects. The use of EPG Pathshala allows self –pacing. For instant the asynchronous way permits each students to study at his or her own pace speed whether slow or quick. Any user can access videos and text on the basic of his or her interest. This project always takes into consideration the individual learners differences. Some learners, for instance prefer to concentrate on certain parts of the course, while other are prepared to review the entire course. EPG Pathshala project is cost effective in the sense of that there is no need for the students or learners to travel. It is also cost effective in the sense that is offers opportunities for learning for maximum number of learners with no need for many or any building. With the help of EPG Pathshalastudents, researcher and any person who can use this portal they enables us to quickly create and communicate new policies about their subjects, training, innovation

ideas, and access new concepts from the various subject experts. Using EPG Pathshala allows students, professors, researcher and any person to achieve a great degree of coverage for their target audience because of with the help of these project users can access subject knowledge for complete degree. This one is pretty well known, and a staple of any well-done EPG Pathshala program. With the use of these programs users can reduce time away from the workplace, eliminates the need for travel, and removes the need for classroom-based training and users can access information from anywhere.

Conclusion- In the past few years continuously growth of using EPG Pathshala because of this project provides flexibility facility to the users. The major advantages of this project are its flexibility and any users can access videos, text at his or her own comfort, place, and time. With the help of this project users enables to take any video from his place. EPG Pathshala is a portal developed by Information Library Network for providing video to students very faster more than traditional learning resources so its popularity is very fast growing among the students, researcher and professor. Project provides may choose the topic of his choice engages the interested learners to go through this project. Any users can access videos for updating their knowledge about the subject and update can be rolled out instantly and easily with the help of online video. Due to the project users can save the time and money for accessing video and text materials on the portal. Printing and travelling charges can be saved as the learner takes the video online and there is no need of any training material as such. Project help to the users to save their time and money.

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E-RESOURCES IN LIBRARY SERVICES

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Abstract

The concept of e-resources has proved to be very significant in this world of technology and hence the readers' and the staff (library staff) time, money and efforts (energy) is saved. There is quality in tasks. If e-resources are considered from the point of view of service, I.T., financial issues etc; they are very essential. Because of these e-resources, it is doubtless to access to every reader across the world in every nook and cranny and it has also become easy to communicate information.

Keywords: Library, Internet, Computer, E-Books, E-journals, CD Rom, Pen-drive, e-mail .

Introduction: Library imparts lion's share in the human social economic, educational and cultural development right (since) from the Neolithic age to the present age of information technology. Before the invention of printing art for the communication of information; metals, stones tree barks, animal hides etc. sources were used on a large scale. But in the course of time, different things like printing technique, photography, sound recording, video films, television, videotape, computer technology the Internet etc. things government invented. The development of library science seems to be very swift due to computers and the Internet Information has been available/accessible to the readers through the Internet in electronic and digital forms. Nowadays most of the information is accumulated (collected) in digital form. Nowadays information has been growing a lot. At such time, it seems to be indispensable to communicate this information to the readers through e-resources from the library. The consumers can avail of it.

The Concept of E-Resources: In library there are many kinds of manuscripts. Out of them, many are worn-out and fragile. But this material is essential from the point of view of research such material can neither be taken away nor be used in the library by the readers. That's why, it becomes indispensable to digitalize this material. This material is communicated by transforming it into CDs, Video, Pen Drive, Floppy, etc. Such type of information is made available free of charge or with charge. It is called e-resources. The libraries in which such type of information is communicated are said to be paperless libraries, virtual libraries, on-line libraries, electronic libraries etc.

Type of E-Resources: The type of e-resources can be cited as following.

E-Books: Nowadays, electronics is used for various things in the modern age. E means the first letter 'E' of the English word 'electronics' and books means books as usual. Vis, e-book means an electronic book or electric atom book. The book traditionally printed on paper is called printed book. New types of books being electronically prepared are called E-books. In order to make such books, there is no need of papers. It is typed on a computer. In order to read these books only computer is to be used. Besides this, they can be read on laptop, tab, mobile phone and special e-books reader also. Many books are available on the Internet in the form of PDF. Such e-books are available on the Internet since 1970; Readers can be access to the readers by subscribing some amount or can also be downloaded free of charge. These e-books involve multifarious information; such as voices, pictures, prose etc. are also involved. The Internet also publishes such type of books. A very big revolution has come in this publication due to technology. Due to the Internet, many copies of books can be stored. Because of such books, they occupy very short place.

Kinds of e-books: Kinds of e-books can be stated as following:

They are-Text Books, Picture Books, Multimedia Books, Hypermedia Books, Telemedia Books, Besides these, they are called as per the following name also. Viz.-paperless books, virtual books, network books, CD Rom Books, etc.

An example of e-book:- www.booksonline.com, www.classicbookshelf.com, www.shop.ibrary.com

Advantages of e-books: the advantages of e-books can be stated as following: E-books can be available any time within 24 hrs.No one can steal these books (no plagiarism)Such types of books can't be missing.These books get ready as per demand; within a short time.

Disadvantages of e-books:It can't be read incessantly.Many readers don't concede (accept) these books.Can't be read comfortably like printed books.Electronic gadgets are needed for the access to the books.

E-Journals and Periodicals: First all, the concept of e-journals and e-periodicals emerged in 1945. The articles, e-journals, e-periodicals which are written published and read with the help of computers are called e-journals and e-periodicals. Ultramodern information is accessed to the readers suitably t the readers on time. They serve this purpose. These journals have imparted valuable help to the readers, researchers, publishers and, teachers and students. That's why, these e-journals are providing to be very popular. These journals are published by publishers and is made available to the readers through the Internet by paying monthly or annual subscription. The journal that has its own name can be read with the help of computers or readers. It is not confined to one reader only.

Kinds of e-journals and e-periodicals: Online periodicals, CD Rom Periodicals, Network Periodicals.

Instance of e-journals and e-periodicals: www.diiib.org, www.aslib.co.uk/idoc/, ww.jic.com

E-newspapers: In the modern age of the Internet and computer making the readers access to daily happening diurnal fresh news, views of the readers, columns, articles, research information, articles on various subjects,

various types of ads, etc. type of information is computerized and made available for the readers at very low cost/expense. Out of these, the most essential information can be typed. Besides this, such information is abstracted.

E-card: Different types of information regarding birthdays, valentine day, Diwali, Dassera, Christmas, New year etc. festivities or festivals etc. Can be sent on the Internet including greeting cards, visiting cards printing etc. such new concept it is in the form of audio, video,; on the netizen's e-mail id. For this purpose, having e-mail id is mandatory. The number of companies producing these cards is numerous. E-letters senders are increasing day by day since they use e-letters on a large scale.

CD Rom: In the modern age of information technology the world has been in the form of a global village due to the decreasing prices of computers and due to the material needed for the technology of communication. In this case, a tremendous amount of information can be stored. The strong capacity of CD is about 700mb. 4gb data can be stored in DVD. CD Rom is the most important e-resource. These equipments are used for the conveyance of information from one place to another and also for storing important information. We can open it on the CD reader for reading and using it on computer. CD is easy for handling and transferring. We can download the data with the help of the CD writer inside the computer and can also open this information with the help of CD reader.

Pen-Drive: In order to store various types of data such as video, video files, pen drives are used. It is very convenient and memory device. It is useful for trafficking and available at low cost. There are USB port to the CPU of computers. In this part, after connecting a pen-drive, we can copy the information we want. That information can be pasted in another computer. The memory capacity of pen-drive is 4GB to 400 GB available in these forms. Pen-drives of many companies are available in market.

E-mail: First of all, it is necessary to create an email address. Some websites like Gmail, rediffmail, google, yahoo etc. Are available on the Internet. We can open account on these sites. Some types of information on PDF can be communicated. A message, data, pathos, greeting card, invitation card, word, excel, information in the form of PDF, abstract, message, letter, the order for things etc. information can be transferred. E-mail can be transferred at many places. This saves time, money and energy. If such facilities are started in a library many tasks can be done conveniently. Because of e-resources, so many things can be done rapidly—such as the growing demand of readers, inadequacy of place, easy to use, easy to search, easy to reuse. We can browse information from anywhere. It does not have time limitation. The collection of reading aids can be done in short places. Because of all these reasons, e-resources feel to be essential.

Challenges in Libraries Due to e-resources: Taking into consideration the growing demands and needs of the readers and researchers, libraries have to change their roles. It is essential to make the provision of finance to meet the demands of readers. It has become mandatory for the libraries to accept new technology, acquiring it, making room available etc. for this purpose doing the application of these resources in libraries and taking them to the readers for this purpose the modern librarian must be well-equipped with e-resources. It is the need of the time. They should take the training of using these resources. The library staff should be ready with the training. Libraries should discharge the functions related to guidance, the process of downloading, printing facility etc. besides this, libraries should bear the following challenges. Change is the law of life; it should be adopted. Technology should be adopted in management. All the libraries should accept information technology. Rural readers and libraries should be given the training of new technology. Economic planning should be done for buying machinery of all types in libraries. The staff should be mentally prepared to accept the technological changes. In order to sustain in the age of competition modern technology should be adopted. In order to strengthen grip (hold) on our occupation, training is essential.

Advantages of E-resources in Libraries: The best service is imparted in minimum time by using technology. Many readers can be given this service at a time (simultaneously). It is the need of time for the readers, staff and libraries. The content of e-publication can easily and quickly be improved. This service comes in useful anywhere and anytime in the world. New and modern information can be communicated quickly. Quick service to the consumer. No responsibility of maintaining books on library. It saves many when money is subscribed jointly.

Disadvantages of E-resources in Libraries: Expenditure is to be done in library regarding Computer, Internet, connection etc. basic facilities. Reading is to be done continuously sitting at computer. The point of copyright is not clear (vivid). It is essential to give training to the readers and the staff of the library. Browsing precise information is hard.

Summary: In the modern age of information literacy, many e—resources are available regarding the information technology and communication. It is essential also to avail them. That's why, libraries should be supplied with computers, the Internet, integral (incessant) electric supply etc. that's why, essential provision should be done. Besides them, in this age of information technology, no libraries can be self sufficient.

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EXPLORATION OF CLOUD COMPUTING TECHNOLOGY IN DIGITAL LIBRARY: AN OVERVIEW

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Abstract

Cloud Computing is the third major invention in the field of information and technology after computer and internet. It is eco-friendly device and a milestone for a paperless society. This paper describes exploration of cloud computing technology and the basic concept of cloud computing explored in libraries. It overview the importance of cloud computing and how it works in digital libraries. This paper also describes the importance and changing scenario of library automation and library services empowerment by the help of different enhancement tools of cloud computing.

Keywords: Cloud Computing, Web Service, Library-Cloud, Computer Applications, Library Software, Digital Library

Introduction: During the last century, drastic changes in information communication technologies such as advances in different software, computing power, storage, and networking technology have allowed the human race to generate, process, and share increasing amounts of information in dramatically new ways. New applications of computing technology are developed and introduced. These new applications, in turn, lead to new demands for even more powerful computing infrastructure. It is now possible to assemble very large, powerful systems consisting of many small, inexpensive commodity components because computers have become smaller and less expensive, disk drive capacity continues to increase, and networks have gotten faster. Cloud computing is the evolution of a variety of technologies that have come together to change an organization's approach for building an IT infrastructure. The cloud computing term describes a variety of different types of computing concepts that involve a large number of computers connected through a real time communication network. Cloud computing refers to the delivery of computing resources over the Internet. Instead of keeping data on your own hard drive or updating applications for your needs, you use a service over the Internet, at another location, to store your information or use its applications. Cloud services are popular because people can access their e-mail, social networking site or photo service from anywhere in the world, at any time, at minimal or no charge. Some cloud providers may, however, use the personal information of users for advertising purposes or to learn more about the users for other reasons. Numerous companies and research organizations are applying cloud-computing concepts to their business or research problems including numerous libraries. Cloud services allow individuals and businesses to use software and hardware that are managed by third parties at remote locations. The cloud computing model allows access to information and computer resources from anywhere that a network connection is available. It provides a shared pool of resources, including data storage space, networks, computer processing power, and specialized corporate and user applications. The following definition of cloud computing has been developed by the U.S. National Institute of Standards and Technology (NIST): Cloud services are popular because they can reduce the cost and complexity of owning and operating computers and networks. Cloud computing is often considered efficient because it allows organizations to free up resources to focus on innovation and product development. Another potential benefit is that personal information may be better protected in the cloud. Specifically, cloud computing may improve efforts to build privacy protection into technology from the start and the use of better security mechanisms. The major characteristics of the Cloud are On-demand self service which means that customers can request and manage their own computing resources. Broad network access allows services to be offered over the Internet or private networks. A service consumer can automatically make use of the computing capabilities, such as server processing time and network storage without requiring human interaction with each service's provider. The user have easily available the Broad network access as per his requirement. Cloud systems automatically control and optimize resources used by leveraging a metering capability in which resources' usage can be monitored, controlled, and reported, providing transparency for both the provider and consumer of the utilized service. The advantage here is that you are paying for exactly what you are using.

Private Cloud: The cloud infrastructure has been deployed, and is maintained and operated for a specific organization. The operation may be in-house or with a third party on the premises.

Community Cloud: The cloud infrastructure is shared among a number of organizations with similar interests and requirements. This may help limit the capital expenditure costs for its establishment as the costs are shared among the organizations. The operation may be in-house or with a third party on the premises.

Public Cloud: The cloud infrastructure is available to the public on a commercial basis by a cloud service provider. This enables a consumer to develop and deploy a service in the cloud with very little financial outlay compared to the capital expenditure requirements normally associated with other deployment options.

Hybrid Cloud: The cloud infrastructure consists of a number of clouds of any type, but the clouds have the ability through their interfaces to allow data and/or applications to be moved from one cloud to another. This can be a combination of private and public clouds that support the requirement to retain some data in an organization, and also the need to offer services in the cloud.

Role of Cloud Computing In Libraries: Cloud computing is a completely new in technology and it is known as 3rd revolution after PC and Internet. Cloud computing is an enhancement of distributed computing, parallel computing, grid computing and distributed databases. Among these, grid and utility computing are known as

predecessors of cloud computing. It has large potential for libraries. Libraries may put more and more content into the cloud. Using cloud computing user would be able to browse a physical shelf of books, CDs or DVDs or choose to take out an item or scan a bar code into his mobile device. All historical and rare documents would be scanned into a comprehensive, easily searchable database and would be accessible to any researcher. Many libraries already have online catalogues and share bibliographic data with OCLC. More frequent online catalogues are linked to consortium that share resources. In digital libraries data storage cloud be a main function of libraries, particularly those with digital collections storing large digital files can stress local server infrastructures. The files need to be backed up, maintained, and reproduced for patrons. This can strain the data integrity as well as hog bandwidth. Moving data to the cloud may be a leap of faith for some library professionals. A new technology and on the surface it is believed that library would have some control over this data or collections. However, with faster retrieval times for requests and local server space it could improve storage solutions for libraries. Cloud computing or IT infrastructure that exists remotely, often gives users increased capacity and less need for updates and maintenance, and has gained wider acceptance among library professionals. Cloud computing in digital libraries is becoming very popular now days because they use cloud architecture in which internet based 'on demand service' is provided. They provide flexible e-books and other document lending service through in-library hardware. Catalogue searching facility in the library is provided through the touch-based terminals and books selected will be checked out to users along with e-readers. Users can borrow digital books in their mobile devices, iPads and android based tablets.

World Share Management Services (WMS) is an integrated suite of cloud-based library management applications of OCLC offer libraries cost savings, workflow efficiencies and the ability to deliver new value to users by sharing data and work across many member libraries. WMS integrates all electronic and print resource management workflows including selection, acquisitions and maintenance within the same Web-based World Share interface. World Cat Discovery provides your library more visibility on the Web and better information about your systems. A report authoring tool which provides user-specified, peer comparisons based on OCLC cooperative data is also available at an additional cost.

Ex Libris: It is a leading provider of library automation solutions, offering comprehensive product suite for the discovery, management and distribution of all materials print, electronic, and digital. Ex Libris caters to libraries of all type and size and to large consortia. It is built on open architecture and are flexible, customizable, easy to maintain and manage, and Unicode-compliant, with full multilingual capabilities. It can be implemented as stand-alone solutions or integrated with existing environments. Ex Libris has developed the Alma, the cloud-based library resource management system to consolidate, optimize and extend the range of library services.

Polaris Integrated Library System: The Polaris ILS provides a robust and scalable software solution with powerful staff tools and an intuitive experience for patrons. The Polaris ILS built on a Microsoft SQL server database platform with documented APIs is open to connections with third-party vendors, with patrons and their social media, and with resources beyond the walls. Its integrated expanded functionality enables direct access to e-content, shared collections, and outside systems.

Dura Cloud: Dura Cloud is an open source platform developed by Dura Space which was released broadly as a service in 2011. It provides on-demand storage and services for digital content in the cloud for academic libraries, academic research centers, and other cultural heritage organizations. Dura Cloud enables digital preservation, data access, transformation and data sharing. It helps to move copies of content of any shape or size into the cloud and store them with several different providers and offers compute services. The Dura Cloud easy-to-use dashboard allow scholars to easily upload and download content and permits to add tags and metadata to content through their interface.

Lib Lime: It is one of the most innovative technology platforms which bring new realities of open access, interoperability, rapid and flexible development. It is used by all types of libraries and consortia with confidence as it couples the concept of open source with the security of outstanding customer service and relieves libraries from the need to have expensive technical resources on staff. Hosted in Lib Lime's distributed cloud computing data center, hundreds of libraries are able to alleviate their internal IT support needs.

The 3M Cloud Library Application: The 3M Cloud Library application is an innovative way to browse borrow and read popular fiction and non-fiction eBooks from local public library. Patron should have a valid library card to use the 3M Cloud Library App and the library needs to have a subscription to the 3M Cloud Library service. Users can use the 3M Cloud Library PC Software to transfer e-books to their Nook Simple Touch, Kobo e-Reader, or Sony e-Reader. One can take notes while reading or can create their own bookmark. The 3M Cloud Library automatically synchronizes to all your devices that have the 3M Cloud Library App downloaded to them. User can start reading on his iPad and even continue reading from his phone right where he has left off. The application has the ability to transfer content to a personal e-reader using either an existing Adobe ID or using the 3M Cloud Library ID. Cloud computing offers many interesting possibilities for libraries that may help to reduce technology cost and increase capacity reliability, and performance for some type of automation activities. Cloud computing has made strong inroads into other commercial sectors and is now beginning to find more application in library science.

Conclusion: Cloud computing is the term given to the use of multiple server computers via a digital network as if they were one computer. The Cloud itself is a virtualization of resources networks, servers, applications, data storage and services which the end user need. There is a great advantage of Cloud computing in digital libraries. It is very flexible, transparent and user centric. It saves time and cost and available anytime everywhere. Cloud computing enhances digital library services by its innovative applications: OCLC, Library of Congress, ExLibris, Polaris, Scribd, Discovery Service, Google Docs, Google Scholar, World Cat, Encore and 3M Cloud.

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STUDY THE ATTITUDE OF SCIENCE COLLEGE STUDENTS TOWARDS DIGITAL LIBRARY

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Abstract

In present study researcher studied about the attitude of Science College students towards digital library. For which researcher decided to study and compare the attitude from target group for which survey method was used. For selection of sample researcher was used the stratified sampling technique of random sampling technique and 98 science college students of Vidyadhan College Valvadi, Dhule (M.S.) was selected. Major finding of the study is as: the attitude of male and female students is found very high positive towards digital library as well rural and urban students attitude is also found very high positive towards digital library; there were not found significant difference in the attitude of male & female as well rural & urban students towards digital library.

Keywords: digital library, science, attitude, ICT, CD-ROM, networking, computerization

INTRODUCTION: Digital libraries are the outcomes of ICT (Information, Communication and Technology) explosion. In developed countries libraries are being to connect with each other remote hosts to conduct online searches for commercial digital biographic databases. The invention of CD-ROM in 1980 was turning point in digitalization of information. In 1987 first electronic thesis was introduced. The World Wide Web projected was firstly proposed and continued to 1993 and the revolution is helped to the nation for development. 1990's marked a progressive more towards digitalization due to networking, electronic document, delivery services, online services, electronic services. Digital libraries are emerging concept of modern age. Libraries provide books from which readers, researchers and inventors are provided the knowledge. Books are always performs central point for reserve the knowledge full information but there are some limitation for the printed material. Therefore for taking the place of printed material there were produces electronic medium and now it is converted into the digitalization. Books are having the same place but the nature of books storage is changed. It looks towards new emerging technologies. When there are arises the problems into the reading at the time of examination that time references helpful for the students. First of all students went towards the library but after using the technological support library came towards the students.

RATIONAL OF THE STUDY:

Why Digital Libraries? The universe reached towards each other for getting the knowledge and information which is necessary to the human. Human is a social animal which is lived in the society and communicate with language which needed information. From it is cleared that information is a midpoint of the society, now the question is that which how the information collected, transferred and stored. The form of information and capacity is very large; it can't be counted into the measures. Human wants this information for communication or for living the life. First of all finds the nature of information which is found in captured type; now collect it into the unit bond and turned towards the user. For getting the meaning to this information human need to understand it. Now second point is that how and where this information will store? The answer is that the information storage capacity is in the computer where we have stored this information and used it through the internet medium. The storage and transfer rate of internet is very high therefore human used it for their development. Information is thing which is need to human any time any where therefore the medium needed strong to transfer of it. Now the education system is a second point where this information is used and education is the developing back bone of the society. Now understand the education system that time one thing is cleared that the library is the center of it. Library needed enriched with the references or book.

OBJECTIVES: To study the attitude of science college students towards digital library. To compare the attitude of science college students towards digital library. To study the attitude of rural and urban science college students towards digital library. To compare the attitude of rural and urban science college students towards digital library.

HYPOTHESIS: There is no positive attitude of science college students towards digital library. There is no positive attitude of science college male students towards digital library. There is no positive attitude of science college female students towards digital library. There is no positive attitude of science college rural students towards digital library. There is no positive attitude of science college urban students towards digital library. There is no significance difference between mean score of the attitude of male and female science college students towards digital library. There is no significance difference between mean score of the attitude of rural and urban science college students towards digital library.

METHODS AND PROCEDURES:

METHOD OF RESEARCH: Considering the objectives, hypotheses and the nature of data to be collected, the survey method was adopted in the present study.

SAMPLING: The population of the present study comprises F. Y., S. Y. & T. Y. B. Sc. Students of Vidyadhan College Valvadi, Dhule (M.S.). Researcher was selected total 98 students in the sample in which 60 are male students and 38 female students. There are 56 students came from urban area and 42 students came from rural area. For selection of sample researcher was used the stratified sampling technique of random sampling.

TOOL: For the data collection researcher was used "Attitude Scale of Digital Library".

Table 1: Showing Interpretation of Science Students' Attitude towards Digital Library

Items	Interpretation		Range	of
	Very High Positive attitude towards digital library		150-121	
	High Positive attitude towards digital library		120-91	
	Moderate attitude towards digital library		90-61	
	Negativeattitude towards digital library		60-31	
	Very High Negativeattitude towards digital library		30-0	

ANALYSIS OF DATA AND FINDINGS: After collecting the data the interpretation done as per objectives by following way:

Objective 1: To study the attitude of science college students towards digital library.

For getting the first objective researcher have formulated following hypotheses:

Hypo-1: There is no positive attitude of science college students towards digital library.

Table 2: Data Analysis in Mean, 't' Observation & Hypothesis Acceptation/Rejection

No.	Mean	Data		Significance	Observation	Hypothesis
		't' obs	't' tab			
98	122.20	't' obs	't' tab	0.05	't' obs > 't' tab	Ho-1 Rejected
		17.08	1.98			

From the above table, for degrees of freedom (df) 97 observed 't' is 17.08 and the critical table value of 't' is 1.98. Observed 't' is greater than table 't' value, it shows significance difference between observe 't' and table 't'. It means hypothesis 1 is rejected. It shows that there is positive attitude of science college students towards digital library. Therefore, above hypothesis no. 1 is rejected. The mean value is 122.20, it shows very high positive attitude of science college students towards digital library.

Hypo-2: There is no positive attitude of science college male students towards digital library.

Table 3: Data Analysis in Mean, 't' Observation & Hypothesis Acceptation/Rejection

No.	Mean	Data		Significance	Observation	Hypothesis
		't' obs	't' tab			
60	121.53	't' obs	't' tab	0.05	't' obs > 't' tab	Ho-2 Rejected
		12.61	2.00			

From the above table, for degrees of freedom (df) 59 observed 't' is 12.61 and the critical table value of 't' is 2.00. Observed 't' is greater than table 't' value, it shows significance difference between observe 't' and table 't'. It means hypothesis 2 is rejected. It shows that there is positive attitude of science college male students towards digital library. Therefore, above hypothesis no. 2 is rejected. The mean value is 121.53, it shows very high positive attitude of science college male students towards digital library.

Hypo-3: There is no positive attitude of science college female students towards digital library.

Table 4: Data Analysis in Mean, 't' Observation & Hypothesis Acceptation/Rejection

No.	Mean	Data		Significance	Observation	Hypothesis
		't' obs	't' tab			
38	123.26	't' obs	't' tab	0.05	't' obs > 't' tab	Ho-3 Rejected
		11.59	2.02			

From the above table, for degrees of freedom (df) 37 observed 't' is 11.59 and the critical table value of 't' is 2.02. Observed 't' is greater than table 't' value, it shows significance difference between observe 't' and table 't'. It means hypothesis 3 is rejected. It shows that there is positive attitude of science college female students towards digital library. Therefore, above hypothesis no. 3 is rejected. The mean value is 122.26, it shows very high positive attitude of science college female students towards digital library.

Objective 2: To compare the attitude of science college students towards digital library.

For getting the objective-2 researcher have formulated following hypothesis:

Hypo-6: There is no significance difference between mean score of the attitude of male and female science college students towards digital library.

Table 5: Data Analysis of Mean, 't' Observation & Hypothesis Acceptation/Rejection

Students	No.	Mean	Data		Observation	Hypothesis
			't' obs	't' tab		
Male Student	60	121.53	0.44	1.98	't' obs < 't' tab	Ho 6 Accepted
Female Student	38	123.26				

From the above table, for degrees of freedom (df) 96 observed 't' is 0.44 and the critical table value of 't' is 1.98. Observed 't' is less than table 't' value, it shows no significance difference between observe 't' and table 't'. It means hypothesis 6 is accepted. It shows that there is no significance difference between mean score of the

attitude of male and female science college students towards digital library. Therefore, above hypothesis no. 6 is accepted. Male student's mean value is 121.53 and female students mean value is 123.26 which show very high positive attitude towards digital library.

Objective 3: To study the attitude of rural and urban science college students towards digital library. For getting the above objective researcher have formulated following hypotheses:

Hypo-4: There is no positive attitude of science college rural students towards digital library.

Table 6: Data Analysis in Mean, 't' Observation & Hypothesis Acceptation/Rejection

No.	Mean	Data		Significance	Observation	Hypothesis
		't' obs	't' tab			
42	121.26	't' obs	't' tab	0.05	't' obs > 't' tab	Ho-4 Rejected
		10.48	2.01			

From the above table, for degrees of freedom (df) 41 observed 't' is 10.48 and the critical table value of 't' is 2.01. Observed 't' is greater than table 't' value, it shows significance difference between observe 't' and table 't'. It means hypothesis 4 is rejected. It shows that there is positive attitude of science college rural students towards digital library. Therefore, above hypothesis no. 4 is rejected. The mean value is 121.26, it shows very high positive attitude of science college rural students towards digital library.

Hypo-5: There is no positive attitude of science college urban students towards digital library.

Table 7: Data Analysis in Mean, 't' Observation & Hypothesis Acceptation/Rejection

No.	Mean	Data		Significance	Observation	Hypothesis
		't' obs	't' tab			
56	122.91	't' obs	't' tab	0.05	't' obs > 't' tab	Ho-5 Rejected
		13.46	2.00			

From the above table, for degrees of freedom (df) 55 observed 't' is 13.46 and the critical table value of 't' is 2.00. Observed 't' is greater than table 't' value, it shows significance difference between observe 't' and table 't'. It means hypothesis 5 is rejected. It shows that there is positive attitude of science college rural students towards digital library. Therefore, above hypothesis no. 5 is rejected. The mean value is 122.91, it shows very high positive attitude of science college urban students towards digital library.

Objective 4: To compare the attitude of rural and urban science college students towards digital library.

For getting the objective-4 researcher have formulated following hypothesis:

Hypo-7: There is no significance difference between mean score of the attitude of rural and urban science college students towards digital library.

Table 8: Data Analysis of Mean, 't' Observation & Hypothesis Acceptation/Rejection

Students	No.	Mean	Data		Observation	Hypothesis
Rural Student	42	121.26	't' obs	't' tab	't' obs < 't' tab	Ho7 Accepted
			0.43	1.98		
Urban Student	56	122.91				

From the above table, for degrees of freedom (df) 96 observed 't' is 0.43 and the critical table value of 't' is 1.98. Observed 't' is less than table 't' value, it shows no significance difference between observe 't' and table 't'. It means hypothesis 7 is accepted. It shows that there is no significance difference between mean score of the attitude of rural and urban science college students towards digital library. Therefore, above hypothesis no. 7 is accepted. Rural student's mean value is 121.26 and urban student's mean value is 122.91 which shows very high positive attitude towards digital library.

RESULTS:

1. There is positive attitude of science college students towards digital library.
2. There is positive attitude of science college male students towards digital library.
3. There is positive attitude of science college female students towards digital library.
4. There is no significance difference between mean score of the attitude of male and female science college students towards digital library.
5. There is positive attitude of science college rural students towards digital library.

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DIGITAL LIBRARY AND INFORMATION LITERACY IN DIGITAL ENVIRONMENT

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Abstract

The Use of information technology in the library is the prime necessity in the digital era. The purpose of this paper is to describe concept of the digital library with its advantages, need and challenges etc. It also deals with importance of information literacy and need of information literacy for all users.

Keywords: Digital Library, Information Literacy & Digitization, Digital Environment.

1. Introduction: Modern society is based on information. The traditional concept of libraries, which was completely based on print media, is changing to digital/electronic form with the help of information technology. A digital library is highly organized collection of electronic learning resources. Digital library is a media server and with search engine it helps online. Access of information in which all the functions of acquisition, storage/preservation, retrieval, access and display are carried out through the use of digital/electronic form. Many users have problem to use this facility due to lack of information literacy. Information literacy is the most important in digital/electronic library in this era.

2. Digital Library: A digital library is a library consisting of digital material and services. Digital materials are items that are stored, processed and transferred via digital devices and networks. Digital services are delivered digitally over computer networks. It maintains all or substantial part of its collection in computer accessible form as an alternative, supplement or complement to conventional printed and microform materials that currently dominate library collection.

3. Definitions of Digital Library: Smith (2001) defined a digital library as an organized and focused collection of digital objects, including text, images, video and audio, with the methods of access and retrieval and for the selection, creation, organization, maintenance and sharing of collection.

Digital Library Federation defines Digital Library as Digital Libraries are organization that provide the resources, including the specialized staff to select, structure, offer intellectual access to interpret, distribute, preserve the integrity of and ensure the persistence over time of collections of digital works so that they are readily and economically available for use by a defined community or set of communities.

A digital library may be considered to be any of these (William, 1995) :
 • machine-readable data files;
 • components of the emerging National Information Infrastructure;
 • various online databases and CD-ROM information products;
 • computer information storage devices on which information resides;

• computerized networked library systems.

4. Need for digital libraries: There are number of reasons for building up digital libraries such as
 -The need of information.-The overcome financial constrain of the library.-Availability of information in digital form.-To reduce space problem.-Management problem of existing libraries.-Availability of Technology.-Digitization is a tool for preservation.

5. Function of Digital library:-Provide access to very large information collection.-Support multi-media content-Provide user friendly interface.-Support advanced search and retrieval.-Information available for a very long time.-It also supports traditional library mission of collection development, organization, access and preservation of information.

6. Process of digitization

i) Manual data entry ii) The scanning process. iii) Optical character recognition There after some processes must be carried out in steps as follows. a) Clean up b) Page analysis c) Recognition d) Checking e) Saving.

7. Need of information literacy in digital era: In information rich world, where scope of available information appears limitless in different digital forms and formats, there is growing need for users to become critical users of information. They should learn the techniques and skills for using the wide range of information tool as well as primary sources in molding information solution to their problems. What information is found is not important. Further the development of technologies and changing information environment needs new skills in seeking processing and using information. People trained in the application of information resources to their work can ordinarily be called information literate.

The needs for information literacy arise due to following reasons. 1) Rapid increase in the stream of information. 2) Advent of information and communication technologies. 3) Vast variety of information sources. 4) Changing shape of libraries. 5) Wide dispersal of information. 6) Rise in number of users. 7) Research on complex and interdisciplinary topics.

8. Prerequisites of information literacy: Hence, information literate is a person who--Recognizes the need for information-Formulates questions based on information needs.-Identifies potential sources of information develops successful search strategies.-Accesses sources of information including computer based and other technologies.-Evaluates information. -Organizes information for practical application.

-Integrates new information into existing body of knowledge.-Uses information in critical thinking and problem solving.

9. Methods used for advancement of information literacy:-Lectures and seminars.-Seminars and demonstration.-Printed guides and books, newsletters, promotional leaf-lets describing system and database, database user manual and text books.-Audio visual material like video tapes films and audio cassettes.- Individual instruction and online courses/tutorials.

10. Conclusion: Information literacy is the problems mainly concerned to the user, Majority of the users have no skill to using digital information. So educating user to handle the digital library resources and technology is the main aspect of information literacy. The special training program must be arranged to make users literate. These programs may be in the form of seminars, workshops of short duration about 2 to 4 days. If the library systems are user friendly then short duration programs would be appropriate to literate users. The library must have special funds for implementing literacy programs.

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DIGITAL LIBRARIES AND FUTURE

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Abstract

The paper presents the Digital libraries and its future. Information and communication technology (ICT) has brought in a revolution and transformed the way libraries perform. Day by day ICT is occupying and indispensable and significance role in Libraries. These days' digitization and libraries are like hand in gloves and are ready to cater to the needs of entire universe. Like information seeking behavior of academicians, educationists, teachers, research scholars, students and others has completely undergone a remarkable change. Each one wants information within seconds that too fast and accurate.

Keywords: concept of digital library, paradigm shift of academic libraries, future challenge and opportunities.

Introduction: The emergence and widespread use of internet and web technologies have made profound impact on traditional library operations, management and services. Libraries have undergone a transformation from a manual system to a technologically driven system. Libraries of all size and types are now adopting the latest technologies and innovations in order to find new way to organize and manage information resources and to provide a user- centred information. Likewise information seeking behaviour of academicians, educationists, teachers, research scholars, students and others has completely undergone a remarkable change. Each one wants information within seconds that that too fast and accurate.

Concept of Digital Library: Digital revolution is a buzz word in the society. Digital library is leading slogan these days. Its impact on the libraries is enormous and clearly visible. In the digital library, all the collections or the major part of the collections are in digital or electronic mode. This helps the users to use or access with a machine or device any point of time at any places requesting the book to be issued is much easier than its print version. It save the time, use time is reduced and searching the collection is easier too. These preferences have affected the users to change their attitude and mindset in the library use. At the same time financial burdens are reduced to some extent, in purchasing those desired materials for the users. The resource crunch is no more a hindrance to the library authority. "Librarians must define their roles now, before the future overtakes them.

Paradigm shift in Academic Libraries: It is quite evident that mandate of the academic libraries is to support the academic and scholarly mission of their respective colleges and universities. Being the treasure trove of knowledge and gateways of information, academic libraries and librarians have to explore innovative ways to fulfil the information and associated needs of readers especially keeping in view the paradigmatic shift in knowledge generation and management, constant invention of new web technologies, penetration of information and communication technologies, availability of open web resources and presence of information search and retrieval giant like GOOGLE. All these have changed the users demand scenario and therefore in order to fulfil and meet the demand and expectations of all its users, libraries and there policy makers have rise to occasion and to change and redesign their activates to deliver high quality, need based, value added services by adopting new and innovative technologies

Future Challenges and Opportunities: With the ascent of digital documents and digital technologies, libraries role has been widely expanded and multifaceted challenges have emerged. the challenges are not only manifold but seem to be threatening to the existence of libraries but simultaneously offering opportunities to library professions to frame proper strategies to fulfil the changing needs of users in the changing technological environment. Some of the challenges and appropriate strategies to overcome them may be enumerated as: Effective utilization of digital technologies in supporting education and research to meet demands of academic institutions, faculty, students, scholars, others both at personalized level as well as community level Managing digital information resources like digitization collections, institutional repositories, learning object repositories, online journals, various other web resources in an effective, impressive and user friendly manner. Promoting access to open access resources by identifying, discovering relevant scholarly web resources and getting these resources available to user community through user friendly information gateways. Emergence of mobile technologies, its popularity and its various implications in the society has opened a new vista for academic libraries too. Scope of suitable and effective implementation in this area must be explored and looked into for the benefit of user community. MOOCs (Massive open online courses) and rise of online education is another challenging dimension for the academic librarians. They have to prepare themselves and evolve logistics to meet the demands of such students. Academic librarians must adopt and have to emphasize on information literacy skills. Information literacy in the form of training and learning/support need to be delivered to the users either in persons or in groups. Such programmes are required on account of complexities and varieties of digital/web resources and would ensure effective use of subscribed and non-subscribed resources. Such programme will reaffirm believe in campus community that the library is central to academic activity what Dr.S.R.Ranganathan had said 67/68 years ago.

Conclusion: National knowledge commission has undoubtedly recognized the role and significance of academic libraries. However, to transform India into a knowledge society, academic libraries are required to redesign in order to meet the new challenges and expectations of the readers. New format of publications, intensive use of digital materials, changing pattern of education and learning and role of ICT in access of

information, etc. are the most compelling factors and challenges before the academic libraries. Therefore, librarians have to adapt to these challenges, frame suitable strategies to overcome these challenges and acquire new and requisite skills to meet out the demand and expectations of their users. In a world that is forever changing, the only certainty is change. Therefore, strategies for building 21st century libraries and librarians must focus on the ability of librarians and libraries to not just adapt to change, but to prepare for it, facilitate it and shape it.

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DIGITAL LIBRARY SOFTWARE: A REVIEW

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Introduction: Change is the nature of law, traditional library changed into digital library. In this present era we are living in the age of knowledge based information society considers information as a wealth which should be made available right information for the right user by right way in the right time. Digital Library plays an important role in providing more appropriate information in less time with easy access. The mission of digital library is to organize the information and make it universally available, accessible and useful. The advent of e-books and e-publishing is changing the way reader's access information all over the world.

Digital Library: In digital library all resources are in digital form and services are fully automated. A library services, located either in a physical or virtual space or a combination of both in which a significant proportion of the resources available in through remote access. In enable users to interact effectively with information distributed across a network. It could be based on a subject discipline, a vocation or profession, a region or nation. "A Digital Library is an online collection of digital objects of assured quality that they are created and managed according to internationally accepted principles for collection development and made accessible in a coherent and sustainable manner, supported by services necessary to allow users to retrieve and exploit the resources." According to Larson, "Digital libraries are not single stand able and repositories, of digital date. Instead, they are a heterogeneous collection of network based repositories using a variety of protocols for user's interaction, data encoding and transmission." Digital Libraries are an organization that provides the resources, including specialized staff, to select, structure, offer intellectual access to interpret, distribute, preserve and integrity of, and ensure the persistence over time of collections digital works so that they readily and economically available for use by a defined community of set of communities.

Software: Software is a part of a computer system that consists of data or computer instructions, in contrast to the physical hardware from which the system is built. In the software anything can be stored in electronically in the contrast storage devices and input output devices are called hardware. Organized information in the form of operating system, Utilities, programs and applications that enables to work computer.

Types of Digital Library Software: Present days there is much software are available for building digital libraries. Open source software are also available, Greenstone, D-space these are an open source software for building digital library.

4.1 Greenstone Digital Library Software: The Greenstone digital library software is an open source system for the construction and presentation of information collection. Greenstone is a suite of software for building and distributing digital library collections. It provides a way of organizing information and publishing it on the web or on removable media such as DVD and USB flash drives. Greenstone is produced by the New Zealand Digital Library Project at the University of Waikato, and developed and distributed in cooperation with UNESCO and the Human Info NGO Belgium. It is *open-source*, multilingual software, issued under the terms of the GNU General Public License. Greenstone runs on all versions of Windows, and Unix/Linux and Mac OS-X and very easy to install. It has two separate interactive interfaces, the Reader interface and librarian interface. End users access the digital library through the reader interface, which operates within a web browser. The readers interface is available in the near about 35 languages.

4.2 D-Space: D-Space open source software is a turnkey repository application used by more than 1000+ organizations and institutions worldwide to provide durable access to digital resources. D-Space is the software of choice for academic, non-profit, and commercial organizations building open digital repositories. It is free and easy to install "out of the box" and completely customizable to fit the needs of any organization. D-Space preserves and enables easy and open access to all types of digital content including text, images, moving images, mpegs and data sets. And with an ever-growing community of developers, committed to continuously expanding and improving the software, each D-Space installation benefits from the next. D-space 6.x is the latest release. D-Space 6.x is a major update to the D-Space platform. It features an enhanced configuration system, enhanced file storage plug-in, and new quality control / healthcheck reporting features (via REST API and via email). In addition, D-Space 6 has an eye on the future, with a major Java API refactor that adds support for both UUIDs and Hibernate in our database layer. Like its predecessor, D-Space 6 continues to strive to simplify your upgrade process by automatically updating your database to 6.x compatibility (from any prior D-Space version).

4.3 Fedora: Fedora software is a robust, modular, open source repository system for the management and dissemination of digital content. It is especially suited for digital libraries and archives, both for access and preservation. It is also used to provide specialized access to very large and complex digital collections of historic and cultural materials as well as scientific data. Fedora has a worldwide installed user base that includes academic and cultural heritage organizations, universities, research institutions, university libraries, national libraries, and government agencies. The Fedora project is led by the Fedora Leadership Group and is under the stewardship of the Dura Space not-for-profit organization providing leadership and innovation for open source technology projects and solutions that focus on durable, persistent access to digital data. In partnership with

stakeholder community members Dura Space has put together global, strategic collaborations to sustain Fedora which is used by more than three hundred institutions. The Fedora project is directly supported with financial and in-kind contributions of development resources through the Dura Space community membership program.

4.4 NewGenLib: NewGenLib is an integrated library management system developed by Verus Solutions Pvt Ltd. Domain expertise is provided by Kesavan Institute of Information and Knowledge Management in Hyderabad, India. NewGenLib version 1.0 was released in March 2005. On 9 January 2008, NewGenLib was declared free and open-source under GNU GPL. The latest version of NewGenLib is 3.1.1 released on 16 April 2015. Many libraries across the globe (mainly from the developing countries) are using NewGenLib as their Primary integrated library management system as seen from the NewGenLib discussion forum. NewGenLib uses a number of well supported and widely used reliable and well tested open source components like Posture SQL, Apache Tomcat, and Solr License. NewGenLib is entirely Java-based, platform-neutral, and uses the following major software technologies in its presentation, web server and database layers.

E-Prints: E-prints is a free and open-source software package for building open access repositories that are compliant with the Open Archives Initiative Protocol for Metadata Harvesting. It shares many of the features commonly seen in document management systems, but is primarily used for institutional repositories and scientific journals. E-Prints has been developed at the University of Southampton School of Electronics and Computer Science and released under a GPL license. E-Prints was created in 2000 as a direct outcome of the 1999 Santa Fe meeting that launched what eventually became the OAI-PMH.

The E-Prints software was enthusiastically received and became the first and one of the most widely used free open access, institutional repository software, and it has since inspired the development of other software that fulfill a similar purpose. Version 3 of the software was officially released on 24 January 2007 at the Open Repositories 2007 Conference and was described by its developers as "a major leap forward in functionality, giving even more control and flexibility to repository managers, depositors, researchers and technical administrators." E-Prints is a Web and command-line application based on the LAMP architecture (but is written in Perl rather than PHP). **Conclusion:** The Digital Library Management software (DLMS) presents an easy to use, customizable architecture to create online digital libraries. With these institutions/organizations can disseminate their research work, manuscripts, or any other digital media for preservations and world over dissemination of digital items.

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E-GOVERNANCE AND ITS IMPACT ON ACADEMIC LIBRARIES AND LIBRARIANS

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Abstract

Rapid developments in Information and Communication Technology (ICT) have changed the traditional concept of library development across the globe. Modern libraries are more dynamic and reach their users without any geographical barriers. In this Internet era, libraries are fast moving towards digital mode and are accessed universally. With the advent of WWW, e-libraries are redesigning their services to borderless world and are becoming lifeline of the academic community. They are no longer information dominant and a huge number of information can be exchanged through some new types of academic exchange models and network exchange platforms. It can be Open Access, Wikipedia, Weblog, and Institutional Repositories. These models play an active role in electronic data exchange system. It facilitates to link users by providing knowledge, technology and research. In brief, digital libraries promote interaction and improve knowledge (management?) globally. It has become a common factor that Internet access with latest multimedia technologies offer scholars fulfillment of their thirst of knowledge. (Academicians?) need the help of library science professionals to organize information into structured knowledge. At this stage, libraries have to face a challenging task to provide effective service to their users. Role of librarians and libraries have dramatically changed. To face these challenges; librarians should be familiar with new technologies, that can support group learning problem solving and retrieve high- quality literature. The study focuses on the impact of networks on academic libraries in Bhopal city, Madhya Pradesh in India. The study reveals the status of e-governance in libraries in Bhopal city, with reference to the role and impact of library networks.; It also looks at the benefits and challenges of e-governance in libraries..

Keywords: E-Governances, INFLIBNET, DELNET, INDEST, librarian's role in e-governance era, distant learning, open access

Introduction :- Technical and non-technical education in India contributes a major share to the overall Education System. It plays a vital role in the socio economic development of our nation. E-Governance involves the use of Information and Communication Technologies (ICTs) to transact the business of Government. The ICT impacts library management and information handling practices, which demands reorientation of library science professionals to keep pace with the emerging scenario. For this it is necessary to bridge the traditional as well as network based library practices.

E-Governance in Higher Education :- E-governance has become the buzz word in Public Administration and Government spheres. However, the very nature of e-governance in public administration differs much when it is applied in the Higher Education Administration. We are all aware of the fact that in the 21 century, a drastic change has occurred in the teaching, learning, evolution and governance practices in tertiary education and it has implications on the competency and expectations of the learners.

E-Governance: The Application of Information Technology (IT) in the process of government function to bring about Simple, Moral, Accountable, Responsive and Transparent (SMART) governance that is cost effective and capable of fulfilling the dreams of the citizens as never before (Majumdar, 2005). E-Governance is the use of information and communication technologies (ICTs) to improve the activities of public sector organizations (Heeks, 2002). Heeks stated that application of new technologies helps to improve the activities of the public. It is clear that use of new technology enhances access to and delivery of government services, to benefit the community.

E-Governance in Developing Countries :- ICTs offer number of opportunities to achieve global sustainability. It plays a major role for economic development and poverty alleviation in developing countries. But there are some adverse effects in the development of ICTs such as, utilization of energy and impact on health from mobile technologies. ICT creates job opportunities and makes information widely available to the global community. Due to ICT developments people do not feel isolation and it makes human life comfortable by developing the economy. E-governance has brought a new hope for the developing world. It provides new opportunities for information exchange and users can access text, sound and images under one umbrella.

Features of e-Governance » e-Administration: Improving government processes by cutting costs, managing performance, making strategic connections within government and creating empowerment.

» **e-Citizens and e-Services:** Connecting citizens to the government by talking to citizens and supporting accountability, listening to citizens and supporting democracy, and improving public services. » **e-Society:-** Building interactions beyond the boundaries of government by working better with (entrepreneurs?), developing communities, building government partnerships and building civil society. Panda and Swain describe the features of e-governance such as, e-administration, e-citizens and e-services, e-society. When it is applied to the library profession, library science professional's role is interlinked with these features.

Libraries and E-Governance: Revolutionary changes in e-environment have provided tremendous potential for libraries to be a part of the community information services. Libraries are institutions that are well equipped to face the challenge of creating awareness amongst the citizens, thereby contributing significantly to e-governance. Libraries provide significant value to their communities in serving educational, informative, economic and social needs. They disseminate information in several ways i.e., through internet, databases, and reference services as well as by providing training in ICT and skills on IT enabling services.

Why E-Governance in the Library: * To manage central and departmental knowledge resources in most effective and efficient ways with paper less work; * To have better accreditation; * To create user friendly library with efficient and effective use of knowledge.

Resources * To reduce library cost; * To increase effectiveness and efficiency of employees of library; * To have an access to information of library records on fingertip.

Librarian's Role in the E-Governance Era :- Change is inevitable in all professions in life. In this electronic era, significant changes can be seen in the role of the librarian too in providing information literacy. Librarians need to obtain new skills, technology while improving existing skills. This paper discusses the reasons behind the change and what skills librarians need to have to fulfill their current role in the e-governance era.

Old Work		New work – old work +	
-	Subject specialization	-	Information literacy
-	Liaison	-	Additional liaison activities
-	Circulation	-	Answering in depth
-	User education	-	queries (On-line information
-	Dealing with information queries	-	desk or by phone etc.)
-	Managing staff	-	Browsing web
-	Preparing user guided manuals	-	Managing digital repository
-	Preserving e-data for future use	-	Supervising staff

What Does it Make a Librarian's Role Significant Today ? When information technology emerged on a large scale in the 1960s, librarians were, for the most part, not eager to embrace it (St. Clair, 2009). According to St. Clair, with the emergence of information and communication technologies (ICT) in 1960s, librarians did not make any efforts to apply it in their libraries. Later on, they realized the importance of gaining ICT knowledge and applying it in their libraries, which eventually brought about significant change on their role for the academic community. Now, applying ICT in libraries has become an integral part of the library community in the world. Librarians in the digital age are constantly engaged in sharpening their knowledge on new technologies, and move towards sharing information. Knowledge organization, filtering of information and management are considered as the mandatory skills for librarians in this electronic era. Libraries have become main vehicles for any institute, college or university which support access, distribution and use of archived data repositories. It contributes to education, leisure, e- learning while developing and maintaining the wide range of structured resources for easy access. To the information professional, the librarian or the information provider, the role has been to actively develop and maintain the management of a wide range of structured and organized knowledge resources by providing bibliographic and physical access, but not necessarily intellectual access, to such resources (Wornell, 1992). Open access to knowledge has brought a new hope for the developing world, promoting sustainable progress in the scholarly community.

E-Libraries / E-Librarians in the Global Context :- Following technologies have been applied in libraries to face their housekeeping problems and to seek better solutions.* Computing-technology (hardware/software), Communication technology,* Network and internet technology, * Web world,

Services which are being provided effectively by the above libraries with the help of computers and modern communication networks. a. Catalogue Databases b. Current Awareness c. Information Services d. Full Text Access to Publications e. Organization of Internet Resources and Providing access f. Electronic Newsletters

Conclusion :- In this modern electronic era, librarians are rapidly adopting new technologies to access and disseminate information globally. Libraries are known as "gate ways" to knowledge and the digitization of entire knowledge which makes it open to the world without any geographical barriers and paves the way for effective e-governance. Mr Sam Pitroda, Chairman, National Knowledge Commission (NKC), India said that e-governance was not about computerizing existing processes. We need to change our basic governance pattern and ensure transparency, productivity and simplicity. We should pick 10 to 20 important services and offer them on the Web and create a common e-governance platform to make it citizen-centric. It is clear that applications of new technologies are vital for the improvement of government services.

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E-KNOWLEDGE AND E-RESOURCES FOR E-LIBRARY

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Abstract

The concept of e-library is not new now but the definition of it is changing with changing times. E-library in today's context can be define as a type of service that allows users, without actually stepping in to the library, to read library books and conduct research at home, in the office, or at school, using the internet. The library in India is becoming a portal in internet, extranet or internet site that replicates the sources of a librarian an electronic format. While improving access and search capabilities. These e-libraries provide resources and documentation, or can combine internal documents with external resources to provide a full collection of pertinent information for distribution to users, partners, academic, faculty, researchers, students, association members, commercial clients of libraries and many more. By empowering patrons to discover and obtain the information they need, e-libraries are ensuring their position as the bridge to knowledge.

Key-words – E-Library, E-Knowledge, E-Sources, E-Resources, KNN, NIC.

Introduction –Establishment of e-libraries is culmination of need for better knowledge management employing modern information and communication technological tools. Evaluation of e-libraries as a system has promoted universities of access to knowledge and information and has also opened up now vitas for application of advanced technologies for information management. Also known as virtual, electronic or libraries without walls, they have boosted the global village concepts under WTO regime. Phenomenal growth and application of internet with high bandwidth connectivity supplemented with affordable low cost processors and memory have made digitization and use of digital contents easy and upcoming of E-libraries as a fast rate. Libraries are a common heritage as they are the repositories of knowledge about human history, its development and diversity. These are the treasures and treated as a gift from the past and ancient times. The building and setting up of libraries have been a measure of civilization progress. Across the world, libraries have contributed to providing people with opportunities for gaining knowledge and for promoting intellectual advancement.

National Knowledge Network of India –Knowledge and knowledge management have been in existence for a long time. For hundreds of years, knowledge has been created, disseminated at universities, research and academic institutions and applied in order to enhance the quality of life. The knowledge management initiative and knowledge management would not be fully implemented and its benefits might not materialize unless a technological infrastructure composed of computers, network and databases in addition to software applications installed in distributed environments is available. India has well worthily realized that ICTs are one set of major forces that has moved KM font and entre. While KM processes take place also in a different context. This process can be summarized as knowledge creation, knowledge storage / retrieval, knowledge transfer, and knowledge application. Thus the organization in developing countries should consciously choose which of these activities they intend to support in order to choose appropriate organizational variables and technology to enable them. The research institute and university should have a well established process of obtaining knowledge, which does not necessarily involve much use of information technology. Most of the organizations and research libraries still use manual way of managing documents through filling. The management of various institutions must invest in their libraries and encourage informal network of experts for knowledge sharing and acquisition. They are confronted with problems when stocking their libraries with modern books and current journals as well as when apply information technology to supply some of their efforts in obtaining knowledge. It is very crucial and important for these higher institutions and organizations especially their libraries to be well funded so as to go online. Keeping the above in view the cabinet committee on infrastructure in India accorded in principle approval for the establishment National Knowledge Network (KNN). The knowledge network is to be implemented by the NIC and will inter connect al knowledge institutions through high speed data communication network. NKN would encourage sharing of knowledge, specialized resources and collaborative research among scientists, researchers and students from divers sphere across the country to work together for advancing human development in critical and emerging areas, it will catalyze knowledge sharing and knowledge transfer between stakeholders seamlessly that too across the nation and globally for creating intellectual property. NKN is focusing on health, education, grid computing, agriculture and e-Governance. Applications such as Countrywide Classrooms will address the issue of faculty shortage and ensure quality education delivery across the country. The Government announcessetting up NKN in 2008-09 and an initial amount of Rs. 100 crore was allocated to the Department of Information Technology. Ministry of Communication and IT for establishment.

E-Knowledge Architect –The ideas of present form of e-libraries conceived in 1990s has received great attention and shown significant growth worldwide. While it is true that such systems are also evolving to adapt themselves to the changing world, many users are relying more and more on social tagging. As long as they and their circles of friends are comfortable with the tags, they are not concerned with the structure and rigor used by libraries and librarians. Struted sources are giving way to good enough. Librarians can offer space-wide web of taxonomies to enable users to operate efficiently within their communities. Librarians will be in demand to architect new information spaces for content re-use of to connect new communities.

E-Knowledge Concierge –Ever-growing demand and acceptability have been fully supported by research and development sector as well. The knowledge concierge bridges the information seeker and the defined information space. It is not sufficient for librarians to be knowledgeable about the information space but to be able to contextualize the users, information needs. Contextualization of information must lead to the provision of actionable information, which can easily be translated to knowledge when the user chooses to act on it.

E- Knowledge Resources - The e-knowledge resources for a library basically include the following, which should be acquired by library as per its needs in restructure facilities.

1) E-journals :- The advent of electronic full text journals affords the opportunity to take a fresh approach recognizing that any risk to publishers in new electronic age is likely to fall on small and medium size libraries, which are operating on restricted budget many e-journals are available online. Some publisher provides free online access to journals published by them against print subscription of library. Publisher provides access to these e-journals either through aggregator such as analytic presses etc. Or through aggregator such as analytic press, Blackwell, sage publication Springer etc. e-journal access can be made through. Individual subscription: - in this type, the library act as a source of information on what is available. It requires the users to have access to internet but there are no storage problems. Local storage at Institutional level: - In this type, the Journals are stored and the searching mechanisms are used to access them which are controlled by the institutions. Commercial providers or aggregator which ensures high standards in delivery and presentation. To use this service, It may require special equipments and software. COD operative project at a national or International level:-

In this type a group of institution/ organization together negotiates with the publisher. For example CAUL (council of Australian University Librarians) has negotiated agreements with current contents to allow access for all Australian Universities to this service.

Examples of some e-Journals providers are as follows: Association for computing machinery Digital Library, EBSCO, EMERALD, INGENTA, JSTOR, Blackwell

2) Online Database: - More and more e-databases in bibliographic as well as full text sources are available and also added up frequently with the growing demand of users. Some databases are web enabled and some are networked solutions. Web enabled databases are easily accessible from user desktops through the web browser while the networked solutions may require special installation at client side.

The e-database may be of following types

3) Bibliographic Databases:-, Asiatic society Journals Index, INDMED: Indian Biomedical Journal develops and design by Indian MEDLARS center. ISID Index to Indian MEDLARS center. Angeline. Agricultural online Access (Agricola) is an Index to all aspects of agricultural sciences.

AGRIS (International Information system for Agricultural Science and Technology). ERIC database on education. Ingenta.Com- offers access to article of more than 6000 titles. National library of medicine database, provides a wide variety of resources related to the biomedical and health science. Important resources are MEDLINE, Texnet Biomedical information, clinical alerts etc. (44) (Lynchccc, 2001)

Full Text Databases:-

Examples:- Economic History Encyclopedia Index, Scientific Electronic Library online, Searchable ornithological Research Archive

Statistical Databases:- Census Information, Database on Indian Economy., GISTNIC provides information on banking statistics, industrial statistics, public finance social sector statistics etc., Asian Development Bank, Reserve Bank of India

E-books: - Since 1970s the development of electronic versions of printed books (E-Books) has been as a part of the whole e- publishing phenomenon. A good number of e- books are available in most of free or on payment. Some e- books are available for browsing online or in some cases titles are downloaded from net.

3) Abstracting and indexing databases:- The well section and acquisition of abstracting and indexing databases depends on the need of users. Also a library has to choose the required data from a large number of such databases available in the market some of the examples of abstracting and indexing database providers are as follows. Dialog and CAS- Cambridge Scientific Abstracts

E-Mail and List servers: - It provides a mean for formal and informal communication many list serves are informal communication many list serves are discussion lists that allow discussions to take place on a variety of topics and other provide access to electronic titles and other provide access to electronic titles such as newsletters of serial pricing issues or end page E-mail is now days not only used for transmission of messages but also used for the discussion of ideas, news features etc.

A) E- Reports: - Scientist, research schooldays, etc now a day considers as an important e-resource of library, which contains reports, publish E- Reports,. These reports are scanned and converted to searchable PDF documents.

B) E- content pages: - The idea behind It is to provide desktop access to the digitized content pages of books, conference proceedings, Journals etc. It helps the users to browse the content page to library documents due to excessive physical browsing.

C) E-clippings: - The main objective of e-clipping is retrospective search and comprehensive analysis of new items.

Conclusion –E-libraries have immense positive role in support in academics, industry, and commerce and genera human development. To meet emerging requirement of growth in different sectors it needs to establish e-libraries to promote information flow quickly to improve productivity. Technology has dominated all spheres of life. The education and knowledge are the fields where we can see the most influential impact of information technology. Knowledge, education and library are known to be sisters. Over several years the education process has seen drastic changes in imparting knowledge. Libraries are the effective tools in disseminating knowledge. Physical wall of library have no significance in this 21st century. Harvey, L.(2004). Analytic Quality Glossary, Quality Research International.

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SELECTION AND ACQUISITION OF E-RESOURCES IN ACADEMIC LIBRARY

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Abstracts

This paper focus that the academic library should select and acquire e-resources. There are various types of electronic information. Many library professionals don't have idea about what process and criteria of subscription of e-resources. Today big proportion in a digital scenario, various subjects, various publisher and vendor provide e-resources. We should verify and evaluate by all tools and criteria before subscribe of e-resources. Academic library play important role providing facilities with easy access of require information. Digital technology creates a easy way to gain actual information. So these day mostly user approve towards e-resources. So library professional should face changing scenario from physical to virtual.

Keyword - e-resources, types of e-resources, tools of e-resources, criteria of e-resources

Introduction :- Today all of you are in an electronic age .So today all transaction is going on electronically in all areas. Information communication technologies come and change very fast. That's effects on information science. Information is available print and e-print in a digital format. Print material and e-print material is same but access different type. Print access by physically and e-print material access by electronically. All information is available online. E-information is access easy, updated and accurate in short time. Today user mostly use e-information more than print information. They comfortable and satisfied with e-resources. In an academic area student, faculty and researchers mostly use e-resources. They completed their information need by e-books, e-journals, e-thesis, e-reference resources, online database, etc. AICTE and university compulsory mandate subscription of e-resources for colleges and institutes. Academic library has subscribe of e-resources and provide free of charge. Now e-resources are various types in digital scenario like as e-books, e-journals, e-thesis, e-reference resources, online database, e-dictionary and encyclopedia, e-image, graphics, audio and videos etc.

E-Resources: - E-resources is short term for electronic information resources. These are collections of information in electronic or digital format that are accessed through mobile phone, computer, laptop etc. These are published resources in a various types like as e-journals, e-books, e-thesis, e-dictionary and encyclopedia, online newspaper, etc.e-resources not purchased but subscribe for fixed period with agreement. E-resources consisted of text, graphic, image, video, audio, etc. in pdf, html, htm, dsp, etc require to download format.

Why E-Resources - The subscribed e-resources use for academic research, learning and teaching purposes only. Mostly use reason for below

Updated information: - e-resources (publisher/vendor/agency) provided updated information on time to time so updated information useful in research work for research scholar, faculty, and students.

Multi access and wide range: - several users access e-resources at any time anywhere without any hinders. Electronic resources make information available 24 by 7.

Easy and quickly: - we get require information by online easily in a short minute.

Comfortable: - today user access information online and they are satisfied and comfortable with e-resources.

Time saving: - e-resources are various benefits, one of it is *save the time of user*. User have not sufficient time they want earlier get information. In a physical library long process searching for accurate information.

Space: e-resources can be stored in a huge amount with micro spacebut traditional library requires more space for storage of print material.

Types of E-Resources: -Electronic Books-Oxford living Dictionary defined -An electronic version of a printed book that can be read on a computer or handheld device designed specifically for this purpose. Printed books and e-books in a same information but use different type. Physically oneself read print books only hard copy of books. Electronic books you read in a digital format consisting of text, images, or both read on computer, mobile, laptop, etc. shortly we also call electronic version of a printed book. Some e-books are existing without a printed equivalent.

E-Journals-Bodleian Libraries university defined -Many academic journals are now available online in full-text. The printed journal is exactly replicated on the computer screen, and articles can be read online or printed out.e-journals is same as e-books.print journals published in a particular time to time. It is same-journals published in digital format usually on the internet same time.e-journals read on computer,mobile and also you can download any article read again and again.

Electronic Thesis and Dissertations-Thesis and Dissertations means any researchers work on particular topic and finding to discover law, theory and principle any a subject. Master degree students, M.Phil and PhD. student submit their research work in colleges, institutes , university. This research work change print to electronic format that call ETDs.

OnlineDatabase- Business Dictionary define-a web based filing system designed to store information. The database can be accessed by web scripts and purchased by subscription. An online database is a database accessible from a local network or the Internet, as opposed to one that is stored locally on an individual computer or its attached storage. Online databases are hosted on websites, made available as software as a service products accessible via a web browser.

E-dictionary and encyclopaedia –An electronic dictionary is available in electronic form and can be accessed through various media. Electronic dictionaries can be use on a smart phones and tablet, laptop and computers.

Tools of E-Resources: -

Faculty recommendation – When library going on subscription of e-resources that time communicate with our faculty member and get feedback from about e-resources which is useful in a subject and curriculum. Which e-resources is complete need to researchers daily useful in research work, which e-resources capable in teaching to faculty member, faculty and researchers want updated information so first discuss with them.

Student's recommendation –e-resource provides current information. Which e-resources give support in learning and consisted in a e-resources image, audio, videos, graphics, text it is mostly usefully in study for students. So we give trial version for accessing them. And get feedback after some day.

Publisher/vendor Catalogue-publisher/ vendors catalogue is best tool for help in selection of e-resources. In the catalogue describe details about of e-resources like as pricelist, title list, period, offer of year, number of e-books/journals, license, agreement, etc.

Criteria of selection and acquisition of e-resources: -

Subject relevance-in a selection process we can mostly check which e-resources is pure subject related because some time publisher/vendor provide e-resources subject related but included information is not related. So please confirm and select.

Authenticity of information –‘Information explosion’ increase information day by day on the internet. Which information is authentic should be found early. **Vendor/publisher reputation**-There are various publisher like EBSCO, GALE, PROQUEST, IEEE, ASME, ASCE, SPRINGER, ELSEVIER, J-GATE, McGraw Hill, Wiley-Blackwell etc so we give first preferences to these publisher.

Technical requirement- The subscribed e-resources must be comfortable with standard web browser when accessible information by the web. so which selected e-resource is suitable with available software and hardware. When create any problem that time vendor / publisher must be providing assistance.

Negotiation with vendor- Download / Print- access without hindrance, user friendly, smoothly and allow the permission to user download, print and sharing information. **Speed-** user can access any type information speedy and user should be satisfied with information. **User report-** vendor should be provide the user/statistic report in minimum time. **Access-** more access in low price/cost. any time any where 24*7*365 **Archive-** provides previously back issues lastly more than 5 year.

Conclusion – Today there are lot of types of e-resources, number of publisher and vendor available in electronic market. AICTE compulsory mandate to all college Library subscribe e-resources. But library have not sufficient budget for subscribe e-resources.

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INSTITUTIONAL REPOSITORY: A DIGITAL ARCHIVE

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Abstract

In this modern digital era, the principal objective of the library and information centers is to keep their clientele up-to-date by providing access to the information in their areas of interest. Digital Repositories are becoming an important tool for digital preservation open archiving and open access.

Keywords: Intellectual work, Scholarly output, Digital preservation, Digital library

An institutional repository (IR) is a digital archive where a university community's intellectual work is made accessible and preserved for posterity. The concept of IR suggests the tantalizing possibility of greater library influence over the full cycle of scholarly communication on campus, from research through publication, collection and preservation. Libraries are performing lead role in shaping institutional digital repositories all over the world. In the simplest sense of the term, an institutional Repository is an electronic archive of the scientific and scholarly output of an institution, stored in digital format, where search and recovery are allowed for its subsequent national or international use. A repository contains mechanisms to import, identify store, preserve, recover and export a set of digital objects, usually from a web portal. Those objects are described by labels ('metadata') that facilitate their recovery.¹

Objectives of managing an institutional repository: In digital age mostly higher education institutions in the world create and manage an institutional repository for digital educational and research resources. there may be various reasons as to why an institution should go for the success institutional repository approach that may include convenient collection, long term preservation of knowledge, immediate access to content and global distribution. The primary objectives for development and managing institutional repository are following: To building institutional profile and increasing institution image. To collection of all intellectual output of institution on single platform. To long time preserve the intellectual output and institutional information of the institution in digital format for the next generation. To create global visibility or freely distribution for an institution's research publications. To avoid the duplication and promotion of research works.

Benefits:

For the contributor –Greater citation: Studies have shown that articles freely available on the internet are cited more often than their paper counterparts. Speed: Faculty members can self-publish their preprints immediately, with the possibility of receiving immediate feedback. Organization: An institutional repository can contain all of the scholarly work by one faculty member, including material such as preprints, Post-prints, presentations, and classroom materials (dependent on copyright restrictions). Instead of being scattered about in different databases, servers, or computer hard drives, this material can be browsed easily in one place by the user and reused easily by the contributor. Preservation: In order to ensure continued access, digital files need to be refreshed and migrated. Ten years from now, will you be able to open a Microsoft Word file you've created today? Depositing a file into an institutional repository means that the burden of ensuring the file can be opened is placed on the curator of the institutional repository and not on the owner. For the institution –The scholarly material produced by the university is available in one place, reflecting the intellectual achievements of the institution and serving as a valuable marketing tool. Documents reflecting the institutional history of the university, both scholarly and non-scholarly are preserved for future use, much like a traditional archive reserves paper material. For the user –Material in an institutional repository can be found through a search engine. There is no charge to access this material and there are no subscription fees. Our repository contains material that is best displayed in its original digital format, such as audio files, video files, animations and data sets. Individual Benefits -Wider distribution Showcase Safekeeping Lower technology barrier

Other Benefits –Increased visibility to the Library Complete customization of policies and user interface Responsiveness to local user needs and preferences Increased contact with constituents Showcase and preserve scholarly output and historic documents Archive post-prints, preprints (and extra materials)

Contents of the knowledge repositories: All the scientific, artistic, teaching or management output of the institution, constitute a unique system of documentary management. Only the documents that will be on open access. Only documents that have been or will be published by formal channels. Some will include those which are property of the institution, although not created by it. Specific collections of games, pictures, etc.

Scientific output –Doctoral theses in the public domain. Doctoral theses read in the institution. Communications at congresses, posts, posters. Pre-prints and post-prints of papers published in journals. Audio-visual materials. Journals of the institution.

Institutional and/or managing output – Journals of institutional information published by the institution in any support Regulations and rules. Archive documents. Posts, Posters, work documents, technical reports.

Learning objects –The concept of learning objects is now evolving into more dynamic, granular and re-usable realities, but there is difficulty in providing a precise definition. It is always about a material in electronic medium for the use in web-based environments, of educational content and with a training purpose that is not

ephemeral. As representatives of this typology, we can point to the following: Study and exercises guides. Audio-visual material Class notes Simulators Bibliography in full text

Requirements for buildup an Institutional Repository: Staffing: Administrator & other supporting personnel for populating the IR and time for developing several policies to manage the system. Running costs: this element captures how IR would be operated and maintained. Issues will include system maintenance, upgrades and training of staff in situ or elsewhere. Hardware: A dedicated server with sufficient capacity must be included in the budget. Hardware for IR needs Server computer, Desktop computer, Capture devices, Scanner, Modem, Printer, Web server. Any types of network and internet connectivity.³ Software: There are various types of Digital Library software are available e.g., 1.DSpace (Digital Space), 2.GSDL (Green Stone Digital Library), 3. eprint Archive, 4.Fedora : An open source Digital Repository Management(FedoraItore), 5.Ages Digital Libraries Software(My Ages), 6.Ages Software 7. CDSware: The CERN Document Server Software 8. Dienst, 9.First Search,10.Ganesha Digital Library version 3.1(GDL), 11. Libronix Digital library System 12.Roads 13.ETD-db(Electronic theses and Dissertations database), 14.LOCKSS (Lots of Copies Keep Stuff Safe), 15 CLOCKSS. must be based on a committed institutional policy.¹

Role of librarian in an IR: Pro-activity and responsibilities relating to IRs are assumed by different people in various institutions. Largely they will be undertaken collaboratively by officers within the library in partnership principally with research and development and information technology section stimulating engagement for buy-in is crucial in the early stages of as IR when efforts are made to build a critical mass of material. Nixon(2002) rightly observed that "Reference librarian are a library's eyes and ears. They understand users' needs and perceptions. They know what's working and what's not. When they act as subject selectors, they are the library's primary liaison with faculty in their subject areas and its most visible representatives. They know how to help,inform,persuade and teach users. For an IR to succeed, it is essential that they be involved in its planning, implementation and operation." So librarians have critical roles to play in both establishing and maintaining as IR through: Advocacy: Librarians need to know all about the IR, its principles, benefits and operational processes in order to promote it and act as 'IR evangelists' (Ashworth 2006). Librarians will need to develop advocacy programs, publicise IR through institutional news media and respond to questions by the stakeholders. Building content: Librarians can employ advocacy and marketing strategies to promote engagement with faculty members and help to generate content. They can also assist by proactively searching for content independently.Collection administrators and metadata specialists: Librarians have potential roles as collection administrators and metadata specialists.

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COLLECTION DEVELOPMENT IN MODERN DIGITAL ERA: ISSUES & PROSPECTUS

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Abstract

The primary goal of any library is to select, maintain & provide access to relevant & representative information sources. In the age of Information Technology the process of collection development & collection management are undergoing a transformation as well. The present paper focuses on collection development in ICT environment based collection development. The present paper also discusses on challenges in building digital collection. Libraries are about many things. But, Collections have always been at the heart of libraries, be they digital, traditional brick and mortar, or hybrid between two moreover. Collections will retain that role in the future as well. Any academic library that aims to satisfy the information needs of academics & researchers must take great care with the development & management of its collection. It is generally considered that both quantity & quality of a library's collection depend almost entirely upon the library's acquisition program including its acquisition policy, its acquisition procedures & of most importance, its selection methods.

Keywords: Collection Development, Digital Library, ICT,

Introduction: Collection development is a term that is used by the library community to refer to "the selection and acquisition of material for an expanding collection and decisions on the material to be included in that collection. Guidelines from the IFLA (International Federation of Library Associations and Institutions) Acquisition and Collection Development Section say that the primary function of collection development policies is to provide guidance on selecting and deselecting resources from a collection. Typically, collection development decisions apply at different stages of an institution's workflow, including the selection, acquisition, processing, housing, weeding, retention, preservation, relegation and discarding of library materials. Much other focus in the library world has been on the development and implementation of written collection development policies and guidelines, although the practical value of these has sometimes been questioned.

Collection Development in ICT Environment: The electronic affect the traditional role of the academic and research library as an institution that collects and stores information and makes it available to its users would be obvious and is indisputable. In order to scope the multidimensional information needs of the modern users, libraries should rethink about the forms and types of information resources. In this IT era, low cost of e-resources, their easy availability, 24x7 access, up-to-date information, e-resources are becoming a vital component of library collection & documents, journals and other forms of could be modifications of policies would take place. Overall the policy set for published material could be modified accordingly; the entire philosophy of Collection needs to be changed as simply duplicating the collection practices evolved for print materials in the new information (network) environment. (Seetharama and Ambuja, 2000).

As builders of collections, librarians now have a larger and more complex set of resources from which to select. These resources range from analogue versions of books, journals, encyclopedias and sound, to digital versions of these in a variety of formats such as CDROM, DVD, digital video type, to online digital e-journals, e-books and online databases, Digitization would also have an effect on the preservation and archiving as resources would also be available in digital format.

Challenges In Building Digital Collection: The major challenges in building collection are – Technical Architecture Copy right Management Preservation

Technical Architecture : Libraries will need to enhance and upgrade current technical to accommodate digital materials. The architecture will include components such as : High-Speed local networks and fast connections to the Internet Relational database that support a variety of digital formats Full text search engines to index and provide access to resources A variety of servers, such as Web servers and FTP servers Electronic document management function that will aid in the overall management of digital resources One important thing to point out about technical architectures for.

Copyright Management : Copyright has been called the "single most vexing barriers to digital library development" The current paper-based concept of copyright doesn't work in the digital environment because the control of copies is lost. Digital objects are less fixed, easily copied, and remotely accessible by multiple users simultaneously. The problem for libraries is that, unlike private businesses or publishers that own their information, libraries are for the most part, simply caretakers of information they don't own the copyright of the material they hold. It is unlikely that libraries will ever be able to freely digitize and provide access to the copyrighted material in their collection. Instead, they will have to develop mechanisms copyright, mechanisms that allow them to provide information without violating copyright, called right management.

Preservation : Keeping digital information available in perpetuity, the preservation of digital materials, the real issue is technical obsolescence. Technical obsolescence in the digital age is like the deterioration of paper in the paper age. Libraries in the pre-digital era had to worry about climate control and the de-acidification of books but the preservation will mean constantly coming up with new technical solutions .when considering digital materials, there are three types of preservation are:

The preservation of the storage medium : Tapes, hard discs, and floppy discs have a very short life span when considered in terms of obsolescence. The data on them can be refreshed; keeping the bits valid but refreshing is only effective as long as the media are still current. The media used to store digital materials become obsolete in anywhere from two to five years before they are replaced by better technology. Over the long term, materials stored on older media could be lost because there will no longer have the hardware or software to read them. Thus, libraries will have to keep moving digital information from storage medium to medium.

The Preservation of access to content: This form of preservation involves preserving access to the content of documents, regardless of their format. While files can be moved from one physical storage medium to another, what happens when the formats (e.g. PDF, Adobe Acrobat) containing the information become obsolete? This is a problem perhaps bigger than that of obsolete storage technologies. One solution is to do data migration that is, translate data from one format to another preserving the ability of users to retrieve and display the information content. However, there are difficulties here too—data migration is costly, there are as yet no standards for data migration, and distortion or information loss is inevitably introduced every time data is migrated from one format to another.

The Preservation of fixed – media materials through digital technology: This slant on the issue involves the use of digital technology as a replacement for current preservation media, such as microforms. Again, there are, as yet, no common standards for the use of digital media as preservation medium and it is unclear whether digital media are as yet up to the task of long-term preservation. Digital preservation standards will be enquired to consistently store and share materials preserved digitally.

Internet Based Collection Development:

e-books : Online Dictionary of Library & Information Science defines e-books as “A digital version of a traditional print book designed to be read on a personal computer or on e-book reader.” There are two major categories of e-books i.e. Off-line (CD-ROM) and On-line. There are a number of e-books in multidisciplinary subjects available free-of cost on internet.

E-journal: In order to provide latest to the researchers & scholars, the concept of e-journals had been raised firstly in 1945. E-journal may be defined as- “One which is available electronically, to be used with the computer & other communication technologies.” With the development of communication technology, the usage & popularity of e-journal has been increased. Today e-journal is becoming the main source of information & its use has been increased.

Conclusion: Considering the multidimensional nature of the need, libraries should rethink about their collection development policy. While also preparing collection development policy the librarian should keep in mind the issues of copyright, technical architecture & preservation medium. The new concept of a digital collection is evolving incorporating many old features and standards, and creation of many brand new ones.

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COLLECTION MANAGEMENT & DEVELOPMENT IN DIGITAL LIBRARIES

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Abstract

Collection development is an important aspect of library. It plays vital role in maintaining and providing good services to the users of the library. The present paper discusses library collection, collection development and collection development policies. In this paper also discuss about the collection development and management in digital libraries.

Keywords: Collection, collection development, collection development policy, collection development and management in digital libraries.

INTRODUCTION: Collection development is an important activity of a librarian. Library collection development is the process of planning and acquiring balanced collection of library materials of many formats, including books, periodicals, online resources and other media. Digitization is essential for collection development and management in libraries.

COLLECTION: A library is asset of books and non- books material of all kinds that can be used a requisite source of information for study and instruction in academic institution. Methodological and topical the mesper taining to acquisition of print and other analogue library materials (by purchase, exchange gift, legal deposit) and the licensing and purchase of electronic information resources. There is wide spread availability of electronic resources, particularly those on the internet, still this will not diminish or eliminate the need for collection development in libraries in developed or developing countries.

DEFINITION: A library collection is the sumtotal of library materials, like books, manuscripts, serials, government publication, pamphlets, catalogues, reports, recording microform reels, micro cards & microfiche punch cards , computer tapes etc. that make up the holding of a particular library.

Collection development:- The collection development describes a cluster of functions, which together shape the holding of materials in a library. Self study and evaluation, selection, Weeding and maintenance. Collection development is a complex process that includes assessment of users information need, evaluation of present collection, designing collection development policy, procurement of information sources and planning for resource sharing.

COLLECTION DEVELOPMENT POLICY : The development and implementation of a collection development policy is a best practice for libraries and archives and addresses issues such as: Material selection and acquisition. Replacement of worn or lost materials. Removed (weeding) of materials no longer needed in the collection. Planning for new collection or collection areas. Institutional mission. Co-operative decision-making with other libraries or within library consortia.

COLLECTION DEVELOPMENT & MANAGEMENT IN DIGITAL LIBRARIES

Digital libraries are getting much attraction from the libraries world yet there are various issues related to collection development and management in a digital environment. The electronic offer ease of use, wider access, rapid updating, cost saving over local maintenance and storage, but the libraries are finding it difficult to define issues related to policy of collection development and archiving of electronic resources.

CONCLUSION: Collection development is an important assignment in the development process of college libraries. The collection contents text books, reference books, periodicals and other non-book materials. Library digitization is very important thing for collection development and management for library and information centres.

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DIGITAL LIBRARY: ITS WORK AND CHALLENGES

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Abstract

The Library without Walls concentrates on making a system of learning frameworks that encourage logical correspondence and coordinated effort. We are living in the data age where the data is essential necessity to everyone on the grounds that without data we can't do anything appropriately. A database of a billion questions, each of which involves one megabyte, is extensive yet not incomprehensible. When one is alright with sizes of this kind, it is practical to envision a thousand such databases, or to imagine them all as bits of the same worldwide accumulation. A digital library is a collection of documents in organized electronic form, available on the Internet or on CD-ROM (compact-disk read-only memory) disks. Depending on the specific library, a user may be able to access magazine articles, books, papers, images, sound files, and videos. Advanced library accumulations contain lasting reports. The computerized condition will empower speedy dealing with as well as fleeting data. Computerized libraries depend on advanced innovations. There will be proceeding with development of advanced library exercises. LIS and software engineering experts confront challenges that will prompt enhanced frameworks. An ever increasing number of libraries will have divisions and projects in the advanced library field. Computerized libraries will expand upon work being done in the data and information administration region. Computerized libraries give a successful intends to circulate learning assets to understudies and different clients.

Introduction: An advanced library is an uncommon library with an engaged accumulation of computerized objects that can incorporate content, visual material, sound material, video material, put away as electronic media formats (instead of print, microform, or other media), alongside implies for sorting out, putting away, and recovering the documents and media contained in the library gathering. Computerized libraries can change monstrously in size and scope, and can be kept up by people, associations, or subsidiary with built up physical library structures or establishments, or with scholastic organizations. The interactive media material must be caught before it can be utilized by a mixed media framework. For instance, a few or the greater part of the mixed media information is in a simple configuration and must be changed over to advanced shape before it can be utilized by an interactive media framework. The mixed media information changed over from simple must be overseen. An administration office is expected to oversee and keep up the information. An entrance ability is expected to seek and recover put away interactive media information. When it is recovered, a circulation office is expected to appropriate the information to an interactive media framework. Along these lines, a framework is expected to catch, get to, oversee, and disseminate mixed media material. Such a framework is computerized library framework. The Library without Walls concentrates on making a system of learning frameworks that encourage logical correspondence and coordinated effort. We are living in the data age where the data is essential necessity to everyone on the grounds that without data we can't do anything appropriately. A database of a billion questions, each of which involves one megabyte, is extensive yet not incomprehensible..

From Digital Libraries by William Arms: "An informal definition of a digital library is a managed collection of information, with associated services, where the information is stored in digital formats and accessible over a network. A crucial part of this definition is that the information is managed. A stream of data sent to earth from a satellite is not a library. The same data, when organized systematically, becomes a digital library collection. Most people would not consider a database containing financial records of one company to be a digital library, but would accept a collection of such information from many companies as part of a library. Digital libraries contain diverse information for use by many different users. Digital libraries range in size from tiny to huge. They can use any type of computing equipment and any suitable software. The unifying theme is that information is organized on computers and available over a network, with procedures to select the material in the collections, to organize it, to make it available to users, and to archive it."

Why Digitization? There are three primary requirements for digitization; two or all them three may apply to your computerized library venture. i. To safeguard the Documents: That is to enable individuals to peruse more established or exceptional records without harm to the firsts. ii. To make the records more available: This is to serve the current clients better; e.g. to enable the clients to look through the full content of the records or to serve a greater number of clients than visualized in remote areas, case, more than one individual at any given moment. iii. To reuse the records. It intends to change over archives into various arrangements; for instance to utilize pictures in a slideshow and to embrace the substance for an alternate reason.

Purpose of Digital Library Expedite the deliberate improvement of methodology to gather, store, and sort out, data in advanced frame.

- Promote productive conveyance of data monetarily to all clients.
- Encourage co-agent endeavors in inquire about asset, figuring, and correspondence systems.
- Strengthen correspondence and coordinated effort between and among instructive organizations.
- Take position of authority in the age and spread of learning

Function of Digital Library : Access to a lot of data to clients wherever they are and at whatever point they require it.

- Access to essential data sources.
- Support sight and sound substance alongside content.
- Network openness on Intranet and Internet.
- User-accommodating interface
- Hypertext joins for route.
- Client-server design.
- Advanced pursuit and recovery.
- Integration with other computerized libraries.
- It is less demanding and more helpful to utilize.

Digital library challenges: Creating “effective” digital libraries pose serious challenges for existing and future technologies. The integration of digital media into traditional collections will not be straightforward, like previous new media (e.g., video audio tapes), because of the unique nature of digital information, which is less fixed, easily copied, and remotely accessible by multiple users simultaneously. Some specific challenges are resource discovery, digital collection development, digital library administration, copyright and licensing, etc., library of congress specified various challenges for building an effective digital library, which are grouped as broad categories as follows.

Building the resource a. Develop enhanced innovation for digitizing simple materials. b. Design pursuit and recovery apparatuses that make up for truncated or fragmented inventoring or expressive data .

c. Design instruments that encourage the improvement of recording or spellbinding data by consolidating the commitments of clients. d. Interoperability

Build up conventions and guidelines to encourage the get together of disseminated advanced libraries.

Conclusion: The term 'advanced library' has been around for no less than 24 years, and potentially more, and a portion of the thoughts behind the term have been around for any longer. While there is still difference about the importance of the term, this piece contends that, computerized libraries are not in a general sense not quite the same as 'customary' libraries; either in the motivations behind existing, or in the administrations gave. The fundamental contrasts boil down to how the administrations are given, and how accumulations are put away and oversaw. There will be proceeding with development of advanced library exercises. LIS and software engineering experts confront challenges that will prompt enhanced frameworks. An ever increasing number of libraries will have divisions and projects in the advanced library field. Computerized libraries will expand upon work being done in the data and information administration region. Computerized libraries give a successful intends to circulate learning assets to understudies and different clients. The library/data focus needs to beat the restraints and search ahead for the advancement of data administrations to the client group by effectively receiving the computerized innovation.

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BUILDING INFORMATION REPOSITORIES CHALLENGES AND OPPORTUNITIES

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Abstract

Each institution will have its own unique approach for establishing a repository that reflects their specific context and community. Repositories can have a wide variety of uses. To date, most repositories have focused on providing open access to research outputs. Institutional repositories represent an historical and tangible embodiment of the intellectual life and output of an institution. The paper seeks to provide an overview of building information repositories its challenges and opportunities.

Information Repository: An information repository is an easy way to deploy a secondary tier of data storage that can comprise multiple, networked data storage technologies running on diverse operating systems, where data that no longer needs to be in primary storage is protected, classified according to captured metadata, processed, de-duplicated, and then purged, automatically, based on data service level objectives and requirements. In information repositories, data storage resources are virtualized as composite storage sets and operate as a federated environment. One way of ensuring that the repository and its services will be relevant to users is to undertake a needs analysis. The most successful repository collections are the ones that support the needs of the community. A typical needs assessment includes both informal inputs, such as through discussions with faculty, as well as more formal means, usually through some type of survey. A knowledge repository is an online database that organises, displays and categorises information. It can be used to provide support and management for many services, including encouraging open access to scholarly research, preserving digital materials for the long term and showcasing academic research. But whilst repositories are becoming increasingly commonplace in India and around the world as houses of shared institutional memory, information on and experience of how best to implement and manage them is limited.

“Free and forever” – evolution of Information repositories: Preserving and making knowledge freely available to the public has long been the mission of libraries. Stone, papyrus or printed books – they were or are all meant to be collected, kept and offered for consultation. Scientific publishing, however, has become a big industry with serious business objectives in the last two centuries and, as a result, the idea of free access to information has been obscured. Commercial publishers release a vast quantity of scientific research papers, and libraries pay a vast amount of money to access them.

Benefits of Building Information Repositories: In regards to the public, that is, individuals, groups, or institutions which benefit from Information repositories, independent of its category and also present a list of beneficiaries. Researchers/Authors – Brings increased visibility, usage and impact for their work worldwide. Research Institutions – Enjoy the same benefits as researchers in aggregated form. Besides, they acquire an information management system that enables them to assess and monitor their research programs and a marketing tool that enables them to provide a shop window for their research efforts. Nations – Increases the impact of the research in which they invest public money resulting in a better return on investment. Society – Research is more efficient and more effective, delivering better and faster outcomes for everyone. External Research Funders – Same benefits as the research institutions who need to be able to access and keep track of outputs from their funding and measure and assess how effectively their money has been spent. Readers – Increases reader reach and retrieval power. Gives barrier-free access to the software they use in their research. Teachers and students – Information Repositories puts rich and poor on an equal footing for these key resources and eliminate the need for payments or permissions to reproduce and distribute content. Eliminates the fear of misusing the material, eliminating also delays, doubts, or fees. No more fair use judgment calls, fear of liability, and painful decisions to err on the side of caution and non-use. Libraries – Information Repositories solves the pricing crisis for scholarly journals. It also solves the permission crisis. They serve a fiduciary function: the parent institution supplies them funds to provide for the most useful provision of library materials and service to their constituents. Universities – Increases the visibility of their faculty and research, reduces their expenses for journals, and advances their mission to share knowledge. Journals and publishers – Makes their articles more visible, discoverable, retrievable, and useful. It can use this visibility to attract contributions.

Challenges in Building Information Repository: The issue of sustainability for repositories is challenging, with the key questions centring on how to manage – both technically and operationally – the long-term preservation of institutional knowledge and how best to meet the evolving needs of the scholarly community. Repositories also have a significant role to play in the knowledge economy, particularly in emerging market countries. In the first years of the new millennium, the growing enthusiasm for digital repositories was such that some thought that they might soon overtake traditional publishing. In reality, though, the issues associated with

the development and maintenance of repositories are still numerous and serious enough for the future evolution of IRs to be somewhat uncertain. Although *technology* both evolves and becomes obsolescent rapidly, developers of repositories seem to be able to take these challenges in their stride. Apparently, the burning issues related to Information repositories seem to lie in other areas. In all probability, IRs would reach the “plateau of productivity” stage much more quickly if they were pure IT operations, although, of course, there is no such thing as a “pure IT operation”. As the first of these burning issues, I would like to mention a rather theoretical one, the lack of consensus regarding a *clear definition of the repository functions and the scope of the material* that they should hold. Some argue that capturing and preserving information are the key goals, while others consider search and dissemination as the most essential functions (Ruiz-Conde and Calderon-Marinez (2013)). There is no agreement on whether repositories should include only research results or also educational materials. There is another debate on which version of articles should be stored. Some say that only peer-reviewed materials can guarantee the quality of the content and as a consequence, maintain the reputation of institution and its IR. However, publishers only permit repositories to store the full text of journal articles under certain conditions. As the Finch report (2012) describes, journal articles account for most of the contents of repositories in the UK, but most of these are metadata records without full text. As they become more prominent, open access articles may soon increase their share. Nevertheless, databases are very diverse in terms of their scope and structure. Another issue became very significant, especially after 2008. Will academic institutions be able to secure sufficient funding to make IRs *financially sustainable*? Constant technological upgrades and continuous maintenance of an ever-growing database requires increasing budgetary and human resources. Chowdhury (2014) warns that running an institutional repository may be extremely expensive. Yet, if institutions have no policies to control the continuity of deposit and preservation, sustainability will be threatened. He states that preservation costs might be reduced if they are managed by a central (state) agency and there are indeed legal steps towards making preservation sustainable, eg the Fair Access to Science and Technology Research Act (FASTR), introduced in the US Congress in 2013.

Conclusion: To conclude, I am hopeful that the number of research and policy papers discussing Information repositories will not drop in the future, as this topic will continue to generate new and exciting questions in regards to further assessments from a technological, operational, professional development and business point of view. Having reviewed many concerns regarding IRs and their role in scientific publishing, we know that despite the worldwide growth of repository numbers, their sustainability is not yet assured. There are several challenges that hosting institutions and IR managers should consider, including technological, policy and operational issues.

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IMPLEMENTATION OF SLIM 21 LIBRARY MANAGEMENT SOFTWARE IN CORPORATE WITH BARCODE TECHNOLOGY IN RCPIT COLLEGE LIBRARY

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Abstract

This Paper deals with Implementation of SLIM 21 Library Management Software in corporate with Barcode Technology in RCPIT College Library. Automation is the prime Moto of today's library because library client needs are changing day by day because of vast of knowledge and availability of internet to cop up with library client needs library staff needs to make sure services that they are providing should be reach to clients accurately and timely. To do so library automation is essential.

Keywords: RCPIT College Library, SLIM21, Library Automation, Barcoding, software, Management, Resources.

Introduction: Library is a Heart of the Organization. Library plays vital role in the development of the student as well as the faculty member. Library is trinity of students, staff member and resources. Library built collection and create tool to support teaching and learning to provide better services to user. RCPIT College has established its own library in year 2001 for student as well as faculty member. Since 2001 to till date this library has experience of lot of technical development one of them is RCPIT College Library automation.

RCPIT College Library: Library is the place where new ideas are generated and visions are broadened. The institute has a provision to include mandatory library hours in the time table so that the students spend ample time in the company of books and recent technical journals. The library is digitalized with SLIM21 software and is connected with the main server up to the hostel via WiFi network so that students can access OPAC (Online Public Access Catalogue) through the hostel terminals. Reprographic facility has also been made available to the students and faculty members. Digitalization of the library has been successfully done. The library remains open for the entire duration of the college timing and provision is also made for 9 hrs. access during University Examinations.

Library Automation Software's: Library automation gathered momentum in 1990s driven by the sharply dwindling prices of hardware, increasing availability of library sotware packages and also ever increasing enthusiasm on the part of library professionals to embrace information technology along with other factors. There are a number of library automation packages in indai. Some of the well-know library softwares of foreign origin are Alice for windws, Virtua, Techlib Plus ect. Among the indigenious library software packages, Libsys is the widely use software. Other library software packages developed in India are SLIM21, Granthalaya, Maitreyi, Sanjay, DELMS, Librarian, WYLYSYS, DELDOS, TLMS, Libsuite ASP⁺ etc. Few of them have been developed by the Governmet organizations, while others by private software compaines.

LIM 21 Histories: SLIM21 is the latest product from the family of SLIM 21st System for Library Information and Management. The first version of SLIM software was launched in the year 1988. Since then it has been continuously improved by incorporating feedback from clients and adapting to the latest technical innovations. SLIM21 is backed by unflinching after sales support from Algorithms Consultants Pvt. Ltd, an ISO 9000: 2008 certified company. Algorithms project execution and quality control procedures make every library automation project a total success. Today, Algorithms counts over 450 libraries of different types such as academic institutions, engineering firms, pharmaceutical companies, hospitals, banks and financial institutions, software houses, schools and colleges as its satisfied customers.

SLI 21st Library Management Software: SLIM21 helps you catalogue books, e-books, films, sound recordings, drawings, clippings, articles, reports, letters, pamphlets, serials publications...all those things that contain information so vital to your organization. SLIM21cataloguing adheres to popular international standards. With SLIM 21 retrieval of information is simple, fast and efficient. Even a catchy phrase in the description of the catalogued item can be used for searching. SLIM21 supports flexible workflow to cover activities related to acquisition of books, serial control and funds monitoring.

SLIM 21 Modules: SLIM21 Basic modules cover functionality required for day to day library management. Cataloguing, Circulation, Serials Contro, Acquisition, OPAC

1. Cataloguing: SLIM21 Cataloguing is based on AACR2 (Anglo American Cataloguing Rules). It catalogues any type of material, print as well as non-print. It supports material in digital form and helps you build digital library. SLIM has virtually no limit on length of bibliographic details. Example, a Title can be 10 characters or 500 characters; summary can be 50 words or 500 words; article can have one author or 10 authors. Unlimited number of added entries (access points) per card is allowed such as title, uniform title, main entry, multiple keywords, place of conference, etc. Any subject classification system such as UDC, DD, or CC etc. is permissible.

2. Circulation: To Strength en smooth functioning of automated circulation section it required reputed library management software. RCPIT College Library has SLIM21 Library management software and for smooth function of circulation section library staff done barcoding of books and the library clients as it is basic need for circulation section. Because of this now library staffs perform their duty with very efficiently and faster. The

SLIM 21 library management software supports all front desk operations like Membership of new users, renewals, Issue Return books and also generates reminders overdue. When any particular client come to issue or return the books that time bar codes are scanned, the details of books and client are displayed on the screen. This reduces the error percentage at the circulation counter and circulation transactions done very fast and time saving.

Issue / Return with Barcode: Easier interface to the barcode system, offering basic transactions like Issue and Return Print transaction report for a borrower

Letter Generation: Collect reserved item Overdue loans notice No dues certificate Membership renewal reminder Recall a book in circulation Self-Check-in and Check-Out (optional feature)

3 Serials Control: SLIM serials control system helps achieve an effective utilization of periodicals budget. It allows for tracking receipts of issues, filing claims for issues not received, preparing binding orders, etc.

The Journal Title Information includes: Title, Abbreviation, ISSN and other identification numbers Publisher / Agent, Periodicity, Delivery Mode, Gratis / Exchange / Depository, Multiple Addresses for Communications, Holding note for Union catalogue, Separate list of journals on proposals,

Letter Generation: New subscription, Renewal of subscription, Reminders / replacements for issues, Binding order, Request / acknowledgment for gift / exchange, Payment forwarding note

Additional facilities, Generation of arrival schedule for issues of journal, Subscription history for journals, Popularity statistics, Accessioning of bound volumes, Publication history, Integrated with article indexing

4 Acquisition: SLIM Acquisition system supports the entire range of activities from the time someone makes a proposal to acquire an item, until it is finally paid for and accessioned. Acquisition system covers Proposal for acquisition, Inquiry to book sellers/publishers, Purchase orders (foreign / local), Books on approval memos, Purchase bills, Payment details of purchase bills

Credit note. Detailed information about vendors. Multiple currencies and conversion rates

The data on documents is automatically picked up for generating letters. These can be simply printed, signed and posted. Associated payments information is maintained. Purchase follow-ups are made easy with: Purchase order status report Purchase order follow up letters Payment advises Entries in accession register are generated automatically The items under acquisition can be kept in the catalogue and can be made visible through OPAC and Web OPAC searches. These items are grouped by proposers, subjects, recipients, etc. and can be retrieved in many ways: Those on requests, orders, bills or approval memos Those awaiting approval Those received on donation or exchange basis

5 OPAC: On-line Search Facilities for Readers SLIM21 OPAC (On-line Public Access Catalogue) offers powerful on-line search facilities to search through library catalogues:

Author	Place of conference
Keyword	Subject name
Subject class	ISBN / ISSN
Title	Year of conference
Publisher	Series Titles
Place of publication	Year of publication
Main entry	Material type

The repository of words, names, titles, keywords, etc. is available for on-line browsing while the search phrase is being entered. This displays alternate spellings; words derived from same root, etc. and thus help the searcher by providing a view of the data. In addition to these conventional searching methods, OPAC indexes every word in the description of the item. Thus, to conduct a search one need not be aware of the cataloguing style of the library.

Optional formats are available to display information such as: Abstract of the item Keywords for the item Number of copies Bound volumes of a journal Loose issues of a journal Inventory status such as lost / missing / withdrawn

An interactive query builder with: Boolean operators such as and, or, not Wild card matching Proximity and adjacency operators Set formation and combination operators A query result can be presented as a neatly formatted bibliography in multiple sorting orders.

Media List: Multimedia, NMU Syllabus, DBATU Syllabus, NMU Engineering Question Papers, DBATU Engineering Question Papers, E-Books, News Paper Clipping, Scientific Treasure, GATE PREPARATION, Digital Library (Library OPAC, E-Books, E-Journals, E-Resources & E-Database)

- NPTEL Video Lecture: 129 sources and 4604 Videos

Bar-coding in library management: Barcode are a pattern of bars and space: of varying width that represent digits, letters or other punctuation symbols to identify an item or object. Barcode by itself is not a system but an identification toll that provides an accurate and timely support of data requirement for sophisticated management systems. Barcode is a predefined format of dark bars and white spaces structured contain a

specific. Piece of information it allows real-time data to be collected accurately and rapidly. Combination of barcode technology with computer and application software improves performance, productivity and profitability. Originally barcode stored data in width and spacing of printed parallel lines. In other words. We can say that barcode are series of black and white bars arranged in a pre-defined form to represent know coded information. A linear barcode is a binary code (1s and 0s) the line and start and stop markers into bars and space, the size of the quite zone required to be before and after the barcode as well as the compilation of a checksum. Since this arrangement can be varied to suit the different applications, there evolved a number of symbolizes over the years. There are more than fifty different coding symbolizes. Some of the popular symbolizes area as follows:

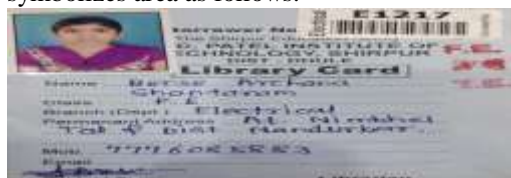


Image 1.9 Borrower Card and Book Use Barcoding

Basic requirement for barcode application: Implementing barcodes in library applications following hardware and software are required:

Inventory Control	Barcode Scanner
Decoder	Printer
Printing software	Communication Software
Database of Library Holdings	Library software and Membership Database
Personal Computers	

Advantage of Barcode Technology: Barcode is a well-established technology and all industries have reaped the benefits of this innovation. Barcode technology is most accurate and least. Expensive way identify and get data from the computer very fast. The role of barcode technology in the library is quite high. The following benefits of barcode technology are Operational efficiency: Operational efficiency has improved a lot after using the bar code technology as bar codes permit faster recoding of information from computer and barcode labels. Time Saving: As barcode technology is faster and accurate to capture the data, it save the time of both client and library staff. Accuracy: Barcode technology ensure the accuracy in data input and error free. Represent unique identity of product, it insure the uniqueness in products. With the help of barcode technology issue/return of documents can be done faster, which helps in saving the time of both the user as well as library staff.

Disadvantages of Barcode Technology: Difficulties experienced during the barcoding work are the books are takeoff from shelf and after barcoding the arrangement of books according to classified is time consuming. Ensure work flows where collections were being moved at the same time as the bar coding project was taking place smoothly. Books without barcoding are not issued to students at the same time.

Barcode Printing of Clients: SLIM21 library management software provide in built barcode printing window. This makes library staff work easy and faster. Only library staff needs to select barcode format, Borrower rang and Borrower category. For printing regular black and white printer can be used. But if Maintain the quality of barcode and life are advise to use color printer.

Barcode Printing of Books: SLIM21 library management software also provide in built barcode printing window for printing barcodes for books. Here also for printing barcode process is same. Here also library staff needs to select barcode format, Books Accession number range.

Conclusion: To perform any system smoothly and promptly in information technology it required hardware and software. In RCPIT College library also has SLIM21 Library management software incorporate with barcode technology and hardware's which are required for automated library to perform daily based various library activities.

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THE IMPORTANCE OF DIGITAL LIBRARIES FOR THE FUTURE IN ACADEMIC LIBRARY AND INFORMATION SERVICES:

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Abstract

The purpose of this research is to help the reader understand the Importance of Digital Libraries. This article presents an evaluation of the Importance of Digital Libraries for the future in Academic library and information services: It begins with a brief overview of the development of academic libraries followed by a discussion of current challenges and opportunities for academic libraries. We distinguish formal, informal, and professional learning and argue that digital libraries will allow Academic library and information to use information resources and tools that have traditionally been physically and conceptually inaccessible. Digital Libraries services have taken a central place in library and information services. They are also regarded as personalised services since in most cases a personal discussion takes place between a user and a reference librarian. Since the Web and digital libraries are meant for providing direct access to information sources and services without the intervention of human intermediaries, this has great social impact because it democratizes the dissemination of information. In particular, it will revolutionize the way in which education is conducted and educational materials are prepared.

Keywords: Digital Library, Technology and Education, information collection, Academic library and information services

Introduction: Digital libraries of the future will give access to a large variety of multimedia and multi- type documents created by integrating content from many different heterogeneous sources that range from repositories of text, images, and audio- video, to scientific data archives, and databases. The digital library will provide a seamless environment where the co- operative access, filtering, manipulation, generation, and preservation of these documents will be supported as a continuous cycle. Digital libraries are large, organized collections of information objects. Well-designed digital library software has the potential to enable non-specialist people to conceive, assemble, build, and disseminate new information collections. Viewed as an educational resource, however, the web exhibits serious deficiencies: uneven and erratic coverage, transience and unpredictability (will this piece of information still be there tomorrow?), and manifest dangers (will my students encounter inappropriate information?). But a far greater tragedy is that whole segments of society become disenfranchised – for while most family homes in rich countries have some degree of access to the Internet, only a tiny minority of citizens in the developing world can tap this wealth of information.

THE CONCEPT OF DIGITAL LIBRARIES AND THEIR ROLE IN EDUCATION: Have boundaries; the web does not. As was mentioned above, this difference is sometimes characterized by the word “curated”, which applies to digital libraries but certainly not to the web. And digital libraries can bring information to people who lack access to the web.

Why do people with access to the web need digital libraries: It may well be that the information in a digital library is already on the web – most of the above-mentioned collections are. However, although full-text search is a powerful means of locating information, it is often hard to find what you want on the web and to be sure that what you have found is authoritative. As focused collections of selected material, digital libraries are usually better and more reliable sources of information than the web at large. We end with a final caveat to this assignment: there may be more valuable ways of deploying the resources that would be required for the monumental task of digitising an entire library. The readings introduced many examples of worthwhile digital libraries, such as the Humanity Development Library in the Kataayi organization in rural Uganda, the online physics archives for researchers, the efforts to preserve the language and traditions of the Zia Pueblo in New Mexico, and libraries of popular music. Collections for disaster relief, preserving indigenous culture, and locally produced information are also mentioned in more general terms. This unit and the associated readings have stressed that digital libraries are about increasing access to information: worthwhile opportunities exist wherever there is a need for this. Reflected on what a digital library is and how it might differ from a conventional library and even from a digitised version of a conventional library; articulated some visions of digital libraries in education; thought about how you might define a digital library and reviewed several different definitions; differentiated digital libraries from the World Wide Web; learned about web search engines and thought about their power and their weaknesses in finding information; considered roles for digital libraries in developing countries; Reviewed the ethical and legal basis of copyright.

Digital Library Design to Support User Needs, Even if lecturers were aware of digital library resources their poor design relative to user needs discouraged usage. Some humanities lecturers, for example, noted that they needed to see the whole page of a newspaper, including advertising and other articles to assess advertising and marketing strategies undertaken. However, most newspaper digital libraries assume that only content is important and that even this does not have to remain accurate to the printed version (i.e. specific electronic versions). This makes the resource an inadequate replacement for hard-copy versions. However, this same discipline was eager to gain access to digital libraries for a variety of multimedia resources (e.g. visual media, television programmers, films, music) that are not currently being provided. Humanities reader – teaching /

researchCS senior lecturer teachingHumanities Reader – teaching / researchElectronic resource librarianLibrary managementCS lecturer – teaching / research

ROLE OF DIGITAL LIBRARIES: Digital libraries are quite new – about 25 years of age. At the same time, they have been growing at a fast pace. Digital libraries have the following characteristics – they store, preserve, distribute and protect contents in different formats and, at the same time, they allow interaction between the user and the contents; they are always present, both geographically and over time; they can make works internationally known, enhancing referencing and citations; they can make public the products of the educational process and let them be used as inputs for further learning.

Management of documents in all formats in a unified way – texts, animations, interactive exercises, audio files, video streams, e-books, e-journals and online tests can be stored, described and distributed through computers and networks. Access control – contents can be assigned different types of access according to the classes of users that are entitled to them. Authors can decide if their works are to be used by their students only, by any student of a given institution or the public in general. Content sharing – authors can make their contents available for other faculty to aggregate into their courseware. Interactivity – contents that are managed by digital libraries can be interactive and based on multimedia. Students can listen to soundtracks, view animated images, solve exercises and have them checked online, write and send comments to authors and/or tutors. Customization – some users may require special characteristics of the contents and the system. This is true when people with special needs are involved, for example, persons who are blind or visually impaired. Reuse – courseware can be developed with a granularity that makes it flexible to combine and support multiple syllabus. Reuse is important because developing courseware is expensive and takes time, so increasing reuse improves efficiency. Cross-institution cooperation – digital libraries in general are connected to the Internet, this allows that contents be used from different cooperating institutions, Any place and at any time – students study in different hours of the day any day of the week, this is more significant when distance learning is considered. Students can be in any country and accessing courseware anytime.

Library role in open access and research data management: One of the most significant recent developments in scholarly academic publication is open access. The movement for open access publications has been growing for some time in response to the high fees for journal article, access which meant that publicly funded research was only accessible to a small number of (usually) academic readers that limited public access and was also considered a barrier to social, cultural, technical and economic benefits of research. In addition to the requirements for open access to publications, there are also regulations surrounding the management of academic data. Academic data is produced and shared in large volumes and represents a significant investment in public money, as well as being valuable resources for the advancement of knowledge. It is understandable then that research data management is a major preoccupation within the academic and research sectors “...from its entry to the research cycle through to the dissemination and archiving of valuable results” ([Whyte and Tedds, 2011](#)). Requirements for institutions to put into place policies for research data management have been driven by a number of factors, including the increasing prominence of data intensive research and also by requirements from journals and funding bodies to collect and store data, and to make it available for other researchers to use. In the United Kingdom, funding councils have introduced requirements for academic institutions to have formal processes in place for curating data generated by publicly funded research projects ([RCUK, 2015](#)). Research data is a resource that demands sophisticated approaches to curation and management (as Joint Information Services Commission (JISC) has identified in its Managing Research Data Programme 2011–2013). There is an increasing pressure for institutions (particularly in the academic sector) to exploit research data more fully, particularly when it has been generated through the use of public funding ([Cox and Pinfield, 2014](#)).

Services of Digital library New technology and traditional thinking: On the one hand it can be argued that dramatic changes have been made at academic libraries in response to the new digital information environment. Most academic libraries, including Linköping University Library, offers a wide range of digital services and resources. But on the other hand, at a closer examination, one will find that these services and resources are mainly organized according to traditional library principles. In the case of Linköping a guiding principle for the Digital library has up to recently been to create systematic and well organized general services and e-resources, for example subject specific gateway services. The virtual part of the library functioned as an extension of the traditional library, an enterprise on the side with relatively low priority, except for of e-journals. A low usage of existing services was often put in relation to researchers' lack of practice of web technology etc.

E-mail: • The E-mail stands of electronic mail • It is a service of Internet as well as Digital library.

• The delivery of E-mail from the sender to the receiver consists of three stages. The first stage, the E-mail goes from the user agent to the local server. User agent was SMTP client software and the local server uses SMTP server software.

File transfer Protocol (FTP): File Transfer Protocol (FTP) is the standard mechanism provided by TCP / IP for copying a file from one host to another. Transferring files from one computer to another is one of the most common tasks expected from a network or internetworking environment. FTP differs from one other client server application in that it established two connections between the hosts. One connection

is used for data transfer, the other for control information. FTP uses two well-known TCP ports: port 21 is used for the control connections and port 20 is used for the data connection. The FTP is client server architecture. The client has three components: user interface, client control process, and client data transfer. The server has two components: the server control process and the server data transfer process.

Remote login: When a user wants to access an application program utility located remote login. Here the planet (TELNET) client server programs come into use. The users send the keystrokes to the Terminal deliver where the local operating system accepts the characters but does not intercept them. The characters are sent to the PLANET client, which transfer from the characters to a universal character set called network virtual Terminal character and deliver them to the local TCP/IP Stack.

World Wide Web: The World Wide Web is a repository of information spread all over the world and linked to other.

Automated Web Search (Search engines): It is technique of document searching for document searching the system is used is called search engine.

Conclusion: This Paper has highlighted how related social and organisational issues can impede effective technology deployment. And research has highlighted how related social and organisational issues can impede effective technology deployment. There is a need within this context to increase the awareness of digital resources available and their potential within specific academic contexts and disciplines. Libraries have been the companions of higher education for many centuries. They have preserved and given access to all sorts of materials – books, manuscripts, rare documents, journals, maps, etc. – that have supported the process of learning.

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DIGITAL LIBRARIES: FUTURE AND CHALLENGES

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Abstract

A Digital Libraries nothing *however* the modification from ancient library. The digital library concept comes into existence within the twenty first century. Virtual library, electronic library, library without walls and Digital Library are synonymous to each other. During this study, we have to discuss about the definition of digital library, its future and challenges, etc. Using digital library, access anyone, anytime, and in any form.

Keywords: Digital libraries, Digital Libraries Creation, Future of the Digital Libraries, Challenges of Digital libraries

Introduction: Digital Libraries are being created nowadays for various communities and in different fields e.g. education, science, culture, development, health, governance. With the availability of free digital Library software packages at the recent time, the formation and sharing of information through the digital library collections has become an attractive and practicable proposition for library and information professionals around the world. Library automation has helped to produce easy accessibility to collections through the utilization of computerized library catalogue like On-line Public Access Catalog (OPAC). Digital libraries *different* from the traditional libraries. Several digital libraries also provide an access to other multi-media content like audio and video.

What is a Digital Library? With the advancement of information and communication technology, the speed of information explosion will increase exponentially. Library digitisation is nothing however the conversion of physical media of the library, i.e. books, periodical, articles, etc., into digital format. Flexibility is one of the chief assets of digital information. As a result, libraries have been constantly facing the problems of space, cost of books and journals, inability to supply multiple copies and most vital is retrieval potency of user being vulnerable for need of data. Digital Libraries popularly viewed as an electronic version of a library. A main benefit of Digital Libraries to preserve rare and fragile objects by enhancing their access to multiple users simultaneously. There are several reasons for libraries to go for digitization, but the prime reason for the digitization is the need of the user for convenient access to high quality of information.

Digital libraries Creation: The biggest problems in creating digital libraries are the building of digital collections. Digital imaging is an inter-linked system of hardware, software, image database, and access sub-system with each having their own elements. Tools used for the Digital Library include many core and peripherals systems like hardware, software package, network, and printing technologies. a number of the details to be considered in developing a Digital Library are as follows:

A. Digital Collection - There are basically three strategies of building digital collections: (i) digitisation, converting paper and different media in existing collections to digital type (ii) Acquisition of original digital works created by publishers and scholars. (iii) Access to external materials not control in-house by providing tips to websites, different library collections, or publishers servers.

B. Conversion of Print to Digital - primarily scanning and use of OCR programs and re-keying of data are the two necessary strategies for converting the print to digital resources. A number of the technical needs of the digital image process include hardware, software package, network, and display technologies.

C. Access to External Digital Collection - The digital libraries will get access permission to digital collection provided by external sources like resources of the libraries, institutions, electronic journal through on-line access, which provides their journals on-line through websites.

D. Access to Digital Information offered on the Online - www is that the repositories of knowledge and one of the important services of the web. Digital libraries can give access to electronic resources through library home page. All the above elements are the important machines and tools required for digitisation.

Future of the Digital Libraries: Digital Libraries future are going to operate over a large form of information object types so much vast than those maintained nowadays in physical libraries and archives. These information objects are going to be composed of several multi-type and multimedia elements aggregate in a vast variety of formats. These new information objects can provide innovative and additional powerful means that to researchers for sharing and discussing the results of their work. In order to be able to support these objects, the Digital Library functionality needs to be appropriately extended so much beyond that needed to manipulate the easy digital surrogates of the physical objects. In order to support these objects the Digital Library may have considerable resources. For example, the creation and handling of the new documents may need access to several completely different, large, heterogeneous information sources, the utilization of specialised services that process the objects keep in these sources for manufacturing new information, and therefore the exploitation of large processing capabilities for performing this task. Digital Libraries also are needed to supply a way richer set of services to their users than within the past. specifically, they have to support the activities of their users by providing functionalities that will range from general utilities, like annotation, summarisation or co-operative work support, to very audience-specific functions, like map process, semantic analysis of pictures, or simulation. The provision of new Digital Library functionality will, in theory, amend the way during which research is

conducted. In the new Digital Libraries users don't seem to be only customers but also producers of information. By elaborating information gathered through the Digital Library they will create new information objects that are published within the Digital Library, therefore enriching its content. The new Digital Libraries are therefore needed to supply services that support the authoring of those new objects and therefore the Workflows that lead to their publication. In parallel with the higher than evolution of the role of Digital Library systems, we are currently observing a large expansion within the demand for Digital Libraries. Research nowadays is usually a cooperative effort carried out by groups belonging to completely different organizations spread worldwide. Motivated by a common goal and funding opportunities, these groups dynamically aggregate into virtual research organizations that share their resources, e.g. knowledge, experimentation results, or instruments, for the period of their collaboration, making new and additional powerful virtual research environments. These virtual research organizations originated by individuals that do not essentially have great economic power or technical experience, more and more frequently require Digital Libraries as tools for accelerating the achievement of their research results. This new potential audience demands less expensive and additional dynamic Digital Library development models. They require to set up new Digital Libraries that serve their needs for the period of their collaborations in an appropriate timeframe and with an acceptable cost. The present Digital Library development model cannot satisfy this huge demand; a radical change is required if we would like to be able to address these new emerging necessities. An excellent contribution towards the satisfaction of all the above-mentioned necessities will certainly come from the introduction of mechanisms that support a controlled sharing of resources among completely different organizations. Sharing during this context is not only applied to repositories of content, as is sometimes meant nowadays, but can be extended to any form of resource required to create a Digital Library, i.e. language and ontology resources, applications, computers and even staff with the required skills for supporting the Digital Library development, deployment and maintenance. Supporting this kind of sharing needs the introduction of appropriate solutions at each the technological and organizational levels. These two levels are not independent; instead they powerfully influence each other. In fact, the provision of a good technological solution favors the creation of an appropriate organization, and vice-versa, a successful organization stimulates the development of recent supporting technologies.

Challenges of digital libraries: The combination of digital media into traditional collections will not be simple, like previous new media (e.g., video audio tapes), due to the unique nature of digital information, that is less fixed, simply copied, and remotely accessible by multiple users at the same time. Some specific challenges are resource discovery, digital collection development, Digital Library administration, copyright and licensing, etc., library of congress specified various challenges for building a good digital library, that are classified as broad categories as follows.

Building the resource a. Develop improved technology for digitizing analog materials b. Design search and retrieval tools that compensate for abbreviated or incomplete cataloging or descriptive information

Sustaining the resource a. Develop economic models for the support of the national digital library.

Digital Library Advantages and Disadvantages

Advantages There are some advantages are as follows: The user of a Digital Library need not to travel to the library physically; folks from worldwide will gain access to similar information, as long as an online connection is available. The same resources will be used at the same time by variety of institutions and patrons. A major advantage of digital libraries is that people will gain access 24/7 to the information, i.e., users will access the information anytime provided the right network connectivity. Digitization is not a long preservation solution for physical collections however will succeed in providing access copies for materials that may otherwise fall to degradation from repeated use. Preservation and conservation of information in the Digital Library are one of a very important issue.

Disadvantages There are some disadvantages of digital libraries also, that are as follows:

User authentication for access to collections, Equity of access, Digital preservation, Interface design

Interoperability between systems and software package, Training and development., Information organization

CONCLUSION: Libraries around the world are engaged on this daunting set of challenges for several years currently. The library/information center needs to overcome the inhibitions and appearance ahead for the betterment of information services to the user community by successfully adopting the digital technology - the requirement of the hour and keep pace with world. It looks that the days may not so much when the entire world would have digital libraries interconnecting all libraries to meet the academic and research needs within the short time. However, before digital libraries took over the library and information network, the country's archives laws must be modified to meet the present challenges within the areas of copyright protection of information and prevention of corruption of information.

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DIGITAL LIBRARIES AND FUTURE

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Abstract

The present article is emphasized on free open source software as online based for library and information science and forecast its future. The author has formulated the conception of free open source software (FOSS). The FOSS is crucial to be played in library and information science due to financial support to library and information science centers are very less so that from this condition librarian gets affected and arises so many problems in library automation and computerization in the library. Here author has tried to reveal the span work of FOSS, that means – how to analysis, down load, authenticity, modules, certification, registration, patent authority, validity period, implementation, data entries, admin priority of modules, accessioning, reporting, bar coding, data structure, MIS, Installation process, run time error, termination error, periodical / book entries, resource sharing, cataloguing, automatic Classification generation etc. Open source software is computer Library software whose source code is available under a license (or arrangement such as the public domain) that permits users to study, change, and improve the software, and to redistribute it in modified or unmodified firm. It is often developed in a public, collaborative manner. It is the most prominent example of open source development and often compared to user generated content. For many libraries, organizing their books and other media can be daunting task, especially as the library grows with more material. Years ago we had crude card catalogue systems (remember the Dewey Decimal System) that kept things organized, but were difficult to maintain.

INTRODUCTION: Open source software is computer Library software whose source code is available under a license (or arrangement such as the public domain) that permits users to study, change, and improve the software, and to redistribute it in modified or unmodified firm. It is often developed in a public, collaborative manner. It is the most prominent example of open source development and often compared to user generated content. For many libraries, organizing their books and other media can be daunting task, especially as the library grows with more material. Years ago we had crude card catalogue systems (remember the Dewey Decimal System) that kept things organized, but were difficult to maintain. Knowledge grows through research. Research is an investigation procedure. Every human being is interested for achieve adequate of information to updating their knowledge every day. Human beings largely depend on huge sources of information. In the new era of information have various Medias and forms like printed media and digitized electronic media. The printed media includes books, newspapers, periodicals etc. and in an electronic media includes telecommunication, radio, Internet, etc. so information is a basic need of human beings for progress in the future.

Role of Knowledge Resource Centers / Libraries while using open source software:- There various types of roles often plays by the libraries, here author tried to reveal some crucial types of role of libraries as follow.1) To understand nascent knowledge trend in academic era. Actually the librarian can realize the nascent trend of academic era due to, the syllabus of Master of Library and Information Science has been shown and analyzes that how to understand the educational trends and its knowledge thirst of readers. So here the crucial role of libraries are to analysis, capturing, acquiring, processing, preserving, and dissemination of knowledge as per criteria of new nascent educational trends. For example new fresh scientists are not fully introduced with knowledge resources availability belongs to his / her subject specialization, so here crucial role of librarians to give that all hard and soft materials which are related to subjects.

Impacts of ICT / open source software on Libraries. There are various types impacts identified in real library working experience which got by the researcher and that are as follow.

1) To reduction in the library staff. When the computers are started to use in the libraries and information centers that time the quantity of library staff got reduced due to one computer can handle so many staffs' library works therefore obviously staff requirement is always less in the libraries and information centers. For example – in 1975 if preparation of catalogue cabinet was required two staff for making catalogues of books and maintain it but now in 2013 not need that catalogue cabinet due to readymade book sheet once filled in library software then automatically all rest entries prepared computerized by RDBMS technology. OPAC too helpful in this connection due to online accessibility is there for retrieving the available data in particular library.

2) To get clarity in Job and Library Stipulated works. The work load of the library is vary from library to library so here this connection the computer helps in getting the clarity in job of library. An authentication and accuracy can easily get by using the computer. For example –In previously era the hard paper and writing on hard work was too much in library due to not application of computer or unawareness of computerization but in 2013 if we look we will come to know that everywhere computers are use for daily transaction purpose so here clarity and library workload can be easily done.

3) To detection of thief / stealing of books and other reading materials. The RFID / Barcode technology made easy to library staff to controlling on stealing and detect the thief in very short time due to if we see in the British Library or in Jayakar Library, Pune University, we will come to know that bracket frame is ser down at front of the library entry point at threshold, when user come across the borderline that automatically if book issued or not issued it indicate and alarm.

4) To understand rigid subject knowledge. E books / E Journals are much important to get understand the rigid subject knowledge gaining due to not required hard copy, heavy load of books, lengthy notes etc. due in one laptop an approximately one million books can be downloaded at a time. With help of ipad/ e book reader can help to read it easily with color shades. The quantity of publishing e books more than hard copy books.

5) To saving the cost. The e books are cheaper than hard copy books due to e book not required the hard pages, binding, imposing, printing, etc. but hard copy books required all these points. Therefore the cost of hard copy books are too much as compare to e books. So hard copy buy is expensive than e books buying.

6) To saving the library space. The space of library is much important due to library is an growing organism. Therefore everyday books are added in the library here e books / e journals are much crucial role to play due to cost of per square feet is too much in big high tech cities as well as in rural areas.

7) To retrieval the books and journals location and contend analysis. The find out a particular book or journal in a library which having millions of book / journals that it is too rigid work to find out a book in a few minutes but if we are using the library software or excel sheet then it will get easily.

8) To save the time of library staff and users. By using the computer based library software we can save time of the user as well as library staff. For example – suppose reader want some information on library automation then it would get in Library and Information Science Encyclopedia and this encyclopedia is available in soft as well as in hard copy then automatically time will be saved with help of use computer.

Strong points and Weak points of open source software:- 1) It is free software.2) Source code of library software is provided for re-engineering and modification in it. 3) It has not any types of guarantee and warranty.4) It has a validity period.

Conclusion: The role of knowledge resource centers (Libraries) while using open source library software have big an opportunity to enhancement the quality of education through providing the reading materials, IT devices, transaction facilities etc. The higher education having much IT challenges to face in this new internet age so that the use of computer / open source software is helped to library and information science professionals to keep our library up to date with saving time of library users and staff. Above mentioned all points are too much important and helpful to our LIS profession on our professionals / Librarians must be utilized the internet as smart user to purvey excellent library services and facilities. The open source software impacts shown that Library and Information Science Profession is excellent profession which can keep the society alert, aware and knowledgeable society and have been making so many generations intellectual and knowledge based society as well as remove illiteracy of many subject knowledge from the society.

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DIGITAL LIBRARY: NEED OF MODERN LIBRARY

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Abstract

A digital library is a library with mixture of digital objects that can include text, visual material, audio material, video material, stored as electronic media formats (as opposed to print, or other media.), along with means for organizing, storing, and retrieving the files and media contained in the library collection. Digital libraries can vary immensely in size and scope, and can be maintained by individuals, organizations, or affiliated with established physical library buildings or institutions, or with academic institutions. The digital content may be stored locally, or accessed remotely via computer networks. An electronic library is a type of information retrieval system. These information retrieval systems are able to exchange information with each other through interoperability and sustainability.

History of Digital Library: The term digital library develop in the year 1892 from the early ideas of [Paul Outlet](#) in ways to cease the violent wars, eliminate national boundaries, and allow humanity to become balanced. He discussed in his book called "Birth of the Information Age" about how to interlink millions of documents, images, audio and video files together so people could search in one system. He called it the "[Mundaneum](#)." In present time, this idea is closely associated with the [Internet](#). [Vannevar Bush](#) and [J.C.R. Licklider](#) are two more contributors that advanced this idea into newer technology. Bush was seen as a researcher that assisted in making the bomb that was dropped on [Hiroshima](#). After observing the disaster, he wanted to create a machine that would show how technology can lead to understanding instead of destruction. This machine would include a desk with two screens, switches and buttons, and a keyboard. He named this the "[Memex](#)." These way individuals would be able to access stored books and files at a rapid speed

Future: Hug digital projects are underway at [Google platform](#), the [Million Book Project](#), and Internet Archive. With continued improvements in book handling and presentation technologies such as [optical character recognition](#) and development of alternative depositories and business models, digital libraries are rapidly growing in popularity. Just as libraries have ventured into audio and video collections, so have digital libraries such as the Internet Archive. [Google Books](#) project recently received a court victory on proceeding with their book-scanning project that was halted by the Authors' guild. This helped open the road for libraries to work with Google to better reach patrons who are accustomed to computerized information.

Advantages: The advantages of digital libraries as a means of easily and rapidly accessing books, archives and images of various types are now widely recognized by commercial interests and public bodies alike. Traditional libraries are limited by storage space; digital libraries have the potential to store much more information, simply because digital information requires very little physical space to contain it. As such, the cost of maintaining a digital library can be much lower than that of a traditional library. A physical library must spend large sums of money paying for staff, book maintenance, rent, and additional books. Digital libraries may reduce or, in some instances, do away with these fees. Both types of library require cataloging input to allow users to locate and retrieve material. Digital libraries may be more willing to adopt innovations in technology providing users with improvements in electronic and audio book technology as well as presenting new forms of communication such as wikis and blogs; conventional libraries may consider that providing online access to their OP AC catalog is sufficient. An important advantage to digital conversion is increased accessibility to users. They also increase availability to individuals who may not be traditional patrons of a library, due to geographic location or organizational affiliation.

Lack of physical boundary. The user of a digital library need not to go to the library physically; people from all over the world can gain access to the same information, as long as an Internet connection is available. Round the clock availability A major advantage of digital libraries is that people can gain access 24/7 to the information.

Various access. The same resources can be used simultaneously by a number of institutions and patrons. This may not be the case for copyrighted material: a library may have a license for "lending out" only one copy at a time; this is achieved with a system of digital rights management where a resource can become inaccessible after expiration of the lending period or after the lender chooses to make it inaccessible (equivalent to returning the resource).

Information gaining. The user is able to use any search term (word, phrase, title, name, subject) to search the entire collection. Digital libraries can provide very user-friendly interfaces, giving click able access to its resources.

Preservation and conservation. Digitization is not a long-term preservation solution for physical collections, but does succeed in providing access copies for materials that would otherwise fall to degradation from repeated use. Digitized collections and born-digital objects pose many preservation and conservation concerns that analog materials do not. Please see the following "Problems" section of this page for examples.

Space. Whereas traditional libraries are limited by storage space, digital libraries have the potential to store much more information, simply because digital information requires very little physical space to contain them and media storage technologies are more affordable than ever before.

Added value. Certain characteristics of objects, primarily the quality of images, may be improved. Digitization can enhance legibility and remove visible flaws such as stains and discoloration.

Easily accessible.

Digital preservation: Digital preservation aims to ensure that digital media and information systems are still interpretable into the indefinite future. Each necessary component of this must be migrated, preserved or [emulated](#). Typically lower levels of systems ([floppy disks](#) for example) are emulated, bit-streams (the actual files stored in the disks) are preserved and operating systems are emulated as a [virtual machine](#). Only where the meaning and content of digital media and information systems are well understood is migration possible, as is the case for office documents. However, at least one organization, the [Wider Net Project](#), has created an offline digital library, the [eGranary](#), by reproducing materials on a 6 [TB hard drive](#). Instead of a bit-stream environment, the digital library contains a built-in [proxy server](#) and [search engine](#) so the digital materials can be accessed using an [Internet browser](#). Also, the materials are not preserved for the future. The eGranary is intended for use in places or situations where Internet connectivity is very slow, non-existent, unreliable, unsuitable or too expensive.

Disadvantages: Digital libraries, or at least their digital collections, unfortunately also have brought their own problems and challenges in areas such as: User authentication for access to collections Copyright Digital preservation (see above) Equity of access (see digital divide) Interface design Interoperability between systems and software Information organization Inefficient or non-existent taxonomy practices (especially with historical material) Training and development Quality of Metadata Exorbitant cost of building/maintaining the terabytes of storage, servers, and redundancies necessary for a functional digital collection. To conclude though there are many drawbacks of digitalization but still it is very much fruitful in the present scenario of library.

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- mhrd.gov.in/digital-library

ADVANTAGES OF DIGITAL LIBRARIES

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Abstract

A digital library is a library in which collections are stored in digital formats and accessible by computers. The digital content may be stored locally, or accessed remotely via computer networks. The term digital library is diffuse enough to be applied to a wide range of collections and organizations, but, to be considered a digital library, an online collection of information must be managed by and made accessible to a community of users. The advantages of digital libraries as a means of easily and rapidly accessing books, archives and images of various types are now widely recognized by commercial interests and public bodies alike. Traditional libraries are limited by storage space; digital libraries have the potential to store much more information, simply because digital information requires very maintaining a digital library is much lower than that of a traditional library. The present paper provides the essential theoretical and practical information about digital libraries. It includes all important aspects of a digital library which are very much important and necessary for its daily functioning.

Introduction to Digital Libraries: An informal definition of a digital library is a managed collection of information, with associated services, where the information is stored in digital formats and accessible over a network. A key part of this definition is that the information is managed. A stream of a data sent to earth from a satellite is not a library. The same data, when organized systematically, becomes a digital library collection. Most people would not consider a database containing financial records of one company to be a digital library, but would accept a collection of such information from many companies as part of a library. Digital libraries contain diverse collections of information for use by many different users. Digital libraries range in size from tiny to huge. They can use any type of computing equipment and any suitable software. The unifying theme is that information is recognized on computers and available over a network, with procedures to select the materials in the collections, to recognize it, to make it available to users, and to archive it.

The Purpose of Digital Library: A digital library is an integrated set of services for capturing, cataloguing, storing, searching, protecting, and retrieving information. Digital library services bring order where data floods and information mismanagement have caused much critical information to be incoherent, unavailable, or lost. Digital library architecture emphasizes organization, acquisition, preservation, and utilization of information. Digital library systems are realizations of architecture in specified hardware, networking, and software situation.

Advantages of Digital Library

The digital library brings the library to the user. To use a library requires access. Traditional methods require that the user goes to the library. In a university, the walk to a library takes a few minutes, but not many people are member of universities or have a nearby library. Many engineers or physicians carry out their work with depressingly poor access to the latest information. A digital library brings the information to the user's desk, either at work or at home, making it easier to use and hence increasing its usage. With digital library on the desk top, a user need never visit a library building. The library is wherever there is a personal computer and network connection.

Computer power is used for searching and browsing. Computing power can be used to find information. Paper documents are convenient to read, but finding information that is stored on paper can be difficult. Despite the myriad of secondary tools and the skill of reference librarians, using a large library can be tough challenge. A claim that used to be made for traditional libraries is that they stimulate serendipity, because readers stumble across unexpected items of value. The truth is that libraries are full of useful materials that readers discover only by accident. In most aspects, computer system is already better than manual methods for finding information. They are not as good as everybody would like, but they are good and improving steadily. Computers are particularly useful for reference work that involves repeated leaps from one source of information to another.

Information can be shared. Libraries and archives contain much information that is unique. Placing digital information on a network makes it available to everybody. Many digital libraries or electronic publication are maintained at a single central site, perhaps with a few duplicate copies strategically placed around the world. This is a vast improvement over expensive physical duplication of little used material, or the inconvenience of unique material that is inaccessible traveling to the location where it is stored.

Information is easier to keep current. Much important information needs to be brought up to date continually. Printed materials are awkward to update, since the entire document must be reprinted; all copies of the old version must be tracked down and replaced. Keeping information current is much less of a problem when the definitive version is in digital format and stored on central computer. Many libraries provide online the text reference works, such as directories or encyclopedias. Wherever revisions are received from the publisher, they are installed on the library's computer. The new versions are available immediately. The library of congress has an online collection, called Thomas that contains the latest drafts of all legislation currently before the U.S. Congress; it changes continually.

The information is always available. The doors of the digital library never close; recent study at a British university found that about half the usage of a library's digital collections was at hours when the library

buildings were closed. Materials are never checked out to other readers, miss-shelved or stolen; they are never in an off-campus warehouse. The scope of the collections expands beyond the walls of the library. Private papers in an office or the collections of a library on the other side of the world are as easy to use as materials in the local library.

Digital libraries are not perfect. Computer system can fail and networks may be slow or unreliable, but, compare with a traditional library, information is much more likely to be available when and where the user wants it.

New forms of information become possible. Most of what is stored in a conventional library is printed on paper, yet print is not always the best way to record and disseminate information. A database may be the best way to store census data, so that it can be analyzed by computer; satellite data can be rendered in many different ways; a mathematics library can store mathematical expressions, not as ink marks on paper but as computer symbols to be manipulated by programs such as Mathematica or Maple. To conclude the digital library is the kind of library which is available to the reader 24 X 7 and 365 days. It is a kind of boon in the sphere of library sciences. The purpose and the advantages clearly signify its incomparable importance.

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DIGITAL LIBRARIES & FUTURE

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Abstract

Research and practice in digital libraries (DL) has exploded worldwide in the 1990s. Substantial research funding has become available, libraries are actively involved in DL projects and conferences, journals and online news lists proliferate. This article explores reasons for these developments and the impudence of key players, while speculating on future directions. We find that the term 'digital library' is used in two distinct senses. Research-oriented definitions serve to build a community of researchers and to focus attention on problems to be addressed; these definitions have expanded considerably in scope throughout the 1990s. Future trends point toward the need for extensive research in digital libraries and for the transformation of libraries as institutions. The present ambiguity of terminology is hindering the advance of research and practice in digital libraries and in our ability to communicate the scope and significance of our work.

Keywords: Digital libraries; Terminology; Digital libraries initiatives; Information infrastructure; Research funding; International; Community development; Libraries; Services; Institutions; Universities; Social Aspects

1. Introduction: Scholarly and professional interest in digital libraries has grown rapidly throughout the 1990s. In the United States, digital libraries (DL) were designated a 'national challenge application area' under the High Performance Computing and Communications Initiative (HPCC) and a key component of the National Information Infrastructure (once of Science and Technology Policy, 1994). The Digital Library Initiative (1994±1998) involved three U.S. federal agencies. The Digital Libraries Initiative, Phase II (1998±2003) involves eight agencies, indicating the expansion of interest and scope over this short period of time. An international digital libraries program was recently announced by the National Science Foundation, extending the range of partnerships. The United Kingdom has the Electronic Libraries Programme (eLib) (<http://ukoln.bath.ac.uk/elib/>) and many DL research projects are under way in Europe, Asia and elsewhere, whether under DL-septic funding initiatives or funding from other areas. During this time period, multiple domestic and international digital libraries conferences were established and digital libraries topics were introduced at meetings in a variety of disciplines and professions. Several new print and online journals on DLs were founded. Online distribution lists with news of DL projects proliferate. Libraries are undertaking projects in digital imaging, document management and network services. Why all of this interest and activity? Did an urgent research and development problem lead to large amounts of grant funding? Did the availability of grant funding create opportunities for a new research area? Did successful research lead to practical developments? Did practical problems lead to research on solutions? Is digital library research and practice a definable area of interest, or has 'digital library' merely become an umbrella term for a wide array of causal relationships are notoriously to establish. At the rate that the trees of digital library research and practice currently are growing, it is grasp the shape and size of the forest. We expect the answers to these questions to become clearer in hindsight, a few years from now. Yet actions we take now and perceptions that we form, may impudently shape the shape of that forest profoundly.

2. Perspectives on digital libraries: In a few short years of research and development, already the term 'digital library' is used to describe a variety of entities and concepts. Definitions abound (Fox, 1993; Fox, Akscyn, Furuta & Leggett, 1995; Levy & Marshall, 1995; Lucier, 1995; Lynch & Garcia-Molina, 1995; Zhao & Ramsden, 1995; Bishop & Star, 1996; Lyman, 1996; Lesk, 1997; Waters, 1998a; Greenberg, 1998). A review of these definitions indicates that in general, researchers focus on digital libraries as content collected on behalf of user communities, while librarians focus on digital libraries as institutions or services. These communities are not mutually exclusive. Some researchers are focusing on practical problems related to institutions and services and some practitioners are participating in research teams addressing issues of content, collections and communities. In this section we examine possible explanations for these contrasting perspectives. In Section 3 we return to digital library definitions.

2.1. Research versus practice: Despite building upon a foundation of decades of research and practice in related areas, the term 'digital library' is relatively new. The availability of research funding under this term has attracted scholars and practitioners from a variety of backgrounds, some of whom have minimal prior knowledge of related areas such as information retrieval, computer networks, cataloging and classification, library automation, archives or publishing. Sometimes other research topics were simply relabeled 'digital libraries', adding to the confusion. The rapid growth in computing networks, databases and public awareness have contributed to a bandwagon effect in hot topics such as digital libraries, digital archives and electronic publishing. Only as an area matures do people give serious thought to rigorous definitions.

2.3. Framing the issues: Digital libraries are attracting interest in many disciplines and professions. While increased participation leads to the cross-fertilization of ideas, it also results in disputed territory and terminology. Lynch (1993) was prescient in noting that the term 'digital library' is problematic because it obscures the complex relationship between electronic information collections and libraries as institutions. Greenberg (1998, p. 106) comments that "the term 'digital library' may even be an oxymoron: that is, if a library is a library, it is not digital; if a library is digital, it is not a library".

3.1. Digital libraries as content, collections and communities: Digital library research builds upon a long history of related work in information retrieval, databases, user interfaces, networks, information seeking, classification and organization, library automation, publishing and other areas.

3.2. Defining elements of digital libraries: Several aspects of these definitions should be noted. One is that digital libraries are viewed as databases, albeit databases of rich content, whether full text, images, or combinations of media and representations. Much digital library research, particularly that conducted in departments of computer science, focuses on 'enabling technologies' such as database structure, retrieval algorithms, intelligent agents, network architecture and other necessary capabilities. These definitions assume or require that content is collected on behalf of a user community.

3.4. Digital libraries as institutions or services: The terms 'digital library', 'electronic library' and 'virtual library' have appeared in the professional literature of library and information science for some years already, but rarely with explicit definitions. Lyman (1996), in an article entitled "What is a digital library? Technology, intellectual property and the public interest", explores concepts he views to be prerequisite to defining the concept of a digital library, such as electronic publishing and digital documents.

4. Summary and conclusions: Interest in digital libraries research and practice has expanded rapidly throughout the 1990s. Major funding initiatives in the U.S., U.K., European Union and elsewhere have fueled research and development. Conferences, journals and news services on digital libraries proliferate. Upon closer examination, we find that the term 'digital library' has multiple meanings. These definitions cluster around two themes. From a research perspective, digital libraries are content collected and organized on behalf of user communities. From a library practice perspective, digital libraries are institutions or organizations that provide information services in digital forms. Definitions are formulated to serve specific purposes. The research community's definitions serve to identify and focus attention on research problems and to expand the community of interest around those problems. The library community's definitions focus on practical challenges involved in transforming library institutions and services. Hence neither the research community nor library community definitions are particularly helpful in categorizing the vast array of databases available on the Internet, on proprietary services and on CD-ROMs. Given the rapid expansion of computer networks, distributed access to information resources, electronic publishing, distance-independent learning, electronic commerce and related technologies, vastly more research on all aspects of digital libraries is needed

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DIGITAL LIBRARY & FUTURE**Kayasth Arunkumar Shantaram, G.T. Patil College, Nandurbar****Abstract**

This paper discusses the new activities, methods and technology used in digitization and formation of digital libraries. It set out some key points involved and the detailed plans required in the process, offers pieces of advice and guidance for the practicing Librarians and Information scientists. Digital Libraries are being created today for diverse communities and in different fields e. g. education, science, culture, development, health, governance and so on. With the availability of several free digital Library software packages at the recent time, the creation and sharing of information through the digital library collections has become an attractive and feasible proposition for library and information professional around the world. The paper ends with a call to integrate digitization into the plans and policies of any institution to maximize its effectiveness.

KEYWORD : Digital, Library, Information, Data, Online, Knowledge Management.

INTRODUCTION : Digital Libraries are being created today for diverse communities and in different fields e. g. education, science, culture, development, health, governance and so on. With the availability of several free digital Library software packages at the recent time, the creation and sharing of information through the digital library collections has become an attractive and feasible proposition for library and information professional around the world.

Library automation has helped to provide easy access to collections through the use of computerized library catalogue such as On-line Public Access Catalog (OPAC). Digital libraries differ significantly from the traditional libraries because they allow users to gain an on-line access to and work with the electronic versions of full text documents and their associated images, Many digital libraries also provide an access to other multi-media content like audio and video.

What are digital Libraries ? A digital library is a collection of digital documents or objects. This definition is the dominant perception of many people of today. Nevertheless, Smith (2001) defined a digital library as an organized and focused collection of digital objects, including text, images, video and audio, with the methods of access and retrieval and for the selection, organization, maintenance and sharing of collection. Though the focus of this definition is on the document collection, it stresses the fact that the digital libraries are much more than a random assembly of digital objects. They retain the several qualities of traditional libraries such as a defined community of users, focused collections, long-term availability, the possibility of selecting, organizing, preserving and sharing resources. The digital libraries are sometimes perceived as institutions, though this is not as dominant as the previous definition. The following definition given by the Digital Library Federation (DLF) brings out the essence of this perception. "Digital Libraries are organization that provide the resources, including the specialized staff to select, structure, offer intellectual access to interpret, And creation of indexes for various metadata, powerful search and browse, support different file formats (html., pdf, doc rtf, ppt etc), extensibility by allowing customization and configuration. Greenstone also allows the building of non-textual multimedia such as audio, video and pictures accompanied by textual description to allow for searching and browsing. The purpose of digital library is to provide coherent organization and convenient access to typically large amounts of digital information. The following principles provide working definitions of a digital library from both a conceptual and a practical standpoint.

A digital library is an integrated set of services for Capturing, Cataloguing, Storing, Searching, Protecting, and Retrieving, Information. Digital library Architecture emphasizes organization, Acquisition, Preservation & Utilization of Information. Digital library systems are realization of an Architecture in a specific hardware, Networking and Software situation.

There are some of the potential benefits of digital libraries : Capture or creation of content Indexing and cataloguing (metadata) Storage Search and query Asset and property right protection Retrieval distribution.

Digital libraries brings significant benefits to the users. Some of them are always available. Improved Access, wider Access, Improved Information sharing and preservation. In 1986, National Informatics center (NIC) and Indian council of medical research (ICMR) Jointly set up a center called ICMR - NIC centre for Biomedical information. This center was recognized as the 17th International MEDLARS center in 1990 and now is well Known as Indian Medlars centre (IMC) National Informatics center (NIC) has been a pioneer in communicating medical research information through the use of Information Technology. This center is now emerging as a content creator and aggregator. It has developed three major products that are available over Internet:-

CONCLUSION Digitization has opened up new audiences and services for libraries, and it needs to be integrated into the plans and policies of any institution to maximize its effectiveness. Digitization is a complex process with many crucial dependencies between different stages over time. Utilizing a holistic life-cycle approach for digitization initiatives will help develop sustainable and successful project. It is hoped that the approach of the issues outlined, the software mentioned in this paper and the references to more detailed source and past project will contribute to the future success of initiating digitization of library resources.

SUGGESTION : The development of tomorrow's digital libraries information appliances is an interactive process. Our current cycle, however, is not complete until to evaluate the ideas presented in this abstract. The

series of laboratory user interface experiments and in the planning stage for a real - world development. One experiment suggests that free form ink marks made while reading are better for query formulation than traditional relevance feedback. People who have tried X Libries agree that our approach of taking a work practice and arguing it - rather than redefining it - makes the system immediately accessible. Information appliances must be accessible. The digital library community must decide whether digital libraries should as proposed, support users throughout the process of turning information into knowledge. When any reviewer asked "Where the digital library?" than purposely avoided describing protocols, services and architectures because we believe infrastructure should support the vision of working with a digital library information- appliance, not define it. All these benefits, digital library information appliances create a rich, universally accessible, digital library experience that improves the way of work. Clearly there is an exciting future for digital library information appliances in the digital library. Large scale digitization projects are underway at Google, the Million Book Project, and Internet Archive. With continued improvements in book handling and presentation technologies such as optical character recognition and development of alternative depositories and business models, digital libraries are rapidly growing in popularity. Just as libraries have ventured into audio and video collections, so have digital libraries such as the Internet Archive. **Google Books** project recently received a court victory on proceeding with their book-scanning project that was halted by the Authors' guild. This helped open the road for libraries to work with Google to better reach patrons who are accustomed to computerized information.

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COMPARATIVE ANALYSIS OF REFERENCE MANAGEMENT SOFTWARE: A CRITICAL STUDY

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Abstract

The paper focuses on a comparative analysis between the reference management software Zotero, Mendeley, and Endnote. It gives the bright idea of the fundamental concept of reference management tools as well as primary characteristics of it. It also offers various features of these tools along with different ways of import and export features which are similar aspects among all. This analysis will be significant and useful for the research during the time of selection of reference management tools.

Keywords: reference management tools, Zotero, Mendeley, and Endnote.

Introduction: Reference management is one of the most convoluted phases of being a scholar. The tiresomeness of formatting references according to favourable citation styles has prepared the reference manager - a crucial instrument for researchers at all heights. Different types of Reference Management software obtainable in the market but it is challenging to recognise which tool is excellent. Even though I have chosen the subsequent for this study, they are Zotero, Mendeley, and Endnote. Commonly, one can assume a Reference Management (RM) to be capable to: Import citations from bibliographic databases and websites Collect metadata from PDF files Permit institute of citations within the RM database Permit annotation of citations Permit distribution of the RM database

Literature Review: Gilmour, Ron, and Cobus-Kuo, Laura (2011) conducted a study to evaluate different Reference Management (RM) software which is extensively used by scholars in the health and natural sciences. Librarians are regularly providing support for these products. This study compared four prominent RMs: CiteULike, RefWorks, Mendeley, and Zotero, in terms of characteristics, presented and the exactness of the bibliographies produce from it. It was also tested importing and data management features, fourteen references from seven bibliographic databases were imported into each Reference management, using computerized features whenever possible. To test citation accuracy, bibliographies of these references were generated in five different styles. The authors found that RefWorks generated the most accurate citations.

Overview of Reference Management Tools: Zotero is free, and open-source reference management programming to oversee bibliographic information and related research materials which are created by the Center for History and New Media at George Mason University. Remarkable features of Zotero are web browser integration, online syncing, generation of in-text citations, footnotes, and bibliographies, plus integration with the word processors Microsoft Word, LibreOffice, OpenOffice.org Writer and NeoOffice..

Comparative Analysis of Reference Management Software: Certain parameters are defined for the analysis of reference management software.

Parameteres for comparision	Zotero	Mendeley	EndNote X8
Price	Free	Free	Not free: Fee based
Access	Firefox Add-on or Zotero Standalone.	Desktop application; web-based application	Desktop application; syncing enabled through web application (EndNote Web)
Cross-platform	Yes: Windows, OS X, and Linux	Yes: Windows, OS X, and Linux	Yes: Windows and OS X
Organize PDFs and other documents	Yes	Yes	Yes
Storage Capacity	2GB of Cloud storage	300MB on Cloud storage	Unlimited on Cloud storage
Annotate / highlight PDFs	No	Yes	Yes
Tagging	Yes (with color tagging)	Yes	Yes (Keywords)
Full-text searching across PDFs	Yes: not enabled by default	Yes	Yes
Mobile app	Yes: iOS and Android	Yes: iOS and Android (beta)	Yes: iOS
Word processor compatibility	Microsoft Word (Windows), Microsoft Word (OS X), LibreOffice, OpenOffice	Microsoft Word (Windows), Microsoft Word (OS X), LibreOffice, OpenOffice	Microsoft Word (Windows), Microsoft Word (OS X), LibreOffice, OpenOffice, Apple

Table 1 Let us discuss defined parameters as mentioned in Table 1 for the evaluation of reference management tools in depth.

Price: Zotero is an essential parameter which comes first during the time of selection of reference management tools. Zotero and Mendeley are open source reference management tool, whereas EndNote X8 is chargeable. The underlying software of Zotero and Mendeley is free.

Access: Zotero is accessible through Firefox Add-on or Zotero Standalone. Mandalay through the desktop application or web-based application, whereas EndNote is available through the Desktop application and syncing enabled through the web application (EndNote Web).

Cross-platform: Zotero and Mendeley have a competence of cross-platform they can be workable on Windows, OS X, and Linux conversely. EndNote also has the facility of cross-platform which can be feasible on Windows and OS X but not on Linux. Zotero consists of a Desktop version and a web version harmonious with entirely crucial web browsers. Mendeley works as a Firefox extension or as a standalone version with a connector to Chrome, Safari, Firefox, and Opera.

Organise PDFs and other documents: All three reference management tools are equally capable of organising PDFs and other documents systematically which is an exclusive feature which attracts researcher to use them. These tools reduced researcher work, time and efforts and increased quality.

Storage Capacity: Storage Capacity of Zotero is 2GB, Mendeley is 300MB, and Endnote X8 is unlimited on cloud storage. Cloud storage is a safer platform rather than others. In this way, Endnote is being preferred tool by the user.

Annotate / highlight PDFs: Mendeley and Endnote have an exclusive feature like annotate and highlight PDFs, but Zotero hasn't. This is very helpful for the researcher.

Tagging: Zotero had a facility for tagging with colour tagging whereas Endnote also had a service for tagging through keywords. Mendeley provides a fundamental feature of tagging.

Full-text searching across PDFs: Mendeley and Endnote allow searching full-text, PDFs by default. They had drag and drop option for storing files in these tools. Automatically, these tools extract metadata from PDFs. It becomes effortless, efficient and effective to search. Whereas, Zotero had also the same feature, but not permitted by default.

Mobile app: Zotero is offering iOS and Android mobile app, Mendeley iOS and Android (beta) and Endnote iOS.

Word processor compatibility: With the purpose of producing in-text citations and a bibliography, one can use a word processor toolbar. Zotero and Mendeley have compatible with Microsoft Word (Windows), Microsoft Word (OS X), LibreOffice and OpenOffice, although Endnote in Microsoft Word (Windows), Microsoft Word (OS X), LibreOffice, OpenOffice and Apple Pages.

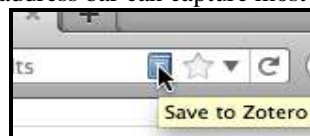
Citation styles: Each tool supports the most popular citation styles, such as APA, MLA, Chicago, Harvard, and Nature. Further, then those techniques, thousands are for specific journals and disciplines

Import and Export features of Reference Management Tools

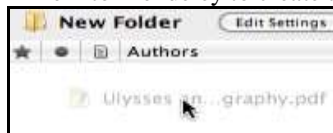
5.1 Modest and Exclusive Techniques (Import)

Figure 1, 2 and 3 clearly showcase the modest and exclusive techniques for Import the Metadata in different reference management software.

Zotero: One click in your URL address bar can capture most records.



Mendeley: Drag and drop a PDF file into Mendeley to create a record.



EndNote: Some databases provide an EndNote button.



Figure – 1, 2 & 3

5.2. Manual Method: Figure 4, 5 and 6 undoubtedly display the manual techniques for Import the metadata in different reference management software. After downloading a TXT, RIS, or BIB file for a record, one can import it manually:

Zotero



Mendeley

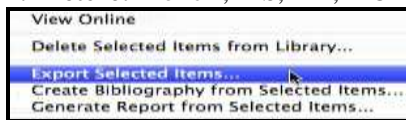
Figure – 4, 5 & 6

EndNote



4. **Export:** If it is desire to export one or more items one can export them in the succeeding formats. These formats permit you to transfer your stuff from one tool to another. Figure 7, 8 and 9 are present the method for export the metadata in different reference management software.

1. **Zotero:** BibTeX, RIS, TEI, MODS, and more



2. **EndNote:** TXT, XML, and more



3. **Mendeley:** BibTeX, RIS, and EndNote XML

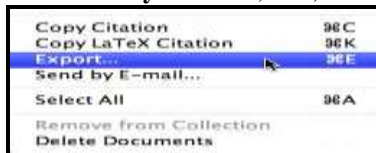


Figure 7, 8 & 9

7. **Methods of Generating Bibliography:** Figure 10 to 14 show how easily, efficiently and effectively bibliographies are generated in different style guides from the reference management tools.

Zotero:



Figure 10



Figure 11

EndNote:



Figure 12



Figure 13

Mendeley:

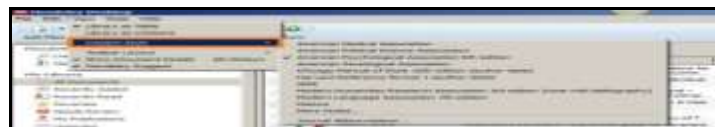


Figure 14

Conclusion: The study presented an ephemeral idea that the reference management software such as Zotero, Mendeley, and Endnote import several similar fields more or less from the web of science, Google Scholar, and others.

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CHANGING ROLE AND RESPONSIBILITY OF LIBRARIAN IN DIGITAL ERA

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Abstract

The world of information is undergoing rapid change. An information age at a great turning point in the history of civilization. The day has arrived when it is most important to learn to access, analyze apply and evaluate such information. As traditional custodians of information, librarians need to be aware of the implications of these changes and develop technological and managerial skills, which will enable them to make effective use of information and to meet their organizations changing information need.

Keywords: Role of Librarian, Digital Library, Role and responsibility, Digital era.

Introduction: Librarians as professionals trained in acquisition, organization, retrieval, and dissemination of information need to adapt and acquire new skills of digital age. Virtual library is not the ultimate answer to everyone's information needs. It is merely another step in a dynamic and evolutionary process. The traditional print library and traditional library services will not disappear. But, as librarians, we must accept and adapt to the introduction of new techniques and systems. We must recognize the enormous potential of the virtual library, address the issues involved in its creation. The role of Librarians & Libraries is changing in the present era due to the changing demands of its users. Users are expecting more from the libraries especially from the academic libraries not only for their intellectual growth but also for their day today informative demands which will certainly grow day by day. Librarians must put in mind that these needs can only be quenched through the innovative services with the help of ICT and its use in wise manner. Smart phones will definitely change the scenario of information access in future because now people need location free access to information. Maximum people use smart phone for their existing features like touch screen, camera, games, social accessing qualitative information etc. Library professions need to get trained in using the mobile technology and guide their users in making use of smart phone and tabs for extracting information from the institutional libraries or from www. Educationists and administrators should explore ways to integrate smart phones and table components into all levels of education.

Changing Role And Responsibility Of Librarians In Digital Era: Though the digital environment is built as a system, which can be directly used by its end-users from their desktop, the role of librarians cannot be overlooked. The responsibility of the librarian and information scientist has increased in terms of packaging and repackaging of information, electronic publishing, advising users about the strategy to identify relevant electronic sources, etc. In such a new environment it will be very difficult for the librarian to decide what should be organized? How to give citation? How to organize the collection? etc. Thus librarian has to change himself and acquire more skills and additional roles.

Leadership Role and Managerial Skills: One primary role of librarians is to provide leadership and expertise in the design, development, and ethical management of knowledge-based information systems in order to meet the information needs and obligations of the patrons. He should enrich his management skills for organizing, managing and disseminating e-literacy to users.

IT Skills as Digital Information Provider: Providing information resources to patrons -regardless of format, it is most necessary to have quality of a virtual librarian. He should be able to satisfy all types of users especially research scholars and young generation who uses internet frequently for the latest up gradation of the information. He should be able to create his own website as an easier way to share with others what they know. He should gather electronic information and create electronic pathfinders and front-end search tools to help users for accessing the required information.

An Evaluator of Digital Resources: Evaluating the right information at the right time is the most important factor in virtual library. Batt (1999) observed that there is an increasing diversity of information resources from which to choose the most appropriate vehicle, and that librarians must widen their selection processes in order to decide on the right medium for each situation. Electronic sources of information are excellent for data which must be timely and is subject to frequent change, such as stock market data, weather reports, and population statistics. Evaluating electronic sources of information there is also a distinction to be made between those sources of data which have been digitized for the speed and ease of transportation, and data which is of limited usefulness, volatile and fluid in nature..

Classification of Online Information: Mason (1998) noted that 'the more there is on the web, the harder it becomes to find'. It is ironic that organizing vast quantities of information is becoming a demanding issue for those involved in developing the internet and reaping internet resources.

Staff Development Programmes: Information retrieval is the most obvious skill a librarian demonstrates to the public. Adequately skilled staff should be recruited to meet the increased demands of the knowledge society. With a rapidly changing environment both within and outside the library, staff development programs are essential to the continued success of the organization.

Proactive Information Professional Role: The modern trend is for the role of the librarian to move from that of a passive intermediary role responsible for guiding patrons to appropriate information resources, towards that of a much more proactive professional role which includes analyzing and repackaging information, content information management and institutional digital repository management.

Information Literacy Programmes: Librarians have to change their role in the e-learning environment by participating in e-learning experiments and becoming involved in universities e-learning centers. A well learned must teach information literacy to educate future knowledge workers, in traditional ways or via Internet-based instruction modules.

E-Resource Managers: Academic and research libraries have a major role in ensuring that they and their home institutions remain vital players in the changing terrain of information and education. Faculty may not be aware of copyright issues and do not know what material is electronically available or licensed by the library.

Librarian as facilitators and intermediaries: The networked environment has strongly invested librarians, putting them on a "client-centered function as facilitators and intermediaries" (Rapple, 1997). The librarian working beyond library walls, as "educator, facilitator and collaborator, rather than information intermediary" (Newton-Smith, 1995). if one believes that librarians "must enhance their role as technological gatekeepers, guiding users through overloaded information sources, improve their technological skills, and must learn about new types of users who have taken center stage" (Wilson, 2000).

Librarians as "knowledge navigators": (Chase, 1998), who "understand the differences between information and knowledge, and have the background, technical skills, and abilities to take a leading role in creating the intelligent enterprise", Finally, librarians can perform an active role even in creating, promoting and implementing new models of scholarly information diffusion, such as institutional repositories (Bailey, 2005).

Librarian as Guardian of information superhighway (ISH) The information superhighway is a vision or a metaphor. It envisions a fusion of the two-way wired and wireless capabilities of telephones and networked computers with a cable TV's capacity to transmit hundreds of programs.

Librarian as Digital Manager: Digital content managers, (taxonomies, metadata, Dublin Core etc.). Academic librarians have great opportunities to provide leadership in knowledge management, open access, institutional repositories, education and digitization initiatives and projects. Academic libraries can embed library value in the mission of their universities.

Librarian as IR Developer : The emergence of the digital research repository is also creating a new role for the information specialist. Creating, developing and managing all aspects of research repositories will be a key responsibility for information specialists.

Role as Cloud Librarian: The Librarian has to acquire skills and knowledge on how to manage and maintain virtual spaces that allow optimal use for clients. These spaces will have to have minimal technical glitches and run smoothly to encourage clients to make active use of it. We will be educated in the latest technical lingo and sound just like computer scientists. All this to provide streamlined access to the virtual library

Librarian as media marketer: To create the awareness about their resources and services, librarians should design a media marketing campaign for television, radio, online outlets, and print that shows realistic, modern librarians doing the diversity of work within the profession (Adams, 2007).

Librarian as Web designer: The future information specialist will be that of web editor, web developer/designer or web administrator. This is one of the best ways to reach our clients in the digital era. Becoming streamlined and integrated with Web 2.0 is another crucial role for the information specialist. Wiki's, Blogs, RSS feeds, etc. are the future. Librarians are currently involved in designing blogs and wiki's but have not yet determined how we can use these technologies for marketing, training, etc.

Librarian as Collaborator: This is another drive behind change in 21st century academic libraries. social media or web 2.0, 3.0 is the use of digital media, including Internet and mobile, for collaborating to create user generated content and form self organizing communities. Social media is designed to collaborate, exchange ideas and achieve commonly-shared goals.

Librarian as Time manager: Librarians have to learn how to manage time to stay updated, attend information sessions on new developments and still perform daily tasks. "Combine librarians and the net, and in no time they will rule the world" (Howells, 2003).

Conclusion: Today we all agree that to cope with the changing dimensions of digital environment. The explosion of information users are increasing unable to deal with the problem of information overload. The fundamental goal of the library is to provide right information to the right users at the right time and to fulfil this goal it is necessary for library professionals to keep pace with the changing needs and demand of users in present era.

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USE OF ELECTRONIC RESOURCES BY THE ENGINEERING FACULTIES: A CASE STUDY OF TWO ENGINEERING COLLEGES IN DHULE DISTRICT, MAHARASHTRA, INDIA

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Abstract

The present study is an attempt to investigate the awareness of e-resources, experience level in using e-resources, time spent on using e-resources, purpose of using e-resources, use of various online sources and the most preferred place for accessing e-resources by the Associate Professors and Assistant Professors and Professors of Engineering Colleges in Dhule District.

Keywords: E-Resources, Engineering Colleges, Users Study. Dhule, Maharashtra

INTRODUCTION: Today information technologies play a vital role for tremendous changes in the library. Advance information technology urge for information provides to repackage separate alternate products, demand of users to have easy search, browse, retrieve revise mode of facture rich non print information sources all lead to the present trend of hybrid libraries. E-Resources are those resources which include documents in electronic or e-format that can be accessed via internet in digital library environment. E-resources are that electronic product that delivers a collection of data, be it text, image collection, other multimedia products like numerical, graphical mode for commercially available for library and information centre's.

E-RESOURCES: An e-resource is an electronic information resource that can be accessed on the web, on or off the campus. Electronic information sources offer vast opportunities for readers. The information needed can be delivered from the most appropriate sources instantly and the user can satisfy his needs dynamically. According to AACR2, 2005 update, an electronic resource is a "material (data and/or program) encoded for manipulation by a computerized device (e.g. CD-ROM drive) or a connection to a computer network (e.g., the internet)."

REVIEW OF LITERATURE: T. Prabhakaran (2013) presented the study with the use of e-resources among the faculty members of engineering colleges in cuddalore district. The data was collected through questionnaire form 198 users various factors like institution wise distribution of respondents using e-resources, sex- wise distribution of respondents using e-resources, institution wise respondents frequency of access e-resources, institution wise respondents purpose of using e-resources, institution wise respondents access search engines and institution wise respondents preferable format for getting information. So users are dependent to some extent on libraries with new technologies such as e-resources. Frequency of using e-resources daily is the first preference Purpose of using e-resources is the best use for research work. Google is the most commonly used search engine among the users. Both format (Print and electronic format) are most preferable for getting information. Necessary training facilities are to be provided to the users, so libraries need to organize the effective training programmes on how to use e- resources. This study suggests some measures to achieve effective and efficient use of e-resources by the faculty members of engineering colleges⁹

K.Vijaykumar and shuaib (2014) presented an overview on the use of E-resources and its impact on of Engineering Colleges in Nagapatinam district.

OBJECTIVES OF THE STUDY To know the different E-Resources used by SSVPs Dhule and RCPIT Shirpur Engineering College Faculty. To find the frequency of using E-Resources To identify the time spent on using E-resources To find the location of use of E-resources To explore the purpose for using the E-resources by the faculties of engineering colleges. To know the sources used by the faculty to obtain information about E-resources. To understand the problems faced by the user in using E-Resources

METHODOLOGY: This study is based on a survey (Questionnaire) method. A structured questionnaire will be designed to collect data from the faculty members of Engineering colleges, keeping in mind the basic objective of the study. The data will be personally collected from the faculty members. Besides personally visit to the respective libraries and personal interviews will also be conducted with Librarians to assess the problems relating to use of e-resources and seeking behavior by the faculty members. The secondary data will be collected from Books, Journals, Magazines, News Paper Articles, Internet Resources, and Ph.D. Thesis etc.

ANALYSIS AND INTERPRETATION: The data was collected with the help of questionnaires. A total number of 200 questionnaires were distributed to faculties of Engineering Institution in Dhule District. The no. of fulfilled questionnaires i.e. 145 were returned back. The investigator selected filled questionnaire for the analysis of data. The following abbreviations are used for Colleges.

1) College wise

Sr.No.	College Name	Distributed	Response	%
1	SSVPs	100	68	46.89%
2	RCPIT	100	77	53.11%
	Total	200	145	100%

2) Designation wise analysis

Sr.No.	Designation	Respondent	%
1	Assistant Professor	116	80%
2	Associate Professor	26	17.93%
3	Professor	3	2.07%
		145	100%

3) Use of Electronic resources:

Preferential Use of Miscellaneous E-Resources	Count	Column N %
WWW	144	99.31%
E-Mail	139	95.86%
E-Books	138	95.17%
E-Data Archives	35	24.13%
E-Journals	144	99.31%
E-Magazines	62	42.75%
E-Manuscripts	57	39.31%
E-Maps	41	28.27%
E-Newspaper	75	51.72%
E-Research Reports	44	30.34%
E-Thesis	87	60%
CD-ROM/DVD	56	38.62%
E-Bibliographic databases	27	18.62%
Other	05	3.44%
Total	145	100%

Table --- shows that majority of the respondents prefer to use electronic resources E-Journals & www (i.e. form websites) out of total 145 respondents, 144 faculty members (i.e. 99.31%) agreed that E-Journals & www (websites) was one of the main electronic resources, Email was given second preference (i.e. 95.86%) whereas (95.17%) faculty member prefer electronic resource i.e. e-journals.

4) Preferential Use of Electronic / CD-ROM Databases

Preferential Use of Electronic/CD-Rom database	Count	Column N %
ASCE	41	28.27%
ASME	51	35.17%
ASTM –	25	17.24%
Access Engg. Mcgraw hill-	52	35.86%
Delnet	30	20.68%
EBSCO	10	6.89%
Elsevier	88	60.68%
Environmental Engg.	22	15.17%
IEEE	101	69.66%
J-Gate	42	28.96%
Nature – Bio Tech	9	6.20%
Springer	71	48.96%
Any Other (please Specify)	4	2.75%
Total	145	100%

Table --- shows that majority of the respondents use electronics /CD Rom to databases prefers IEEE. Out of total 145 respondents, 101 faculty members (i.e. 69.66%) preferences that IEEE electronic databases was one of the main database for their teaching. Elsevier was given second priority (60.68%) whereas (48.96%) use electronic databases for Springer.

5) Location of use of E-resources:

Location Use of E-Resources	Count	Column N %
At College	115	79.31%
At Home	5	3.44%
At Other Place	1	0.68%
At College & Home	24	16.55%
Total	145	100% %

The survey result as shown in Table -----indicates that out of 145 respondents about 115 (i.e. 79.31 %) respondents use of e-resources at college which is followed by 24 (16.55%) respondents use of e-resources at College & Home whereas 5 (3.44%) use of e-resources at home.

6) Purposes for use of e-resources:

Objective of E-Resources	Count	Column N %
Assignments Work	79	54.48%
Preparing Lectures	141	97.24%
Preparing Notes	134	92.41%
Preparing Seminars	110	75.86%
Writing Books	21	14.48%
Writing Projects	68	46.89%
Writing paper	116	80%
Academic Research Work	79	54.48%
Any Other Purpose, Please Specify	9	6.20%
Total	145	100%

Table----- shows that majority of the respondents purpose use of E-Resources for preparing lecture. Out of total 145 respondents, 141 faculty members (i.e. 97.24%) agreed that preparing lecture was one of the main purposes of use of e-resources. Preparing notes was given second priority (92.41%) whereas (80%) purpose of e resources for writing paper.

7) Sources for obtaining information about E-resources:

Sources for obtaining information about E-Resources	Count	Column N %
Guest Lecture & Workshop	76	52.41%
Library Bulletins	68	46.89%
Library Web Pages	79	54.48%
Library Staff	73	50.34%
Magazines From Library	44	30.34%
From Friends & Family	65	44.82%
Other Students	9	6.20%
Total	145	100.0%

Table --- shows that majority of the respondents obtaining information sources about E-resources from Library Web Pages. Out of total 145 respondents 79 faculty members (i.e., 54.80%) agreed that Library Web Pages was one of the main obtaining sources of information about E-resources. Guest Lecture & Workshop was given second priority 76(52.41%) whereas 73(50.34%) source obtaining information about E-Resources from Library Staff.

8) What do you find to be the biggest problems in using E-resources?

Principal Constraint in Use of E-Resources	Count	Column N %
Difficult to read from the screen	60	41.37%
Technical Problems	122	84.13%
Difficult to use	12	8.27%
Others	9	6.20%
Total	145	100.0%

Table ---- shows that majority of the respondents using problem of E-Resources i.e. technical problem. Out of total 145 respondents, 122 faculty members (i.e. 84.13%) using that the technical problem was one of the main problem of using E-Resources. difficult to read from the screen was given second priority (41.37%) whereas (8.27%) problem of using e. rescores Difficult to use.

Suggestion for use of e-resource: Some important suggestions are as follows: Awareness should be created for use of e-journals and e-books to obtain current information. Necessary arrangement should be made to access the full text of more journals and meet out technical Problem.

All the online databases news should be provided at the college website and it should be regularly updated.

Creating awareness about e-resources subscribed by College Library.

CONCLUSION: The future of the e-resources is very bright since E-journal are convenient and flexible , which allows users to spend more time involved in actual research, reading or writing ,rather than in searching for and obtaining articles.

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INTRODUCTION TO ELECTRONIC PUBLISHING OF LIBRARY SERVICES: A REVIEW

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Abstract

The age of information explosion, Information and Communication technology (ICT) is progressively replacing the old methods of information collection, storage and retrieval. Library System is a major beneficiary group of ICT. Over Internet, a teacher can share his knowledge with peers in the subject, a searcher can collect information on his area of study from anywhere in the world and a student can clarify his doubts which may not be possible in the classroom. The paper attempts to discuss the impact of electronic publishing on library System and radical changes in the publishing industry especially with impact of electronic media and Internet.

Keywords: *Electronic Publishing, ICT, Library Services*

Introduction: The information technology has changed the way that information is stored and disseminated and has threatened the traditional approaches to the library and its services. The digital revolution has taken on the world of publishing also. Now paperless publishing or electronic publishing is gaining more prominence. In the changing scenario, libraries and librarians will have to play a crucial role in handling conventional and electronic resources. Thus the era of electronic publishing has begun affecting library and information professionals. The ultimate goal of electronic publishing is to provide fast and easy access to the information contained in the objective publications with simple, powerful search and retrieval capabilities.

Information Communication Technology: Information Communication Technology, The Infrastructure and components that enable modern computing. Information Communication Technology, the term generally accepted to all devices, networking components, applications & systems that combined allow people and organizations (i.e. Business, non-profit agencies, governments, criminal enterprises) to interact in the digital world.

Electronic Publishing: It is basically a form of publishing in which books, journals and magazines are being produced and stored electronically rather than in print. Electronic publishing (also referred to as E-publishing or digital publishing) includes the digital publication of e-books, EPUBs, Digital Magazines (also sometimes known as electronic articles), and the development of digital libraries and catalogues. Electronic publishing has become common in scientific publishing where it has been argued that peer-reviewed journals are in the process of being replaced by electronic publishing. It is also becoming common to distribute books, magazines, and newspapers to consumers through tablet reading devices, a market that is growing by millions each year, generated by online vendors such as Apple's iTunes bookstore, Amazon's bookstore for Kindle, and books in the Android Market. Electronic publishing is increasingly popular in works of fiction as well as with scientific articles. Electronic publishers are able to provide quick gratification for late-night readers, books that customers might not be able to find in standard book retailers (erotica is especially popular in eBook format and books by new authors that would be unlikely to be profitable for traditional publishers).

Copyright: In the early 2000, many of the existing copyright laws were designed around printed books, magazines and newspapers. For examples, copyright laws often set limits on how much of a book can be mechanically reproduced or copied. E-publishing raises new question in relation to copyright, if an e-book or e-journal is available online, millions of internet users may be able to view a single electronic copy of the document, without any "copies" being made.

Electronic Book:- An electronic books is a book-length publication in digital form, consisting of text, images, or both, and produced on, published through, and readable on computers or other electronic devices. The Oxford Dictionary of English defines the e-book as "an electronic version of a printed book, but e-books can and do exist without any printed equivalent. Commercially produced and sold E-books are usually intended to be read on dedicated e-book readers. However, almost any sophisticated electronic device that features a controllable viewing screen, including computers, many mobile, and nearly all smart phones, can also be used to read e-books. Some companies, such as Amazon, with their Kindle for PC software, provide an emulator that allows a user to read their format on other platforms.

Electronic Journal:- Electronic journals also known as e-journals, and electronic serials, are scholarly journals or intellectual magazines that can be accessed via electronic transmission. In practice, this means that they are usually published on the Web. They are a specialized form of electronic document: they have the purpose of providing material for academic research and study, and they are formatted approximately like journal articles in traditional printed journals. Being in electronic form, articles sometimes contain metadata that can be entered into specialized databases, such as DOAJ or OACI, as well as the databases and search-engines for the academic discipline concerned.

Online Magazine:- An online magazine is a magazine published on the Internet, through bulletin board systems and other forms of public computer networks. Some online magazines distributed through the World Wide Web call themselves webzines. An ezine is a more specialized term appropriately used for small

magazines and newsletters distributed by any electronic method, for example, by electronic mail. Online magazines representing matters of interest to specialists in or societies for academic subjects, science, trade or industry are typically referred to as online journals.

Online Newspapers:- An online newspaper, also known as a web newspaper, which exists on the World Wide Web or Internet, either separately or as an online version of a printed periodical. Newspapers with specialized audiences such as The Wall Street Journal and The Chronicle of Higher Education successfully charge subscription fees. Most newspapers now have an online edition, including The Los Angeles Times, The Washington Post, USA Today, and The New York Times. In India, major newspapers went online to provide latest and most updated news from them Times of India, Hindustan Times, The Hindu, Indian Express and The New Indian Express. Some newspapers even provide E-Paper which is regarded as the digital replica of the newspaper.

CD/DVD: The Internet is now days strongly associated with electronic publishing there are many non-network electronic publications such as encyclopedias on CD/DVD as well as technical and reference publication relied on by mobile users and other without reliable and high speed access to a network.

Blog:- A blog is a discussion or informational site published on the World Wide Web and consisting of discrete entries ("posts") typically displayed in reverse chronological order. Blog can also be used as a verb, meaning to maintain or add content to a blog.

Advantages of E- Publishing:- Rapid publication since electronic referring can speed up the process and publication can be immediately followed by acceptance. Large collections can be searched and retrieved simultaneously and instantly. Multimedia capabilities can be incorporated. Publishers, research groups and authors can be easily contacted via electronic mail links. Product can be used on many devices i.e. Computer, Smartphone, Tablet (iPad, kindle etc.)

Disadvantages of E- Publishing:- A computer and other devices is required for use.2. Electronic media is easier to steal Securing media is possible but more expensive Sales of electronic media are weaker than traditional forms. Some reader prefer traditionally published material. **The Role of Librarian:-** It is tempting to define a librarian as 'someone who works in a library; but that definition is much too narrow. The tasks librarians perform in identifying and organizing materials are still needed for electronically published materials, and may be appreciated more, since the alternative is more visibly obvious.

Conclusion:- Libraries will be undergoing rapid and profound changes over the next decade as electronic publication of scholarly materials becomes prevalent. As the need for collection of periodicals dwindles, much of the mechanism which is the library will no longer be needed. Librarians, however, will be needed more than ever to cope with the increased availability of materials, indexes, interfaces, finding aids, and formats.

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EVOLUTION OF WEB 3.0 & ITS APPLICATION TO THE LIBRARIES

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Abstract

The internet has changed the way we think of information and technology. The web of documents has morphed into a web of data. The semantic wave embraces three stages of internet growth. The first stage, Web 1.0, was used as a Read only medium. Web 2.0 started as Read and Write medium. Now the current version of web i.e. Web 3.0 is the semantic web which allow the users to Read, Write and Execute web Librarians can hardly create technological experience; they must undergo it. Successful coupling of selective techno-scientific facilitative capabilities with engine of well-oiled functioning library is necessitated. It must run cheek by jowl. Artificial Intelligence is rearing its head at regal regularity. Of late, there has been traceable interest on Library 3.0. The advent of Information and Communication Technology (ICT), Library services has undergone sea- change.

Keywords: Web 1.0, web 2.0, Web3.0

Introduction: The world of information Technology is undergoing rapid changes in the history of civilization. With the big advance in technology and the growth of the amount of content on internet, it has become difficult for users to find and utilize information and for content providers to classify and catalogue documents.

What is Web 3.0 : Web 3.0 is a phrase penned by John Markoff of the New York Times in 2006. It refers to a supposed third generation of Internet based services that collectively comprise what might be called “the intelligent web”, for instance, those using semantic web, micro formats, natural language search, data mining, machine learning, cloud computing and artificial technologies which put stress on machine-facilitated understanding of information with a view to providing a more productive and intuitive user experience. It is no wonder that Nova Spivack defines Web 3.0 as the third decade of the Web (2010-2020).

Evolution of Web 3.0:

Web 3.0 features:Convergence of the virtual and physical world- Metaverse,Access to information anywhere, anytime,It is mainly driven by the heavy use of smart phones and cloud applications,It is a web development layer that includes T.V quality open video,3D simulations, augmented reality, human constructed semantic standardsand pervasive broad-band, wireless and sensors.

Differences among Web 1.0, Web 2.0 and Web 3.0:

Web 1.0	Web 2.0	Web 3.0
The mostly read only web	The widely read-write web	The portable personal web
Focused on companies	Focused on communities	Focused on the individuals
Home pages	Blogs	Lifestream
Owning content	Sharing content	Consolidating dynamic content
HTML, Portals	XML, RSS	The semantic web
Web forms	Web applications	Widgets, drag and drop mashups
Directories(taxonomy))	Tagging(folksonomy	User behavior(meonomy)
Page views	Cost per click	User engagement
Netscape	Google	iGoogle, Net Vibes

Features and Applications of Web 3.0:Web OPAC: One of the key aspects of Library 3.0 is Web OPAC. It is a library catalogue on the Web or Intranet. Users can search the required information by connecting to Uniform Resource Locator (URL) of Web OPAC anytime during the day and from anywhere in the world. It is planned to facilitate the library’s members to access the OPAC through their own search for the ease of borrowing instead of searching through the card catalogue. In addition, members would also be able to request for the information about borrowing, reservation etc related to their own library profile, as well as to make automatic reservations.

Advantages: Scientists can immediately notice the missing reprints by author search. Updating can be done quickly as scientists take keen interest to submit the reprints. It is accessible all the time, worldwide. Increases awareness of ‘Scientific Research Contributions’ made by the Institute.

Ontologies: Ontologies are used for to annotate information in the web content and expressing its semantics in a machine-readable manner. These are the techniques to give richer semantic relationships between terms and thoughts of knowledge. These give more standardization in managing web contents instead of merely indexing the terms. Ontology aims at how the information is organized rather than organizing the information. These will be able to give more flexibility in providing semantic description to the content in learning object repositories

and at the same time these facilitate automated functions and task delegation to intelligent agents. Ontology deals with questions relating to the entities exist or can be said to exist and how such entities can be grouped, related within a hierarchy and subdivided according to similarities and differences.

Ubiquitous Contents: The ubiquitous computing offers various contents which can be used or reused frequently. The contents of this generation need to be created in various formats and can also be easily shared, transferred and accessible through all modes of communication. Ubiquitous contents are the personal contents of the people persistently stored on the web in the form of movies, blog spots, RSS feeds, wikis, stories, articles, music, games etc. These are always there on the web and accessible from everywhere over the internet through all mobile and internet accessible devices.

Geo Tagging: This helps users to find specific information located at specific location. It is simply a marking of various media or digital contents like images, photographs, videos, websites or RSS feeds etc. Most of the cellphones and mobile devices have GPS (Global Positioning System) facilities.

Virtual Reference Service: Since technology is developing very fast in all domains, librarians are more determined to serve the users who are away from the libraries. Linda Berube (2003) defines that Digital reference or Virtual reference primarily refers to a network of expertise, intermediation and resources placed at the disposal of someone seeking answers in an online environment. In virtual reference service, apart from helping the users in personal or telephonic way, libraries are now developing the contents which can easily be transferable and readable in cellphones and other mobile devices to help users at any point of time.

Semantic Web: The Semantic web provides a general framework that allows data to be shared and reused across applications, enterprise and community boundaries. It is a collaborative effort led by W3C with participation from a large number of researchers and industrial partners. Its objective is to convert all the unstructured documents on the Web into a web data. It is based on the Resource Description Framework (RDF). It will provide us with the option to share, unite, search and organize the web information in easy manner. Sharing and organizing information available in every corner of the web which is the main aim of this generation and expected to be achieved with the help of semantic web technologies.

Application in Libraries: The Semantic Web is very useful for the Librarians in providing valuable Library services. As the Librarians are information providers they should bring people and information together. Semantic Web is a remarkable tool for libraries where it protects proprietary information and helps in sharing the wealth of knowledge. The vision, goals and mission of together the libraries and the Semantic Web are similar. Both of these have been developed for accessing information available in abundance and discovering the knowledge through cooperation and collaboration for the advancement of society. The Semantic Web technologies are used for developing Library Portals facilitates users' search, access and retrieval of learning resources. The portal should aim to provide access to a coalition of learning repositories with learning resources available in different formats. The implication of Library Portals with Semantic Web services will fulfil the vision of Libraries. The large collections of learning resources are semantically annotated adopting various technologies that facilitate user's access to the content in one or more learning repositories.

Applications in Libraries: Cloud based digital library provider 'Duraspace' is having two softwares namely 'DSpace' and 'Fedora Commons' but D Space is widely used for building repositories for preserving scholarly contents, research output. OCLC is one of the best instances for making use of cloud computing for sharing libraries' data. Its world cat is the most popular online union catalogue for searching library data. To access any files on the internet, cloud computing presents number of services such as Flickr, Drop box, Jungle Disk, Google Doc, Sky Drive and so on. These services virtually share the files on the web and provide access to anywhere and anytime without any special software and hardware. For library automation purpose, 'Polaris', 'Ex-Libris' provide variant cloud based services such as acquisitions, cataloguing, process system, digital contents and also support various standards such as MARC 21, XML, Z39.50.

How QR codes can be used in Libraries: The QR code link to songs, videos, web sites, surveys, contests etc or other information that augments the exhibits. Codes in the library stacks/ end caps or magazine/journal areas that point to online electronic holdings of print materials or related subject guides. Linking to library audio tours for orientations. Code added to print handouts for additional information on mobile friendly sites. In catalogue records to offer patrons basic information about an item, including the location and call number. Users can scan the code and head to the stacks rather than writing or painting. Code placed on staff directory pages and research guides that go to mobile friendly sites for later reference.

Responsibilities of Librarian 3.0: In today's times the role of the LIS professional is that of a bridge between an information specialist- the subject matter experts and the users. Web 3.0 technologies and ontology have enabled Library 3.0 and have brought about fundamental changes in the way the information is collected and disseminated. With the role of the information professional becoming more and more prominent, the library professional will have to additionally learn about the related subjects along with the existing knowledge base.

The library personnel will have to be professional in their approach and deal with various matters intelligently keeping in mind the target audience.

Features of Web 3.0: Web 3.0 or semantic web is an extension of the current web in which information. A well-defined meaning, better enabling computers and people to work in cooperation. The word 'stands for 'the meaning of', and therefore the semantic web is one that is able to describe things in a way that computers can better understand. The basic features of Web 3.0 are as below:

Intelligence: The most promising feature of Web 3.0 will be Web with intelligence i.e. intelligent web. Applications will work intelligently with the use of human-computer interaction and intelligence. An application based on Web 3.0 can directly do intelligent analysis, and then optimal output would be possible, even without much intervention of the user. The documents can be translated to other languages in Web3.0 era. Web 3.0 should enable us to work through natural languages. Therefore, users can use their native language for communication with the others around the world.

Conclusion: The future world will be guided by the ubiquitous web 3.0 systems. As a result, Library 3.0 paves the way for libraries to offer access to relevant and engaging services and collections that will meet and hopefully exceed the expectations and needs of the users in the coming years. Library 3.0's definition is shaped by individual or organizational needs. During the database information systems, Artificial intelligence, and other computer-aided retrieval systems have made a very optimistic start. In the Internet era, Semantic Web came as a model of semantic retrieval in the web environment. Traditional libraries are in a stage of transition towards making the library without boundary with global access with Internet. It is increasingly felt that we start preparing to become librarian 3.0 now.

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E-RESOURCES: A NEED OF PEDAGOGICAL COMMUNITY

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Abstract

Information Communication Technology has shuffled the future of library service. The electronic library is a stack of huge and various depositories of digital commodity and electronic data, it's able to collect geographically in a large number of assigned users. This paper concentrates on the need for the pedagogical community, digital Library resources, advantages, challenges, and disadvantages.

Keyword: Digital, E-resources, Pedagogical, Online database

Introduction: Digital library resources are like other library materials in various ways. They are preferred, collected, documented, handled, related and improved to users, evaluated, preserved, withdrawn and cancelled. Digital information resources include journals, government documents electronic images that computer able to save, classify, transfer and display in the form of the numeric digit. The main role of digital libraries is firstly it expedite standardized and productive for approaching and sharing knowledge which is useful to users. And secondly, it assists in the transfer of resources as well as knowledge.

E-Resources? An electronic resource means the publication (like e-journals, e-books) and dissemination of knowledge through the multimedia product (by the use of optical disks such as CD ROMs, networking) & Other choice builds the use of electronic databases (like video texts, e-mail & e-newsletter). And for all this user need computer connection or any e-devices. For accessing the knowledge

Pedagogical E-Resources include Collection in which complete contents; Documents are designed or transformed in machine-readable form for online access Scientific data sets Scanned picture, images of visual or printed text etc Computer storage devices' such as optical disk, CD- ROMs/ DVDROMs Databases available complete internet and other networks Online databases and CD-Rom knowledge stock especially those with multimedia and interactive video components Digital audio video clips or full-length movie

Benefit of e-Resources: Offer libraries and their usages many benefits. There are a few benefits of applying e-resources such as the ease of – usability, affordability, and accessibility. They can raise speed and ease to access and the amount of knowledge possible. They can recover library space and staff hour. They are not yet, however, the solution to all libraries financial, space, access and service problem. Most libraries continue to operate in a double territory – print and electronic resources, whether physically located within a library or accessed via a network, are a portion of the library's collection and should be assessed and appraised with the equal criteria and accuracy enforced to all compilation verdict.

Why We Want E-Resources? Due to the boost in the knowledge origination the growth of the collection, organization and retrieval of information made the task very difficult. That is why most of the libraries prefer electronic resources to print collection for optimum use. The other reason is physical space, escalation in journals prices; digital literacy has forced the libraries to opt for electronic resources in order to meet information needs of the large community of users. Digital library able to store ample content of digital knowledge in documental form. A digital library may refer only to electronic resources or mean a combination of electronic resources, services that support using those resources or mean a combination of electronic resources, services that are provided via a network. It helps users to quickly search and instant acquire in firstly developing knowledge in present time.

Types of E-Resources:

Websites Electronic-Book Electronic-journals (Full text & Bibliographical) Online databases Online electronic-resources E-resources which are available in digital media such as; CD-Rom Hard disks Cloud Other portable databases

Role of Library Professionals: Arrange the proper content in a convenient medium. Professional need for acquiring right information Selection of good supplier Diagnosticate helps for users provide right environment along with right budget

Conclusion: E-resources available in sundry format help and support the pedagogical community to carry out the research. In present days E-resources have various challenges like proper choice, storage & Management. But at the sometimes there are advantages of e-resources like it provide easily accessible information from anywhere at any time, easy to handle, time sever, and promote reader to acquire knowledge with the help of these modern tools. Therefore it necessary to all library professional to adjust thierself with the changing digital trend by learning, understanding & applying the e-resources.

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HISTORICAL DEVELOPMENT OF WEB3.0 AND ITS IMPACT ON LIBRARY SERVICES

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This paper aims to explain the historic development of Web from the first generation to the second generation and third generation of the Web. It describes the importance of Web 3.0 and its other sub-functions to the librarians and their importance in the libraries. The basic purpose of this study is to overview an insight about the upcoming technologies.

Keywords: Web3.0, Library Services

Introduction: 21st Century is said to be the digital Era. Today is digital world, which is concerned with creation, sharing and using information in digital form. World Wide Web is larger collection of interconnected documents of contents. Patrons demand is changing in Library to Library. The world of information technology is undergoing rapid changes in the history of civilization. The growth of the amount of content on internet, it has become difficult for users to find and utilize information and for content providers to classify and catalogue documents. The World Wide Web first introduced in the year 1991. but, later, as a technology advanced new versions web standard in the form of web 1.0, web 2.0, web 3.0 came into existence. Web 2.0 and Web 3.0 are obviously considered more advanced and easy to use when compared with Web 1.0. Web 3.0 is third generation of the web. Web 3.0 brings us great technologies such as semantic web, cloud computing, mobile devices, new social media applications and new search technologies. The internet has changed the way we think of information and technology. The web of documents has convert into a web of data. The semantic wave embraces three stages of internet growth. The first stage, 1.0, was used as a Read only medium. Web 2.0 started as Read and Write medium. Now the current version of the Web 3.0 is the semantic web which allows the users to Read, Write and Execute web.

WEB 1.0, 2.0, and 3.0

Web 1.0: is an old internet that only allows people to read from the internet. It was define as Web of information connections. According to the Tim Berners Lee considers the Web as “read-only” Web. It provides very little interactions where user can exchange the information together but it was not possible to interact with the website. The role of the web was very passive in nature. Web 1.0 is a system of interlinked, hypertext documents accessed via the internet. The primary focus of web 1.0 was one way communication. However, this is exactly what most website owners wanted. Their goal for a website was to establish an online presence and make their information available to anyone at any time.

Characteristics: Web 1.0 Technologies includes core web protocols HTML, HTTP and URI. The major characteristics of web 1.0 are as follow They have read only content Establish an online presence and make their information available to anyone at any time. It includes static web pages and use basic Hypertext Mark-up Language.

Limitations: The major limitations of Web 1.0 as follow

The Web 1.0 pages can only be understood by humans (web readers) they do not have machine compatible content. The web master is solely responsible for updating and managing the content of website Lack of Dynamic representation.

Web 2.0: Web 2.0 is the second stage of development of internet, in web 2.0 we focus more on user generated data and make World Wide Web more interactive. The term Web 2.0 is commonly associated with web applications that facilitate interactive information sharing, interoperability, user-centred design and collaboration on the World Wide Web. A Web 2.0 site gives its users the free choice to interact or collaborate with each other in a social media dialogue as creators of user generated content in a virtual community, in contrast to websites where users are limited to the passive viewing of content that was created for them. Examples of Web 2.0 include social networking sites, blogs, wikis, video sharing sites etc.

Characteristics:

Participation: Every aspect of Web 2.0 is driven by participation. The transition to Web 2.0 was enabled by the emergence of platforms such as blogging, social networks, and free image and video uploading, that collectively allowed extremely easy content creation and sharing by anyone. Contrary to the traditional web which was somewhat one-sided, with a flow of content from the provider to viewer, Web2.0 allows the users to actively participate online.

Standards: Standards provide an essential platform for Web 2.0. Common interfaces for accessing content and applications are the glue that allows integration across the many elements of the emergent web.

Decentralizations: Web 2.0 is decentralized in its architecture, participation, and usage. Power and flexibility emerges from distributing applications and content over many computers and systems, rather than maintaining them on centralized systems. It is about communication and facilitating community

Openness: The world of Web 2.0 has only become possible through a spirit of openness whereby developers and companies provide open, transparent access to their applications and content.

User Control: A primary direction of Web 2.0 is for users to control the content they create, the data captured about their web activities, and their identity. This powerful trend is driven by the clear desires of participants.

Identity: Identity is a critical element of both Web 2.0 and the future direction of the internet. We can increasingly choose to represent our identities however we please, across interactions, virtual worlds, and social networks. We can also own and verify our real identities in transactions if we choose.

Web 3.0: it is the third stage of development of the World Wide Web. Web 3.0 is a web where the concept of website or webpage disappears, where data is not owned but instead shared, where services show different views for the same web. Those services have to be focused on content and personalization, and both will be reached by using vertical search. Web 3.0 is the next evolution of the internet. Some hypothesize that web 3.0 will combine the best bits of both web 1.0 and web 2.0 but will be a more user focused, personalized, intelligent, controlled or semantic web experience.

Definition of WEB 3.0: The term Web 3.0 was first coined by John Markoff of the New York Times and he suggested Web 3.0 is the third generation of the web in 2006. The Web 3.0 can be also stated as “executable Web”. According to Nova Spivack, the Chief Executive officer at Radar Networks, “Web 3.0 is a set of standards that turns the web into a big database”. Steve Spadling defines Web 3.0 as “highly specialized information silos, moderated by a cult of personality, validated by the community, and put into content with the inclusion of met-data through widgets”. Conrad Wolfram stated “Web 3.0 is where the computer is generating new information, rather humans “.

Features of WEB 3.0: Web 3.0 or semantic web is an extension of the current web in which information is given well-defined meaning, better enabling computers and people to work in cooperation. The basic features of Web 3.0 are as below.

Intelligence: The most promising feature of web 3.0 will be web with intelligence i.e. intelligent web. Applications will work intelligently with the use of human-computer interaction and intelligence. Documents in different languages can be intelligently translated into other languages in web 3.0.

Virtualization: Web 3.0 would be a web with high speed internet bandwidths and high end 3D Graphics, which can better be utilized for virtualization.

Personalization: Personal or Individual preferences would be considered during different activities such as information processing, search, formation of personalized portal on the web.

Interoperability: Interoperability implies reuse, which is again a form of collaboration. Web 3.0 will provide a communicative medium for knowledge and information exchange. When a person or a software programmed produces formation on the web and this information is used by another, then the creation of new form of information of knowledge takes place.

Application of WEB 3.0 in Academic Library System:

Mobile Web: Internet is not just limited to computers but to our mobiles. it will be operating system independent i.e. we will be able to use applications of Android, Blackberry, etc.

The most of the changes in semantic web may not be immediately beneficial this is not the case with the real world web. Mobile phones with high processing power, high specification cameras and GPS receivers, offer a new way to provide information services.

Smart Board Foster New Learning in the Library: Smart board facility the ability to teach the important life skills of how to find information and research. Once we engage the smart board technology, the world open up. one of the benefits of having smart board in this central location is that every teacher and student has access. Teacher reinforce classroom content through interactive. Smart board enhanced lessons the personal interactions engage the students and they pay more attention. The smart board also group interactions and sharing.

Web OPAC: One of the key aspects of Library 3.0 is Web OPAC. A Web OPAC is a library catalogue on the Web or Intranet. Users can search the required information by connecting to Uniform resource Locator (URL) of Web OPAC anytime and from anywhere in the world. In Library 3.0 Web OPAC of various libraries which are forming a part of visible or invisible.

Ontologies: The classification systems for book classification has been changed into ontologies to represent domain knowledge in machine process able form. These are the techniques to give rich semantic relationship between terms and thoughts of knowledge. These give more standardization in managing the web contents instead of merely indexing the terms.

Search and Browsing Services: An important part of the full text search is the ability of the search engine to refine the query to reflect a user's expectations. during the query expansion step all words provided by the user are mapped to one or more types, e.g. a topic, a keyword.

Social Book marking: is a centralized online service which allows users to add, annotate, edit, and share bookmarks of web documents. when user browses digital library, some articles and materials seem to him more valuable than others. Common practice is to bookmark those resources.

Geo Tagging: This helps users to find specific information located at specific location. it is simply a marking of various media or digital contents like images, photographs, videos, websites. Most of the cell phones and mobile devices have GPS (Global Positioning System) facilities etc.

Blog: A blog is a discussion or informational website published on the World Wide Web consisting of discrete, often informal diary-style posts. Blog allows users to extend the information space related to each resource with their own comments and thoughts. Current readers can easily deliver new knowledge for future readers.

Conclusion: This paper provided an overview from the evolution of the web. Web 1.0, web 2.0 web3.0 were described as generation of the web. The characteristics of the generations are introduced and compared. It is concluded web as an information space has had much progress since 1989 and it is moving toward using artificial intelligent techniques to be as massive web of highly intelligent interactions in close future. Web 3.0 will be more connected open and intelligent with semantic web technologies distributed databases nature languages processing, machine learning, machines reasoning and autonomous agents.

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WEB-BASED INSTRUCTION AND INFORMATION LITERACY IN ACADEMIC LIBRARY**Gaikwad Irba Gangadhar***Librarian, Dhanaji Nana Mahavidyalaya, Faizpur, Dist.-Jalgaon. Maharashtra, India***Abstract**

Information literacy is a key component of lifelong learning in higher education. It has potential to improve the quality of student learning and making the student be continual learners after they graduating. This paper presents the overview of a web-based Information Literacy service, and how librarians can make IL training more relevant to the students. The purpose of this paper is to identify the already existing IL services with advanced web-based IL instruction, with new features, providing a more constructivist approach to teaching and learning. It also discusses the collaborative effort between academic librarians and faculty to enrich the student's information literacy. Due to the time-saving and less significant difference in web-based instruction can be a viable alternative teaching method for Information Literacy.

Keywords: Information literacy, Web-based Information literacy

Introduction: Today human has gone beyond the basic survival messages of earlier days, humans have become information-rich at least in terms of volume. In Information age increasing volume of information is very high, speedy and consequently now a day's peoples are suffering from information, they are confused, frustrated and result is adverse they are not using available information through the mass of information. Richard Saul Wurman called this state of information as 'information anxiety'. Information anxiety is a helpless feeling that is a realization that there is more information than one person can ever hope to process. The situation is so much information available or retrieves in so little time (Burkhardt, 2010) In higher education, it is an evident and easy way to search the internet and World Wide Web through which they find their information in learning and making best grades in an examination and so on, these students are called as NetGen students. They use search engines like Google or Yahoo and finds few articles from web database, sometimes they simply rely on friend's advice about best information resources. Firstly librarians strongly addressed that coherent, planned, program level set of research skills and learning outcomes should be identified and integrated into the curriculum for undergraduate, graduate and professional students as well. Librarian teach to student these skills from the ages but it called by various names as bibliographic instruction, library orientation, the ultimate aim was to make student as independent learner and lifelong learner, as well as competent learner and library and information professionals in academic environment, can surely use the information literacy model which a programmatic, curriculum integrated, pervasive and sustained placement of information and research skills throughout the curriculum. (Cox & Lindsay, 2008)

Definition of Information Literacy: The ability to find relevant information for a particular situation or problem and to interpret that information effectively. (Stevenson & Collin, 2006, p. 101) Information literacy is a set of abilities requiring individuals to recognize when information needed and have the ability to locate, evaluate and use effectively the needed information, ultimately information literate people are those who have learned how to learn, they know how to learn because they know how information is organized, how to find information and how to use information in such a way that others can learn from them. (Markey & Leeder, 2014)

Components of information literacy: Information literate person has and knows how to collect and communicate the information effectively. Specific skills including understanding and logical use of print and electronic file management system, practicing time management techniques, breaking down a complex task into manageable form an objective and appropriately using graphics such as diagrams, flowcharts, tables, Gantt chart, organizational chart, content maps and so forth. Information literacy is an umbrella term encompasses several types of literacy. Information literate recognizes that all types of literacy are important and try to be proficient in the skill set required for each. The following types of literacy and their associated skills are important components of information literacy.

Computer Literacy: the concise dictionary of library and information science defined the computer literacy as "awareness of computing capabilities and an ability to recognize and articulate problems that can be solved with aid of computing technology. it does not imply the ability to program computers." (Keenan & Johnston, 2000) Computer literacy is a task understanding of the how the computer works and how it can be used to complete tasks. It is an understanding level of information and knowledge of software and hardware and its application. It is a collection of hardware, software, internet, multimedia, file management and security.

Library Literacy: a Library is a place where is a collection of different kinds of information resources stored in it. Books, encyclopedias, reference materials, directories, catalogs, indexes, databases, periodicals, visual resources etc. are various holding information sources of a library. Library literacy is a knowing process how to locate the resources in the library physically or electronically, understand to find and access to resources. Understanding of correct reference and being able to get help from a librarian when necessary. (Wilson, 2015)

Components of the Information Literacy Program: Credit-bearing courses Orientations, tours, and workshops Subject-specific and general bibliographic instruction Individual instruction Web-based instruction/tutorials Consultation with faculty/assignment design

Web-based Instruction/tutorials: Internet and technological applications are recognized as a tool for the education for options and possibilities of information dissemination. Web-based instruction is accepted worldwide as an effective instructional method for educational teaching offering advantages, enriching the educational competencies of the learners. WBI is delivered through electronic mediums, it can be easily updated, transformed, upgraded and instantly shared. Librarians as a teacher becoming instructors themselves have adapted and adopted a technological change in their services and serving their users. Web-based instruction in perspective to library services eliminates the delivery time of information and place constraints, It is accessible at 24 hours.

The Need for Web-based IL: Now a day's students using library print and electronic resources as well as learning how information of all types are structured and how it can be retrieved. They are keenly interested to learn. Obviously, there is a need to develop a Web-based tutorial that is less time-bound, more flexible, and more accessible for off-campus students or those who prefer to learn information literacy skills at their own pace and convenience.

Types of Web-based Instruction: Smith explained in her book in details about we based instruction in a library. they are as follows

General Research or Reference Skills: The common type of Web-based library tutorial deals with how to undertake researching general. This type of tutorial can be integrated into many different disciplines as a supplement because the research process follows a similar path in many subject areas. Web-based instruction is an important method of instruction for distance education students also. this type of tutorial includes planning research, identifying/refining a topic, using available research tools, evaluating information, citing resources, and differentiating between various resource types.

Online Catalogue Skills: A library's online catalogue is a tool for finding materials in its collection. A tutorial that instructs library users on how to search a catalogue of library and it includes keyword versus subject searching, the meaning of call numbers and how they are structured, when to try different access points to find materials and how to search different fields simultaneously using Boolean logic.

Database- or Software-Specific Search Skills: Instruction/ tutorials cover those developed to teach users to use specific databases or to master particular search-software interfaces. Because there are so many database interfaces, it is necessary to help users learn how to navigate them. Some search software, such as ProQuest provides one interface to search multiple databases.

Role of Librarian and faculty: Role of librarians and faculty is essential for the successful implementation information literacy programmes. it builds a strong among faculty – librarian for the academic success. Furthermore, librarians need help from faculty to make awareness about understanding the concept of information literacy and the importance of integrating it into their courses. Faculty members have governance over the curriculum, influence on students, and mastery of their discipline. Librarians have exceptional information research skills, knowledge of student searching behaviour, and a commitment towards the academic output. Wong conveys constructive approach in designing information literacy program for first-year students assist in their development when librarians consider students intellectual and epistemology view and design information literacy teaching.

Conclusion: Information literacy is essential for of lifelong learning in higher education to improve the quality of student learning, and to empower students to be perpetual learners. It creates research base also. It develops of librarian-faculty partnerships. Librarians can play a major role in teaching information literacy in higher education institutions in which student centred approach through web-based instruction has been increasingly emphasized.

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Abstract

This paper discusses about the concept of semantic web, the technology, web content writing, and necessity for the development of web 3.0. The various components of semantic web technology such as HTTP, URI, RDF, XML, Ontology, W3C and other components specified as W3C standards are touched upon briefly. The benefits of implementing semantic web in the Library functions to provide effective information services and for optimum use of the Library collection are illustrated here.

Keywords: Semantic Web, WWW, Web 3.0

Introduction: World Wide Web is the first source of information for everyone viz., students, research scholars, faculty, practitioners, Information Officers, etc. The Information Resources on the web are in the form of Uniform Resource Identifiers (URI) and the information in them is not machine-readable. People search for the Information on a particular topic via a web portal by typing in the key words. The retrieved result consists of only few relevant ones. The search is performed by using statistical methods such as most occurrences of words, co-occurrence of words, etc. The keyword index is completely incapable of presenting relational information between concepts and the keyword search displays only the matching links. The information professionals are advocating for more advanced technology search engines which have deductive reasoning like human beings. To achieve such a system the metadata and ontologies have to be developed and are embedded into the web pages.

Components of Semantic Web: The term Semantic Web is used to refer to the technologies and standards used for structuring and linking of data by providing a proper description of concepts, terms, and their associations within a given knowledge domain. Such standards and technologies included under W3C are:

Resource Description Framework (RDF) RDF Schema (RDFS) Simple Knowledge Organization System (SKOS) SPARQL, which is a RDF query language

Agents: The software objects developed by using object-oriented programming and component-based software that work autonomously, proactively and intelligently are called agents.

URI (Uniform Resource Identifier) A uniform resource identifier (URI) is a unique name given to identify a resource over a network using specific protocols. URI provides a generic syntax and consists of a generic set of schemes such as URL, URN (Uniform Resource Name), URC(Uniform Resource Characteristic), etc for identification of document/resource. The generic syntax of a URI scheme is applicable for all its subsets. Semantic Web necessitates identifying a resource on the web available in different formats uniquely and globally.

Resource Description Framework (RDF): RDF is a simple language used to create standard data models to refer resources, their relationships and data interchange on the web. RDF is a fundamental standard for the Semantic Web. RDF Schema is a vocabulary extending RDF used for describing properties and classes of RDF-based resources, with semantics for generalized-hierarchies of such properties and classes. - *Wikipedia* An RDF-based model can be represented in a variety of syntaxes, e.g., RDF/XML, N3, Turtle, and RDFa. Each RDF statement is a collection of 'triples' viz., subject, predicate and object. The subject denotes the object the triple is describing, the predicate identifies the attribute of the subject within the statement and the object defines the value of the predicate. RDF uses 'triple' model which allows structured and semi-structured data to be mixed, exposed, and shared across different applications. This linking structure model allows to form a directed, labeled graph, where the edges/nodes are the named links between two resources. This *graph view* provides easy way to understand the technology of RDF.

Web Ontologies: The term ontology is taken from philosophy which means the study of the nature of existence (the literal translation of the Greek word *ὄντολογία*). It is the branch of metaphysics which identifies and describes the things in the most general terms. Ontology is the structural framework or pattern of knowledge representation in the form of objects / concepts within a specific domain, their definitions, properties and the associations with each other which models a domain. It is a prescribed, explicit, pattern of a shared conceptualisation, metadata schemas which provide the opportunity to share controlled authoritative vocabulary and taxonomy. These Ontologies help in defining machine understandable semantics which enable easy communication between the human and machine, and also support the exchange of semantics.

Web Ontology Language (OWL): Web Ontology Language (WOL) is a language which allows us to describe the semantics of classes and properties, add more vocabulary in the domains of internet. Web ontologies provide richer integration and interoperability of data; the applications developed using WOL are intelligent, work at the level of human conceptual level, and searches across diverse communities and integrate the information. Eg. OntoWeb project of Free University of Amsterdam. The formal ontologies are useful in structuring the content on the web to become comprehensive and machine transportable, a pre-requisite for Semantic Web.

Turtle It is a widely adopted W3C standard not fully standardized, if done then it will be an alternative to RDF/XML. It will eventually lead to greater Semantic Web adoption by the developers and users.

N-Triples: It is a line-based, plain text format for encoding an RDF graph. It was designed to be a fixed subset of N3 and hence N3 tools such as cwm, n-triples2kif, and Euler can be used to read and process it. cwm can output this format when invoked as "cwm -ntriples".

Artificial Intelligence and Expert Systems: Semantic Web can be fully realized with the use of artificial intelligence. It is the study and design of intelligent agents which perceives its environment and takes actions that maximize its chances of success. John McCarthy, has coined this term in 1955, and defined it as "the science and engineering of making intelligent machines. An expert system is a computer system that has the ability to make decisions like a human expert. These are particularly designed and developed to solve complex problems by reasoning about knowledge, like human expert, and not by computer algorithms and procedures.

Development of a Semantic Library: The Semantic Web comes in handy for the Librarians in providing effective library services. Using the experiences and knowledge of the Librarians the appropriate metadata can be embedded into the existing collections. As the Libraries are information gatekeepers they should bring information and people together. Semantic Web is a remarkable tool for Libraries where it protects proprietary information, and helps in sharing the wealth of knowledge.

The Semantic Web has emerged to address the shortcomings of HTML web pages by developing IT tools which are machine driven and required for integrated access across heterogeneous

Library Portals: The Library portals provide a gateway to information, services from multiple sources and access to the organization's resources. The use of Semantic Web technologies in developing Library portals facilitates users' search, access, and retrieval of learning resources. The portal should aim to provide access to a coalition of learning repositories with learning resources available in different formats. The implementation of Library portals with Semantic Web services will fulfill the vision of Libraries. The large collections of learning resources are semantically annotated adopting various technologies that facilitate user's access to the content in one or more learning repositories. Ontologies are used for annotating information to the web content and expressing its semantics in a machine-readable manner. The Ontology schema will be able to give more flexibility in providing semantic description to the content in learning object repositories and, at the same time, it facilitates automated functions and task delegation to intelligent agents. The library portals search interface should have the capabilities for searching across the heterogeneous resources. The Semantic Library portal should have automated interaction with a search engine at the resource, combined with web ontologies, and the content is tagged with information. The adoption and implementation of technologies will enable ontology-facilitated sharing and reuse of learning resources. Such a portal will allow the library to provide best services.

Semantic Web representation: There are variety of metadata schemes which guide in cataloguing of digital resources i.e., metadata creation. The description given to the resources should enable a user to identify and select appropriate resources with respect to content, format, etc. Resources have to be represented by simple description, following formal ontologies, which are machine support and have deductive reasoning, by following functional requirements for bibliographic records and cataloguing criteria. Rules for Description and Access (RDA) will be helpful in the development of semantic web catalog. Coherent, accurate, consistent semantic representation is needed to ensure good quality semantics and for effective semantic web library operations. There should be a well defined semantic web representation policy for the library. The catalog should be rich with Ontologies, authority verification and MARC based scheme should be used for effective Semantic Catalogue.

RDF Vocabularies: All the collections / holdings in the library should be perfect description for their representation. The standards such as FOAF and SKOS are being used in recent times.

Semantic Web Reference Service and Community outreach activities: There are many types of reference services which include personal interaction, documentation services such as bibliographies, guides on collection resources and technology; user education and outreach activities include bibliographic instruction. These services are provided in conformation with the Library's collection development & access policies, and mission statement, for promotion of its facilities and optimum use of the collection. The semantic Web reference services should assist in search of knowledge and more sophisticated automatic processing. There should be Targeted searching for discovering knowledge.

Semantic Web resource use: The circulation policy always promotes healthy use of the collection and protects the library holdings. The arrival of digital libraries have eliminated many challenges of the circulation section such as lending the limited collection, defining loan periods and renewal policies, issue of lost and damaged items, fragile & rare materials etc. There should be Semantic Web resource use policy in the library which promote resources use, and protect the integrity of resources. The policy should clearly mention the access procedures for agents; provide them with a unique identification number, and borrowing privileges of resources.

Conclusion: A semantically intelligent Integrated Library System will provide effective functioning in the provision of library services. The Librarians who are having full skills, talent and knowledge will become the advocates of Semantic Web and they can fulfill the vision and mission of the Semantic Web. The librarians should acquire all the latest IT skills useful in maintaining digital libraries, and develop communication skills in different languages and ontologies for better dissemination of information and provision of services and reach the largest clientele. Even though the libraries have been adopting the latest IT technologies, they still have to embrace the Semantic Web. The library functions can be applied for acceleration of research and development of Semantic Web and the library functions can be redefined for making true impact on the society. The research is on and there are number of opportunities for Librarians in this area.

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INNOVATIVE TECHNO CENTRIC METHODS IN TEACHING LEARNING PROCESS AND LIBRARIAN

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Abstract

Quality education has traditionally been associated with strong teachers having high degree of personal Communication with student. But now days, the role of technology is becoming more and more important in education field and this importance will continue to grow and develop in 21st century

1. Introduction: Education should be a process of imparting knowledge, developing skills, attitudes and values. Quality education has traditionally been associated with strong teachers having high degree of personal communication with student. But now days, the role of technology is becoming more and more important in education field and this importance will continue to grow and develop in 21st century. Being the facilitator at the knowledge resource center, the librarian should play major role in providing knowledge resources in appropriate form for the better utilization of techno centric methods in teaching learning process. Teacher centric methods Student centric methods Techno centric methods

2. Objectives of the study:- Following are the objectives of study: To understand techno centric methods of teaching and learning. To find out hurdles in implementation of techno centric teaching learning methods. To provide solutions for overcoming problems faced in the use of techno centric teaching learning methods. To understand librarians role in implementation of techno centric teaching learning methods. The present paper attempts to describe various techno centric methods of teaching-learning, finding out various hurdles in the use of them, providing suggestion for better use of techno centric methods of teaching learning and show librarians role in implementation of techno centric teaching learning methods.

3. Techno centric methods of teaching-learning:- Following are some of the innovative techno centric methods of teaching-learning:-

1] Online Learning:- It is a general term used to refer to computer-enhanced learning. It is associated with Advanced Learning Technology, which deals with both the technologies and associated methodologies in learning using network and /or multimedia technologies. Distance learning provided the base for development of online learning .Online learning can be on demand. It overcomes timing, attendance and travel problems.

2] Hybrid Learning:- It is a name commonly used to describe a class that combines face to face class-room instruction with online learning. Under this a major part of the activities take place online, while traditional classroom time is reduced but not eliminated. This type of class allows students to have a more flexible schedule .It still allows for face to face contact with instructor and other classmates just like in a traditional class. It provides students with option of taking some learning material fully online and some in class. This method includes a mixture of face-to-face classrooms, online classroom and self-paced learning.

3] Online Collaborative Learning:- It involves interaction between learners and faculty members through the web. This action occurs in one of the following models:- Synchronous interaction and Asynchronous interaction. Synchronous means at the same time i.e. it involves interaction with the faculty member and other learners via the web in real time using technologies like virtual classrooms or chat rooms.

4] Universal Learning:- Universal learning means everywhere learning. In universal learning Internet or learning content follows people around. It contains work-related information, personal knowledge and internet. Various devices plug in and retrieve the information in the appropriate format .Devices like cell phone, laptop or any other technology gadgets are used .It fulfill e-learning promise of anytime, anywhere and any content. It involves the constant transmissions' that occurs in education

5] Distance learning:- It this type of education, students work on their own at home or at the office and communicate with faculty member and other students via e-mail , electronic forums, video conferencing ,instant messaging and other forms of computer-based learning.

6] Self-Paced Learning:- It provides the flexibility to learn according to the availability of learners own time and place. It occurs in a variety of ways like reading specific chapters from textbook, attending pre-recorded lectures /classes, articles referred by faculty members working on assignments and projects and searching and browsing the internet.

4. Hurdles in the use of techno centric methods in teaching learning process:-

Following are the hurdles in the use of techno centric methods in teaching learning process:-

1) Readiness to Accept Change:- Teachers don't want to accept change easily. A large number of teachers in educational institutions are not ICT proficient i.e. they are not well versed with computer technology.

2) ICT Infrastructures:- The important challenge in the use of techno centric methods is the non availability of information and communication technologies infrastructure like appropriate buildings, computers, internet services, electricity supply.

3) Non Proficiently in English Language:- Majority of online content is in English. Large proportion of educational softwares are produced in the world is in English. Non proficiency in English among teacher's sand students is one of the big problems in the use of techno centric methods

4) Lack of Teachers with ICT Skills:- Lack of teachers with ICT skills is another problem in using techno-centric methods. Before going to teach the students, teachers must know about how and when to use ICT tools to achieve particular purpose.

5) Lack of Support from Higher Management:- Use of ICT in education is not easy task. It requires support of top management and teacher's. Therefore; it is required to convince them properly for their support. Lack of support from higher management as well as teachers is one of the important hurdles in the use of techno-centric methods.

5. Suggestions for Overcoming Hurdles in Using Techno Centric Methods in Teaching Learning Process:- In order to overcome the above problems and make more use of techno centric methods in teaching learning process, following suggestions should be implemented:-

1) Teachers Education:- First of all, teachers must be well-trained about the use of techno centric methods in education. Before teaching to the students teachers must know about how and when to use techno centric methods to achieve the particulars purpose.

2) Proficiency in English Language:- Majority of online content is in English. Therefore, English language proficiency among teachers and students should be developed.

3) Developing ICT Infrastructure:- In order to use techno centric methods in teaching learning it is necessary to ensure the availability of appropriate rooms, computers, internet service, electricity and telephony.

4) Readiness for accepting change:- It is necessary to persuade and motivate teachers to accept change in teaching-learning methods. Teachers should be made ready to use techno centric methods in teaching learning process.

5) Support from all:- For the implementation of techno centric methods in teaching learning process, it is necessary to receive wide range of support from top level management and teacher .

6. Librarians role in implementation of techno centric teaching learning methods:-

In traditional libraries, there is more stress on books and journals in hard copies. But for facilitating the use of techno centric methods in teaching learning process, the librarians should provide more attention towards making more collection of ebooks, ppts, short films, audio and video lectures etc and made t available to all the stakeholders of the teaching learning methods.

7. Conclusion:- Use of techno centric methods in teaching learning process is necessary for improving quality of education, making knowledge building possible thought accessibility to resources and people and reaching people in remote areas as to satisfy their basic right to education. Availability of ICT infrastructure, skilled teachers, readiness to accept change and support from all level will encourage more use of techno centric methods in teaching learning process.

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Abstract

Radio-frequency identification (RFID) is one of the most recent trends in modern libraries. Radio Frequency Identification, an alternative to the Bar Code that uses tiny microchips in tags to hold and transmit detailed data about the item tagged. RFID has advantages over bar codes such as the ability to hold more data, the ability to change the stored data as processing occurs, it does not require line-of-sight to transfer data and is very effective in harsh environments where bar code labels may not work.

Keyword: RFID, Libraries

Introduction: Radio-frequency identification (RFID) is one of the most recent trends in modern libraries. RFID (Radio Frequency Identification) which is a combination of radio-frequency-based technology and microchip technology is being hailed as one of the most important application in every field including highway toll payments, automotive, packaging and handling, and retail industries, libraries, etc. The widespread use of RFID by Wal-Mart (the world's largest retailer) and the United States Department of Defense has made other companies and groups aware of the benefits of using RFID. According to Automatic Identification and Data Capture (AIDC),¹ "Radio Frequency identification is a technology that uses radio waves to transfer data between a reader and an electronic tag which is attached to a particular object. Typical uses are for object identification and tracking".

What is RFID? Radio Frequency Identification (RFID) is a short range communication Technology. This RFID is used to describe technologies using radio waves to identify people or objects automatically. RFID technology similar to the bar code identification systems. In RFID Technology No line of sight required.

3. Components of RFID Technology:

3.1 Tag: Also known as a *transponder*, the tag consists of an antenna and silicon chip encapsulated in glass or plastic. The tags contain a very small amount of information. For example, many tags contain only a bar code number and security bit (128 bits) but some tags contain as much as 1,024 bits.

3.2 Readers: RFID readers or receivers are composed of a radio frequency module, a control unit and an antenna to interrogate electronic tags via radio frequency (RF) communication. The reader powers an antenna to generate an RF field. When a tag passes through the field, the information stored on the chip in the tag is interpreted by the reader and sent to the server, which, in turn, communicates with the integrated library system when the RFID system is interfaced with it. RFID exit gate sensors (readers) at exits are basically two types. One type reads the information on the tag(s) going by and communicates that information to a server. The server, after checking the circulation database, turns on an alarm if the material is not properly checked out.

3.3 Antenna: The antenna produces radio signals to activate the tag and read and write data to it. Antennas are the channels between the tag and the reader, which controls the system's data acquisitions and communication.

3.4 Server: The server is the heart of some comprehensive RFID systems. It is the communications gateway among the various components. It receives the information from one or more of the readers and exchanges information with the circulation database.

4. Applications of RFID in Library Management

4.1 Book Drops: The Book Drops can be located anywhere, within or outside the library. Possible remote locations outside the library include MRT/train stations, shopping centers, schools, etc. This offers unprecedented flexibility and convenience of returning library items at any time of the day, even when the library is closed.

4.2 RFID Transponder or Tagging: It is the most important link in any RFID system. It has the ability to store information relating to the specific item to which they are attached, rewrite again without any requirement for contact or line of sight.

4.3 Counter Station is a staff assisted station on services such as loan, return, tagging, sorting and etc. It is loaded with arming/disarming module, tagging module and sorting module. Arming/Disarming module allows EAS (Electronic Article Surveillance) bit inside the tag of the library material to be set/reset so as to trigger/not trigger the alarm of the EAS gate.

4.4 The Patron self-check-out station: It is basically a computer with a touch screen and a built-in RFID reader, plus special software for personal identification, book and other media handling and circulation. After identifying the patron with a library ID card, a barcode card, or his personal ID number (PIN), the patron is asked to choose the next action (check-out of one or several books).

4.5 Shelf Management: This solution makes locating and identifying items on the shelves an easy task for librarians. It comprises basically of a portable scanner and a base station.

4.6 Anti-theft Detection: RFID EAS Gates is the anti-theft part of the Library RFID Management System using the same RFID tags embedded in the library items. Each lane is able to track items of about 1 meter and would

trigger the alarm system when an un-borrowed item passed through them. The alarm will sound and lights on the gate will flash as patron passes through with the un-borrowed library material.

RFID LIBRARY MANAGEMENT SYSTEM: Using RFID in libraries saves library staff's time by automatizing their tasks. An establishment that uses RFID library management saves a book reader, precious time that he would have been spent, waiting for his turn in a queue for borrowing or returning a book. Taking care of books and making them available to the book readers are important tasks. Most of the library staff's time is spent in recording information of incoming and outgoing books. Borrowing and returning of books can be fully automatized with the help of self check-in/out systems. This system involves installation of special software.

5. Merits of RFID in Libraries

5.1 Faster Inventory Check: Faster inventory check, Shelf management and searching of materials can be done through a portable hand held reader. It can also be used for stock erification and finding of misplaced items.

5.2. User Information: The user information is stored in a smart card which contains the user ID, details of the books issued and fines if any. The same smart card can also be used for auto fine debit / collection Statistics and Reporting The system provides various reports which are helpful for librarian sand users.

5.3 Web Interface

Web interface allows users to access the system through intranet or internet.

Online search of Books:- This can be done at any place irrespective of any distance and location.

User login:- Single registered user can make use of online OPACS.

Online reservation of books:- Online reservation of documents is possible by using such typeof technology.

Online User Statistics:- Online user statistics can be known.

5.4 For Library Management: It is Cost Effective and Scalable for future expansion. The use of RFID in libraries reduces the over head of both library staff and library readers by reducing the time spent in check in/out and inventory check.

5.5 Lower Manpower Utilization in Library: The use of RFID also reduces the man power utilization in check-in, check-out, shelf management and inventory management of library. The use of self-service kiosks and book drops reduces the interaction of library readers with library staff making them free to do other work.

6. Demerits of RFID in Libraries

6.1 Cost: While there are many benefits of RFID, the cost of the same is high. For implementing RFID system in Indian libraries, the approximate cost of RFID system includes - RFID tags which varies from Rs. 11-22, Security gates which are in the range of Rs. 4,00000- 5,00000, Staff Work station which is in the range of Rs. 1,45,000-2,00000, Installation & Commissioning of RFID system which varies from Rs. 50,000- 1,00000, Application Software in the range of Rs. 2,00,000- 2,50,000, Server/Docking Station which may cost around Rs. 3,00000- Self Check Station in the range of Rs. 4,50,000- 5,00000, Book-Drop Kiosk in the range of Rs. 5,25,000- 5,75,000, Portable RFID reader (Digital Library Assistant) in the range of Rs. 2,25,000- 2,50,000, etc. the cost is an important reason as to why the libraries are not adopting this technology.

6.2 Privacy and RFID: Because of their nature, RFID tags can be vulnerable to unauthorised scanners reading the information stored on the tags. For this reason, most RFID tags used in the libraries contain a minimal amount of information, essentially the same information as stored on the barcode. But even if the tag contains nothing more than a unique identifier (like a bar code), there are privacy concerns..

6.3 Vulnerability to compromise: It is possible to compromise an RFID system by wrapping the protected material in two to three layers of ordinary household foil to block the radio signal. Clearly, bringing household foil into a library using RFID would represent premeditated theft, just as bringing a magnet into a library using EM technology would be.

6.4 Removal of exposed tags: RFID tags cannot be concealed and are exposed for removal. If a library wishes, it can insert the RFID tags in the spines of all except thin books. However, not all RFID tags are flexible enough. A library can also imprint the RFID tag with its logo and make them appear to be bookplates, or it can put a printed cover label over each tag.

6.5 Exit sensor problems: While the short-range readers used for circulation charge and discharge and inventorying may read the tags as much as 100 percent of the time, the performance of the exit sensors is more problematic.

6.6 Standards: There are no real agreed standards world-wide for RFID. Only set frequency bands and some guidelines are available with regards to RFID. Operational standards and regulations are different for each country.

Conclusion: Libraries have become a driving force in the development of RFID for the mass market. This technology was first used in other sectors, such as logistics, airline luggage automation and parcel distribution.

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RFID TECHNOLOGY IN LIBRARY

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Abstract

Radio Frequency Identification (RFID) is the technology that is stated to replace barcodes in library applications. The 21st century brings along the recognition for the necessity to understand and measure the activity of RFID. This is a new generation of auto identification and data collection technology. RFID technology is proven to be a promising alternative in relieving the library staff from time consuming routine RFID technology is helpful in taking inventory, finding missing items and identifying unfiled items. RFID based systems move beyond security to become tracking systems that combine security with more efficient tracing of materials throughout the library including easier and faster charge and discharge, inventorying, and materials handling. RFID is the technology that is stated to replace barcodes in library application. It is a wireless data collection technology that use electronic tags for storing data in this paper an attempt in made to depict the picture of RFID application in libraries.

Keywords – RFID Technology, Barcode, Tags, Library, wireless data, Information.

Introduction - RFID is the latest technology to be used in libraries for book identification, for self-checkout, and for sorting and conveying of library books and also for theft detection. RFID helps to automate this process and provides them an opportunity to better utilize their time in serving patrons. It is estimated that many libraries are using RFID tags. The objective of any RFID system is to carry data in suitable transponders, generally known as tags and to retrieve data, by machine readable means, at a suitable time and place and to satisfy particular application needs. Due to this security of library resources is very important. RFID has significant benefits as compare to barcode technology. It is the latest technology widely used by the academic libraries to combat the theft of library collection. It moves beyond the security system to tracking system for efficient tracking of library material throughout the library including easier and faster circulation than barcode system. But this system is always overlooked by the library professionals because of its cost. Library users have growing information needs and want to fulfill them in minimum possible time with less effort. Considering the large number of users and so called information explosion, the libraries undergo automation these days to fulfill the needs of the user's faster, quicker and easier way.

Definitions of RFID – Dictionary for Library and Information Science defines RFID as “use of microchips to tag library materials and library card, enabling users to check out items by walking through a self-service station equipped with an antenna that emits low frequency radio waves

RFID Technology in Libraries and how it works – RFID technology is in use since the 1970s. Singapore public library claims to be probably the first application of RFID technology fully deployed in a library environment in 1998.

Library RFID Components – RFID tags / transponder that are electronically programmed with unique information. Readers or sensors to query the tags. Antenna. Server on which the software that interfaces with the integrated library software is loaded. RFID label printer. Handheld reader.

How RFID system works – RFID reader transfers energy to the transponder / tag by emitting electromagnetic waves through air. RFID tag uses radio frequency energy to charge up. RFID tag receives command / data signal and responds accordingly. RFID reader receives tag response and process accordingly and sends to a host computer or external devices through its control lines. Host computer respond accordingly and display information on the screen an alarm or the turnstile gate may close.

Advantages of RFID in libraries- High reliability of RFID technology. Fastest, easiest, most efficient way to track, locate and manage library materials. Unique ID of the RFID tag prevents counterfeiting. Increases the security function in library. Flexible library timings by use of self charging/renewal and book drop kiosk. Automation of repetitive works and improvement in library workflow. It also enables quick shelf reading, re-shelving, sorting, searching, weeding and exception finding. The exit gates have option to keep record of incoming and outgoing library users with video recording.

Challenges of using RFID in libraries – Tags and readers are still too expensive. The RFID tags are typical affixed to the inside back cover of the book, which can be easily removed and threaten the security gates. Tag clash occurs when more than one chip reflects back a signal at the same time, confusing the reader. RFID system alternatively reduces staff and patron interaction, so that proper interaction cannot be maintained among them. Document like magazines, pamphlets, DVD's may not have good location for RFID tags.

Conclusion – RFID technology improve efficiency by helping staff track materials better, prevent theft and allow users to check out books faster, quick inventory control without handling books, trouble free identification of misplace books, automatic book sorting and theft prevention and provide more time for library staff to assist patrons.

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SOCIAL NETWORKING AND LIBRARIES

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Abstract

Social networking websites usually have open membership this means that anyone become a member, it's a process of relationship building among a group of people who have a common interest. In this paper we discuss about social networking and libraries. Needs of social networking objectives of social networking, Social Network, Why Libraries Should Be on Social Media, Role of Academic Librarian in Social Networking.

Keywords: Networks, Social Networks

Introduction: Social networking sites are a type of virtual community that has grown tremendously in popularity over the past few years. Social networking sites record all interactions, and retain them for potential use in social data mining. Facebook, MySpace, Twitter, Second Life, Delicious, Blogs, Wikis. These are just a few of the social networking options available on the Internet today. During the last ten years, social networks have evolved from simple communication hubs to veritable agents of change; galvanizing thousands of people over political discourse, creating and changing industries, and all in all, transforming people's lives.

Objectives: Understand the meaning of the term social networking; Identification of the types of social networking sites. Know the basic functions relating to social networking and the role of Library professional. Make comparative study of the most common and successful social networks with reference to library services. Study and analyze the standards available for social networking.

Needs: To have a major centre of information resources. To meet the needs of specialized and general users in India. To help and promote development of Libraries ill-equipped to handle and retrieve information. To help the libraries lacking with financial resources and space. To support any single library to afford all the needs of all type of users. To promote the concept of Resource Sharing and its importance.

Objectives Of Networks: To develop a resource sharing strategy for India at both national and regional level. To develop a database of information resources available in India with the help of the existing information networks. To achieve economy in the use of resources, both money, man and materials (3M's). To establish cooperation among different types of information networks, information center's libraries including National Library of India. To encourage the formation or promotion of existing resource sharing networks in all states. To promote and support adoption of the standards in library networks and operations.

Social Network: Social Network is a social structure made up of individuals, groups or organizations that are connected to each other by one or more relations or interdependencies. According to Swedberg & Granoveter, a network is a regular set of contacts or social connections among individuals or groups. The Oxford English Dictionary defines social networking as "the use or establishment of social networks or connections; (now esp.) the use of Web sites which enable users to interact with one another, find and contact people with common interests, etc."

Why Libraries Should Be On Social Media: Libraries are using social media to support their collections, programs, events and services. Following are reasons why libraries should be on social media. Libraries should be on social media because there is an audience. Libraries should be on social media to promote their collections, services and programs. Libraries should be on social media to improve their services. Libraries should be on social media to provide information. Libraries should be on social media to engage with patrons.

Role Of Academic Librarian In Social Networking: The concept of physical library is changing towards digital library. The academic library professional from India are utilizing these tools for providing new way of library services. Librarian should follow the public conversations, posts, updates & events of these key individuals & proactively offer advice, resources and help. Understanding and articulating the nature of social networking sites creating webpage content, establishing friendly user interface over the network, creating online database management, evaluating and applying information and assisting users with skill acquisitions.

Conclusion: Social networking Web sites are a new technology offering a new platform for reaching students beyond the traditional library building and Web site by allowing students to access librarians and the library's resources without leaving the comfort of the Web sites they use the most. Social networking sites are quite popular, and are beginning to attract the attention of the students. Social networking privacy concerns are relevant issues in today's world. Think about this: Once you publish something online, whether it is a text document or a video, it is in the public domain.

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USE OF GOOGLEE COSYSTEM: A USER STUDY WITH REFERENCE TO WARDHA DISTRICT

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Abstract

Google is the most popular terms used now a day. Everyone is familiar with Google. It has become the most essential tool of our day to day life. We can't imagine a day when we haven't used Google while using the internet. The only lacuna we do have is that we don't use Google to its fullest. Most of the people are using Google's capabilities in very limited way. In this paper author has tried to study the awareness and use of various applications of Google among the users in detail. Researcher also suggested to aware the user about all the Google application so to utilize Google to the fullest and avoiding pitfalls.

Keywords: Google, playbook, play music, Google docs, Google drive

Introduction:- It is simply impossible to think of a person who is not familiar with Google. It may possible that a person who does not have the knowledge of internet has also used Google products in one or another way – most likely as their search engine or their browser. But very less people knows the vast benefit of the application that Google offer. Even a computer savvy would not be familiar with the number of application that is made available by the Google. We as a internet user, frequently use many applications of Google like YouTube, Google Chrome, Gmail, etc. but Google have many other applications like Google Site, Google Play Books, Google Music, etc., which are very useful for the general internet user. They are also useful for the Library and IT professionals. Library professional can use Google's wide range of application for providing better service to the users.

Google Ecosystem: Under the Google Ecosystem, Google has provided lotsof applications. Few are listed below –

- Google Map
- Google News
- You Tube
- Gmail
- Google Play
- Drive
- Calendar
- Google +
- Translate
- Play Games
- Play Movies and TV
- Photo
- Books
- Blogger
- Contacts
- Hangouts
- Keep
- Classroom
- Earth
- Google Allo
- Google Duo, etc
- Play Games

Objective: Use of internet has become a part of higher learning. To keep pace with the evolving needs of the society, libraries are reinventing themselves in term of resources, services and staff and have become dynamic in nature. The web based applications have become a part of the libraries and it is thus imperative to assess the awareness and use of e-resources by the users. The objectives of the study are to assess the awareness among the library user regarding various applications provide by Google. The paper also highlights the use and need of the user education.

Hypothesis: All the college has adequate IT infrastructure. The user awareness is very low regarding Google Ecosystem.

Methodology: For the present study, analytical and descriptive methods are adopted. The target population of the study is the senior arts colleges of the Wardha Distict. The sample studied is 33 senior college's library. For the purpose of conduct of the study, the researcher has collected the primary / empirical data from the librarians of 33 senior college libraries, using questionnaire technique. In this research only art, humanity and social science colleges are considered.

Data Analysis and Interpretation: There are 33 senior colleges in the Wardha District which are affiliated to Rashtrasant Tukdoji Maharja Nagpur University, Nagpur. A simple but structured questionnaire was sent to all 33 colleges and asked the librarian to distribute it randomly to the 100 students present in the reading hall of their respective college. Total 3300 responses has been received and analysed. The respondents were pursuing graduation, post graduation and PhD. In addition to personal information, various significant parameters such as use of library, e- resources and use of Google, etc. are covered in the questionnaire. The data collected has been analysed using percentage

Table 1 List of the Senior college in Wardha District affiliated to RashtrasantTukdojiMaharaj Nagpur University.

	Name of College
1.	YeshwantMahavidyalaya, Wardha
2.	Ra.Su. Bidkar Arts, Commerce & Science Mahavidyalaya , Higanghat , Dist. Wardha

3.	Suwalala Patani Arts,Commerce Mahavidyalay, Pulgaon, Dist Wardha
4.	ShrikrushnadasJajuGraminSevaMahavidyalaya, PipariMeghe, Wardha
5.	YashwantMahavidyalaya, Selu Dist Wardha
6.	ShrimatiSavitaraniNarayandasJavediyaArs& Commerce Mahavidyalay , Deoli, Dist Wardha
7.	LokMahavidyalaya, Wardha
8.	Priyadarshani Mahila Mahavidyalaya , Wardha
9.	Narayanrao Kale Model Arts Commerce College, Karanja(Ghadge), Dist. Wardha.
10.	Vidyavikas Arts & Commerce Mahavidyalay, Samudrapur , Dist. Wardha
11.	Samarth Arts & Commerce Mahavidyalay, Ashti, Dist. Wardha.
12.	ShikshanMaharshiKrushnraoZhotige Patil Arts & Commerce Mahavidyalay, Samudrapur, Dist.Wardha.
13.	HutatmaRashtriyaArts &ScineceMahavidyalay, Ashti, Dist. Wardha
14.	Arts ,Commerce Mahavidyalaya, Pulgaon, Wardha
15.	New Arts, Commerce and Science College, Wardha
16.	Swa. Shri. VasantraoKolhetkar Arts Mahavidyalay ,Rohana , Tal - Arvi , Dist. Wardha
17.	VidyaniketanMahavidyalaya , Hinghanghat , Dist. Wardha
18.	SaibabaLokPrabdhan Arts Mahavidyalay , Vadner , Hinganghat , Dist. Wardha
19.	Sant GajananMaharaj Arts Commerce Mahavidyalay , GiradSamudranagar , Dist. Wardha
20.	PramodbabuShedeArts& Commerce Mahavidyalay , SidhiRelway Tal - Selu, Dist. Wardha
21.	Ranibai Aganihotri College of Chitrakala , BapujiWadi, Ram Nagar ,Wardha
22.	Sant GadgebahindiMahavidyal ,Bhusawl, Dist. Jalgaon.
23.	Arts Commerce & Science Mahavidyalay , Borgaon , Wardha
24.	JaivikasMahavidyalay , Shirpur (Hore), Tha.Deoli , Dist. Wardha
25.	YashwantMahavidyalay , Vaygaon (Nipani) , Dist. Wardha
26.	Motiramji Shinde Arts & Commerce College , Madgaon Tal - Samudrapur, Dist.Wardha
27.	Swa. Narayan Rao Wagh Arts & Computer Science College , PipalkhutaArvi,Dist. Wardha
28.	P N Sarode College Of Arts Comm& Home Science. , HinganghatDist.Wardha
29.	V R College Wardha, Bachlor Road, Wardha
30.	SwaAnjanabaiBhange Women College, karnja (Ghadge), Dist. Wardha.
31.	Shri Kala Mahavidyalaya, Anji (Mothi), Dist. Wardha
32.	Mariya Art &Sciene College , Deoli , Dist. Wardha
33.	Y.J. M. Mahavidyalaya, Talegaon, Tha. Ashti Dist. Wardha

There are 33 Arts colleges in Wardha Distirct which are affiliated to Nagpur University, Nagpur . These colleges have graduation and post graduation courses in Arts.

Table 2. Frequency of library visit

Frequency	Percentage (%)
Daily	35
Twice a week	39
Fortnightly	4
Monthly	13
Occasionally	9

Table 2 depicts that 35% respondents daily visit college Library. Very few respondents visit library occasionally. It suggests that library is an important centre for getting Information.

Table 3. Time spend in the library

Time spend per week (hrs)	Percentage (%)
Less than 1	5
1-2	25
2-3	22
3-4	17
4-5	8
Above 5	23

Table 3 shows that 23% respondents spend 5 hour in the library and only 5% respondents spend less then1 hour in the library.

Table 4. Purpose of the Library visit

Purpose	Percentage (%)
Issue /Return	34
For reference	20
Research	16
To access Internet	15
To update knowledge	15

Table 4 shows the purpose for which the users visit the college library. It can be observed from the Table 2 to Table 4 that the library is visited by the students more often and the resources in it are highly used for education and research work.

Table 5 Infrastructure facilities available in the library

Infrastructure Facilities	Percentage (%)
Computers	100
Internet	100
Wi-Fi	68
Printer	100
Personal Smart Phone	92

Table 6 reveals that all the college library have computer and internet connection (100%). It suggests that all the colleges have adequate IT infrastructure facility.

Table 6. Website visited

Website	Percentage (%)
Google search	72
Gmail	11
University website	4
Job portal	7
Yahoo	5
College Website	1

Table 6 suggests that 72% of respondent visit Google. While only 1% of respondents visit their college website. It suggests that Google is the most visited website.

Table 7. Awareness about Google Ecosystem

Google Applications	Percentage (%)
Google Map	45
Google News	1
You Tube	100
Gmail	100
Google Play	85
Drive	15
Calendar	1
Google +	2
Translate	5
Play Games	1
Play Movies and TV	0

Photo	3
Books	0
Blogger	0
Contacts	2
Hangouts	0
Keep	0
Classroom	0
Earth	3
Google Allo	0
Google Duo, etc	0
Play Games	0

Table 7 depicts that 100% respondents are familiar with Google's You Tube and Gmail. Most of the respondents are not familiar with the other application of Google.

Testing of Hypothesis: Table 5 and 7 proves the hypothesis that All the college has adequate IT infrastructure. The user awareness is very low regarding Google Ecosystem.

Conclusion and Suggestions: Most of the library users are not familiar with the other application of Google. Library Professionals should use all the Google Application to its optimum. They must try to unfold the various utilities provide by the Google because they are very easy to use applications. It requires only little effort and some time to explore it. These applications will help them to enhance their skills. These applications can upgrade their professional performance and it will also help them to serve the users in very effective manners

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USE RFID AND SMART CARD SYSTEM: IN ACADEMIC LIBRARIES

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Abstract

RFID & Smart Cards system provides effective and efficient library services. These Systems have been continually enhanced to meet the changing needs of libraries. RFID & Smart Cards is a new generation of auto identification and Data collections Technology. For security purpose, the goal of the security system should be to provide a safe and secure facility for library employees, library resources and equipment and library patrons. Considering the importance to library security, the present paper concentrates on application of RFID & Smart Cards technology in academic libraries, its components, benefits and role of librarian are described.

Keywords: RFID

Introduction: - Today Libraries are the threshold of electronic age. with in the wall of a modern library millions of books. Periodicals, CD'S and DVD'S are contained with in its inventory can by time consuming and very costly to the library administrator, eventhought the use of DDC, UDC and modern barcode technology. RFID & smart cards technology is currently and widely accepted by various LIS software using number of protocols, NCIP is one of such open protocol which is being developed by NISO working group for interoperability of various hardware and software with each other. RFID & Smart Cards is one of the most technologies being adopted by both industry and academic world. Modern academic library is a place where millions of books advanced, CD'S DVD'S and other electronic reading materials are contained. It is a challenge to manage for librarians. Managing such type of huge collection. RFID technology is in use science the 1970s. RFID tags can be active, semi-passive and passive. It is a small device that can store information.

What is RFID ? :- There are 3 parts to an RFID i.e. An antenna- (that enables the tag to send and receive data) Transceiver of reader- (so called interrogator which holds digital information in a micro chip used to transmit signal through antenna) Transponder of Tag (A microchip attached to an antenna, that picks up signals from and sends signals to reader.)

Component of RFID Technology :- 1) RFID Tags. 2) RFID Reader. 3) RFID Antenna 4) RFID Station 5) RFID Label printer 6) Handheld reader 7) Self check unit 8) External book return.

Need of RFID: In academic Libraries :- Radio Frequency Identification Technology is the fastest, most efficient way to track, allocate the manage library materials. We shall be amazed at what it can do for our productive, from processing multiple items simultaneously to pinpointing misplaced materials in seconds. By tagging each of our library materials with an information chip that emits a signal. RFID can work wonder for our library.

Advantages of RFID in Academic Libraries. Some of the selected benefits are as under.

It has improved users satisfaction substantially. Streamlined inventory management. It has enhanced the security level collection. Automated materials handling. It has enabled self check in / checks our system.

Technology standards to drive down cost. Easy stock verification. High level of security

Disadvantages of RFID Technology :- High cost Users and tag collision. User privacy concern. Exit gate sensor problem. Tag collision Environmental conditions. Frequency Block. Easy to remove the tag from the book.

Smart Card :- Smart cards are using the such type of cards the check in and check out function becomes easy accurate and convenient to the research scholars library users. User identification can be easily done through the smart card. One of the first smart card prototypes created it's inventor Roland Moreno around 1975. The chip has not yet been miniaturized on this prototype, one can see how each ten of the microchip (center) is connected to the exterior world by a copper connected to the exterior world by a copper connector. A smart card is any pocket-sized card that has embedded integrated circuits. Smart cards are made of plastic, generally plastic, generally polyvinyl chloride since April 2009 a Japanese company has manufactured reusable financial smart cards can be contact, contactless or both. They can provide personal identification authentication data storage and application processing. Smart cards may provide strong security authentication for sign-on (SSO) within organizations.

Types of Smart Cards :- Magnetic stripe cards :- A magnetic stripe has a strip of magnetic tape material attached to its surface. Optical cards :- Optical cards use some form of laser to read and write to the card. Memory cards. Microprocessor cards.

Use of Smart Card :- Book store :- Student can be issued books, magazines etc. From the book store using their smart cards. Items issued from store will be recorded and reconciled with payment parents would get statement of items student procured from store.

Library :- Once RFID school management system is employed, Librarians can use Edsys smart cards to pull out student records and use it to issue or return library books items. If library facility is used for reading, Student would have to mark library attendance using Edsys smart cards.

Application of Smart Card :- Libraries for book security. Financial works. Sim card in mobile phone Identification Public transit. Computer security Schools. Health care center.

Advantages the use of Smart Cards :- The first main advantage of smart cards is their flexibility.

Multiple functions use for ID and stored for a data in the books of library. The card can be easily replaced if lost. The main advantage of library security. Portability. Increasing data storage capacity.

Reliability that is virtually unaffected by electrical and magnetic fields.

Disadvantages of Smart Cards :- The plastic card in which the chip is embedded is fairly flexible.

The larger chip the higher the probability that normal use could damage it. Cards are often carried in wallets or pockets, a harsh environment for a chip. The smart card security model may be broken. Smart cards have also been the targets of security attacks. Another problem is the lack of standards for functionality and security.

Conclusion :- RFID and Smart Card provide head-to-head protection for all type of print and non print materials. These technology is of course more expensive. RFID and Smart Card technology that is likely to replace the conventional barcode technology, due to its many advantages on the former. The information has been gathered and compiled with our inputs for librarians to refer this paper as a base, when planning to go for a RFID solution without getting into technical Jargons. It has several customizable features that can prove and best suited for libraries and its communities. Hence more advancement is yet to be done in this field to get better result with high efficiency and low cost.

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EMVCO

USE OF TURNITIN PLAGIARISM SOFTWARE IN SVKM'S NMIMS (DEEMED TO BE UNIVERSITY) AT MPTP, SHIRPUR CAMPUS, INDIA: A STUDY

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Abstract

We all are aware of Internet, Internet has helped to store, communication, disseminating and accessing the academic and other information across the globe. Some Immoral pedagogical habit and misconducts have been increased in the academic and research. Plagiarism is one of the most misconduct affecting the excellence of the pedagogical society in the globe. The present study is based on the usage of Turnitin plagiarism software in SVKM's NMIMS (Deemed to be University) at MPTP Shirpur campus, Dist- Dhule, India. The central library has provided a facility for plagiarism checking. Students, faculty, and researcher have submitted their research articles, project reports, and theses in the Turnitin software for checking the plagiarism. Due to this service university got standards and quality research output. The researcher has discussed the period, discipline or branch, the frequency of detects percentage of plagiarism, students, staff members and research scholar. of the research publications.

Keywords: Turnitin, Plagiarism software, SVKM's NMIMS, Central Library, UGC.

Preamble: Plagiarism is a popular term in the academic fraternity. The exponential growth in scholastic publications makes it tough for researcher, faculty, and instructor to finding the plagiarized sources. Nowadays, there has been an increasing interest in plagiarism detection software, such as the web-based Turnitin software.

Turnitin is Internet-based plagiarism prevention commercial service software created by paradigms, LLC, first launched in 1997. Plagiarism is rapidly becoming part of our academic culture.

What is Plagiarism? The Merriam-Webster online dictionary defines the "plagiarize" as "to steal and pass off (the ideas or words of another) as one's own", to use (another's production) without crediting the source to commit literary theft, to present as new and original an idea or product derived from an existing source.² Oxford dictionary has defined plagiarism as the practice of taking someone else's work or ideas and passing them off as one's own.³ The Committee on Publications Ethics (COPE), UK, defines plagiarism as the unreferenced use of others published and unpublished ideas.⁴

Benefits of Plagiarism Detection: The Turnitin plagiarism software contains vast database to compare the documents Less time consuming due to fast scanning speed and save extra labour as they are computer assisted.

Detect plagiarism done from all types of online internet resources.

About SVKM's NMIMS, Shirpur Campus: The Narsee Monjee Institute of Management Studies (NMIMS) (Deemed to be University) established in 1981 has over 14,000 students and 450 faculty members representing an eclectic mix of industry and academic experience in severed diverse domains of knowledge. Apart from its main campus at Mumbai, NMIMS has off-campus centers at Shirpur (Maharashtra), Bangalore, Hyderabad and Indore. In 2003, NMIMS established eight schools, offering programs across various disciplines including Management Technology, Science, Pharmacy, Architecture and Commerce offering graduate, postgraduate and doctoral programs. Keeping in mind its concern for the society, NMIMS set up an off campus at Shirpur in 2007. This campus provides state-of-art infrastructure facilities to students while offering quality education. Spread over a land area of 50 acres, the campus comprises

Goal of the Study: The objectives can be summarized as; To know the use of Turnitin Plagiarism Software To determine uploaded documents in the Turnitin To Study, the percentage range of Turnitin of plagiarism in documents uploaded To know the discipline wise documents uploaded in the Turnitin for plagiarism detect. To determine the students and staff uploaded data

Scope and Methodology of the Study: The scope of the present study is confined to the articles, Project report, and theses uploaded in the Turnitin Plagiarism software for detect, at SVKM's Narsee Monjee Institute of Management Studies (NMIMS) Deemed to be University at MPTP, Shirpur Campus. During August 2017 to December 2017. The data store in the Turnitin software's add assign page after login in the Turnitin software data has collected, interpreted and the results are drawn.

Data Analysis: During the period of August 2017 to December 2017, the M.P. Central Library uploaded articles, theses, and books for detection of plagiarism. The details of documents are uploaded in the Turnitin are given in table 1.

Table I : No. of documents received for uploaded

Sr.No.	Types of Documents	Staff	Students	Total No. of Uploaded
1	Research Articles	67	42	109
2	Theses	09	0	09
3	Project Report	0	32	32
4	Books	02	0	2
Total No.		78	74	152

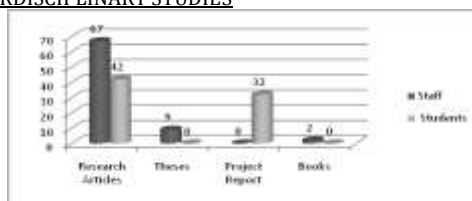


Figure No.1: documents received for uploaded

Table no.1 and figure no. 1 shows that the total 152 documents received for uploaded in the Turnitin plagiarism software for detection, out of 78 documents received from staff for uploaded whereas 74 documents received from students for uploaded.

Table No.2 Branch Wise allocation of documents received for Plagiarism detection

Branch	No.of Documents Received for Plagiarism		Total No.	Percentage
	Staff	Students		
Engineering	47	33	80	52.63%
Pharmacy	22	41	63	41.44%
Textile	2	0	2	1.31%
Applied science	7	0	7	4.60%
	78	74	152	100%

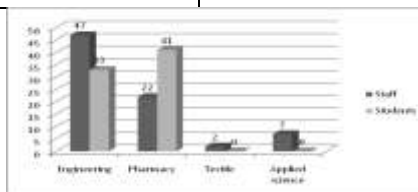


Figure 2 : Branch Wise allocation of documents received for Plagiarism detection

Table and Figure 2 present that the majority of the Engineering staff and students 52.63% prefer to use plagiarism software, the Pharmacy staff, and students 41.44% prefer to use plagiarism software, Textile staff, and students 1.31% prefer to use plagiarism software and Applied Science staff and students 4.60% prefer to use plagiarism software.

Table No.3: Frequency in the detection of Turnitin Plagiarism Software

Sr. NO.	No. of Documents	Frequency In Detection	Percentage
1	113	I – Time	74.00
2	27	II- Time	18.00
3	9	III- Time	6.00
4	3	IV- Time	2.00

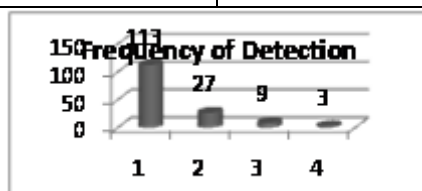


Figure No.3: Frequency in the detection of Turnitin Plagiarism Software

Table and Figure 3 show that the 113 (74%) staff and students need not have to detect their documents the second time. 27 (18%) staff and students have to detect their documents for the second time. 9 (6%) use plagiarism software third time for detection. Only 3 (2%) staff and students have to detect their documents for the fourth time.

Conclusion: Use of the Turnitin plagiarism detection software in an academic penetrability appeared to be very successful in staff and students appropriate rewards and source recognition. The pedagogical community ought to undergo that as educators of society's children, we must set an example of ethical, moral, and legal standards for students, for the public, and for the community. NMIMS (Deemed to be University) provided the plagiarism detect facility for students and staff. The purpose of providing Turnitin plagiarism software facility is to detect Ph.D. Theses, Project report, Research Articles, and books. Students and staff have acknowledged this facility.

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Abstract

Invention of internet, particular World Wide Web has opened up an entirely new medium for providing new advance information services for the users. Web based library services are also result of web technology. This paper focuses on such web based services, their features, advantages and disadvantages. Web based services include library webpage, Web OPAC, email, ask-a-librarian, web forms, web based user education.

Keywords: Web, Library Information Science,

Introduction: World Wide Web has completely revolutionized the way to communicate, teaching, business, employment, education, defense and more. It has major impact on the publishing and information delivery system in 21st century (Arora2001). Similarly in case of libraries too, applications of internet and web technologies have changed the way the libraries operate and provide information services to users. Traditionally, the library services were statics. To access the library services users needed to go to the library physically during the library opening hours only. But in the age of internet, library services have become dynamic. Now a day the users can access the library at anytime from anywhere. With the advent of information technology and web based services, contents are now available to user on their desktop. Digital library services, Electronic library services, Internet library services are the terms used for web based services. Web Based Library Services are mainly provided through the library portal which is a special kind of gateway to web based library resources. This portal provides integrate access to the metadata of a library's multiple database. It gathers a variety of useful information sources into a single webpage that allows user to customize their information resources by selecting and viewing information they find personally useful (Jackson). Some of the commonly used web based library services are library webpage, web OPAC, Ask-a-Librarian, web forms, digital reference service, online document delivery, online help and tutorials, online reference services, electronic journals, electronic article alert services, online acquisition, online circulation etc.

World Wide Web: World wide web is a global is a global network of internet of linked hypertext files stored on computers throughout the world that can provide computer users with information on a huge variety of subjects (Jeysanker,2009). The information can be in the form of regular text, hypertext, pictures, sounds, news groups and other types of data. To access such information from web use client program is necessary like internet explorer, fire fox, Google chrome etc. Web uses http protocol language over the internet to transmit data. In the web each web page can hold not only information but also links to other pages.

Library services: Libraries provide services to its users. Library services are defined as the facilities provided by a library for the use and dissemination of library material like books, journals, theses, dissertations, etc. in order to meet the users requirement. Commonly library services are circulation, reservation, renewal, new arrivals, current content, current awareness service, interlibrary loan service, access to the library catalogue, access to online database, indexing and abstracting services, internally published newsletters and so on.

Web Based library Services: Web Based Library services means library services provided using internet as medium and library website as a gateway with the help of integrate library management system (White,2001). Web based library services provides users with convenience of accessing information in their own time, saving them travelling cost and time and new options for answering reference questions. The provision of these services is not constrained by the traditional opening hours but can be offered on a 24 hours.

Library Webpage: Library web page can be defined as gateways for searching information about the library. Web page provides integrate access to the metadata of a library multiple databases, e-journals and library catalogue, detailed information about a library. It also gives information about the library collection, library timing, subscribed journals, popular documents based on circulations, user feedback etc. offered by library.

Features of Web Page Save the time of the user. Facilitates and promotes library use. Allows easy bridging distances Keep informed about library activities and new services

Web OPAC: Web OPAC is a library catalog on the web. Users can search the information by Web OPAC at anytime from anywhere in the world. It facilitates the users to access the bibliographic details of holding in the collection of particular library. Some of the major services available through Web OPAC are library catalogue, search facility on entire database, group wise restricted access for users and guest.

Features of Web OPAC make easier access catalogue data in the form of bibliographic records. It is worldwide and all the time accessible. No limitations of space and time for search of any information.

The status of books whether it is issue, lost may be available.

E-mail: Librarians can use e-mail for delivering some web based service like electronic document delivery services, RSS feeds, abstracting etc. Email is used as current awareness service for scientist.

Ask- A- Librarian: Ask- A-Librarian services are Internet based question and answer service that connect user with individuals who possess specialized subject knowledge and skill. Users can ask questions by an e-mail

address provided by the service. Once a query is read by as service, it is assigned to an individual expert for answering. The responses are either send to users email address or is posted on the web so that user can access it after certain time.

Web Forms: Web forms are important for library web based services. Interactivity is a key feature of web forms. Most of the library websites have web forms for users.

Reference Service Users survey Suggestions for services Comments on library website Requests for library to acquire certain titles

Web Based User Education: Web based user education provides a high degree of interactivity and flexibility to the users. Web guides and teaching tools are found everywhere on the Web because they are easily updated, accessed, and printed on demand. The library website can use web based user education for its user in following area Instructions on subject search engines, using Boolean operators and searching internet resources through search engines Instructions for searching web based databases and other electronic resources Basic library skills Using library OPAC/ Web OPAC, locating books and other library materials

Advantages of Web based service Following are the advantages of Web Based services Availability of information in different places and also in different formata Fulfill information requirement instantly Less dependent on the library staff for getting information Cannot be stolen or misbehaved A large number of user can be helped at a time

Cut in library budget Operating costs are minimal Fast publication Saves considerable storage space

Disadvantages of Web Based Services Require some training for users to use special equipment required No fully record of the different documents is available at the moment Use is limited by copyright laws and licensing agreements A huge volume of information is generated every minute No rule or orders are imposed on the generation, distribution, access and use of this information

Conclusions: The main function of library is to provide quality information service in order to satisfy their users with the right information to the right user at right time. Web based library services are just new form of library services. These services should be adapted in the libraries to serve and teach users to find, evaluate and use information effectively. Librarians have to join learning community, guides and students. Web based services just teaches how to search required information pin-pointly and effectively.

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USE OF WEB BASE CITATION TOOLS TO MEASURE H-INDEX OF RESEARCHERS: AN OVERVIEW**Mr. Mangesh S. Talmale**, Librarian, Karve Institute of Social Service, Pune**Mr. Avinash Humbare**, Librarian, PDEA'S Anantrao Pawar College, Pirangut, Pune**Abstract**

Citation Databases shows the identity of the researchers / institutes as well as the publishers. It indicates the quality based weight age and reputation. This paper presents the web base online citation tools to measure the h-index of researchers. It explains web base online citation tools such as Web of Science, Scopus and Google Scholar support (Perish or Publish). It also describes the features, challenges and how to find h-index. Researcher should increase the use of citation database to aware about their status and visibility in the field.

Keywords: Web of Science, Scopus, Google Scholar, Perish or Publish, h-index

Introduction: Research publication reflects the intellectual contributions of researchers.

Published literature serves as a vehicle for communication of new concepts for further addition to the ever growing of knowledge. Research activity plays an important role in the development of any discipline and expansion of new knowledge. Researchers play an important role to create and disseminate of new knowledge in discipline through various medium and have been interested in publication productivity to assess scholarly excellence. It is an accepted fact that researcher consistently receive highest prestige in their career development. Successful publications bring attention to researchers and their sponsoring institutions, which can facilitate continued funding and an individual's progress through a chosen field. There are various techniques brought out from time to time to measure the research productivity. Scientific research and its communication play a vital role in all round development of country. Research work has no value unless the results are communicated /evaluated at proper time. The researcher builds their knowledge and communicates their research work to community.

Need: Citation Databases shows the identity of the researchers / institutes as well as the publishers. It indicates the quality based weight age and reputation. Researchers are contributing their research knowledge through various medium, forms, format such as books, journal articles, conference papers and web base social media, etc. Citation makes a better researcher and good citation practices make a better writer. *Citation* count is one of the technique to measure of *research ranking*. *Citation metrics and visibility are becoming more and more important in research community to get grants from funding agencies. Most researchers are measured h-index based on their publications and numbers of citations receive for their publications.* Impact of citations and h-index visibility, researcher gets recognition, reputation, fund and credit of their work. Hence, Researcher need to aware about such recognise citation tools, which can help to evaluate their research output.

Features of Web base Citation Database: Easy to access. Subscription is essential for Web of Science and Scopus Citation database Google Scholar is accessed for free Multidisciplinary database Unique number Scholar ID

Citation Databases: The *Institute* for Scientific Information (ISI) was founded by Eugene Garfield in 1960. In 1992 the ISI was sold by Garfield and other shareholders to a company that later became Thomson scientific, and which continued the citation indexes. Recent years have been the emergence of significant challenges to the ISI indexes in the form of alternative large scale online scholarly article database like Google scholar and Scopus (Elsevier), which contain embedded citation information.

Web of Science (WoS) (<https://webofknowledge.com/>): The Web of Science (WoS) is an online subscription based bibliographic citation database. It's result of effort made by Eugen Garfield of Institute of Scientific Information (ISI). It covers three databases SCI expanded (an SCI edition with broader coverage), the SSCI and the ACHI published from ISI, Philadelphia and maintained by Thomson Reuters, now maintained by Clarivate Analytics (United States). It is multidisciplinary subject database covers Science, Social sciences, Arts, Humanities. It has coverage data from the year 1900 to present.

Find the H-Index Using Web of Science (WoS): Step-by-step search strategy to find an author's h-index in Web of Science: Going to Web of Science database ; Author search – Enter Author Name in author box e.g. (Mishra ,AC); Refine by institute or organization e.g. (NATL INST VIROL); Select the subject area e.g. (Life Science and Biomedicine); Select time period e.g. (2013) ; Select the search option; Display the results; At the top right of the results is the option to Create Citation Report. Click this. The analysis appears, along with the person's relative h-index.

SCOPUS (<http://www.scopus.com>): Scopus citation database is an online subscription edition. It was developed by Elsevier. It covers multidisciplinary subject databases covers Medicine, Science, Technology, Social Science, Arts and Humanities. It includes disciplines: such as Life Sciences; Social Sciences; Physical Sciences; Health Sciences. It provides the citations in the literature published after 1996. It covers peer reviewed scientific journals, books and conference proceedings. It provides facility to track, analyze and visualize research.

Find the H-Index Using Scopus: Step-by-step search strategy to find an author's h-index in Scopus:

Going to Scopus database ; Author search : Enter Author Name in author box e.g. (Mishra, A.C.); Put organization or institute name in affiliation box e.g. (National Institute of Virology); Select the subject area e.g. (Life Science and Medical Science); Select the data range ; Select the search option; Display the results; Analyze author output section, will see the h-index listed

Google Scholar (<https://scholar.google.co.in>): Google Scholar is bibliographic database. It was developed by Google in 20 November 2004. It is freely available databases. It covers peer-reviewed papers, theses, books, preprints, abstracts, technical reports from academic publishers, repositories with preprints and published digitized materials, library catalogues etc. It provides the metrics of articles. It provides the facility to researchers to develop their Google Scholar page by using their Gmail account having an affiliating address such as academic institution, fields of interest and citations. Through its "cited by" feature, it provides access to abstracts of articles that have cited the article being viewed.

Find the H-Index Using Publish or Perish: Publish or Perish (PoP) is a free software program. It used to retrieve and analyze academic citations Google Scholar to measure the research impact. It was developed by Anne-Wil Harzing. It has capability to calculate the various citation based metrics and indexes. It retrieves citations of publications via Google Scholar and Microsoft Academic Search for metrics based analysis of citations.

Challenges of Citation Database to find h-index: There are following challenges faced by author to find the h-index from citation database as follows: **(a)** Majority of the literature in English language followed by Japan, Germany, French, Russian, etc. **(b)** Local language papers are not index **(c) Synonymy:** Several variants of the same article, **(d) Homonymy:** Several authors with same name, **(e) Homograph/ Synonyms:** Different journals have different pattern to write the name of the authors'. It is very difficult to differentiate homonyms authors. It has also been noted that different journals followed different pattern for the bibliographical reference that includes author names, journal name, full abbreviated. Hence the synonyms problems are very common for scientific analysis. **(f)** Lacking of researchers about Information Communication Technology (ICT) knowledge. **(g)** Internet access is essential. Hence, there are challenges faced by researcher to find the correct h-index due to above reasons.

Conclusion: Number of publications and their citations appears the visibility the h-index of researchers and strength. Researchers to understand his/her progress depends on the publication productivity and their received citations. H-Index would help researcher to suggest necessary measures to be undertaken to sustain and enhanced the research contribution for the institution/nation; research performance assessment and monitoring of scientific developments. Researchers can use the standard unique ID like Open Researcher and Contributor ID (ORCID) to avoid the ambiguity issues of author's name. So, they can find out the h-index result correctly.

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MAJOR DIFFERENCES AMONG WEB1.0, WEB2.0 AND WEB3.0**Mr. Prasanna P. Dange**, SSPM's Arts & Science Mahila College, Shahada Dist-Nandurbar**Dr. Sunil D. Punwatkar**, Vasantrao Naik Government Institute of Social Sciences RBI

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Abstract

In the recent years works for the information use of modern innovative technology and redefining the way of organizing, communicating and collaborating with individual which in terms lead us to mixture of spectacular successes and failures. The purpose of this paper is to understand and conceptualize the journey of Web from the scratch to the upcoming trends in the field of Web Technology this paper shows brief history of web, its current and coming technologies and its advantages and disadvantages.

Key words: World Wide Web, PC Era, Web1.0, Web2.0, Web3.0 Major Differences Web 1.0 to 3.0

Introduction: In today's era Web Technology can be easily defined by the user in different descriptive way. But matter in fact many user are quite unknown to the information that from where the WWW was coined first. As this paper *Major Differences among Web1.0, Web2.0 and Web3.0*. The World Wide Web has been through various phases of development. Going by the trend of constant evolution, the Web is now slowly but surely transiting to more data centric phase in the context of Web version 3.0. This paper is structured in such a way that, classifying obtaining nature of Web 1.0 and projecting prospective characteristics of Web 2.0 with added different dimensions of the Web 3.0 semantic frame works. Now-a-days there can be communication and interaction between machines, computers and devices over the internet using a software system known as Web Service. So for communicating and interfacing, we use Application Programming Interface, that is, rules and specifications to be followed by the software system. YouTube, Flickr, Face book, Twitter are the examples of Web 2.0 social networking websites that provide a service for searching, sharing and connecting with people and communities. Combining the features of Web 2.0, semantic web and other web services, Web 3.0 will dominate the existing web services.

CHARACTERISTICS: Web 1.0 Technologies includes core web protocols: HTML, HTTP and URI. The major characteristics of Web 1.0 are as follow: They have read only content. Establish an online presence and make their information available to anyone at any time. It includes static web pages and use basic Hypertext Mark-up Language.

LIMITATION: The major limitations of Web 1.0 are as follow: The Web 1.0 pages can only be understood by humans (web readers) they do not have machine compatible content. The web master is solely responsible for updating users and managing the content of website. Lack of Dynamic representation i.e., to acquire only static information, no web console were available to performing dynamic events.

WEB 2.0: Web 2.0 is the second generation of web. It was defined by Dale Dougherty in 2004 as a read-write web. The concept began with a conference brainstorming session between O'Reilly and Media live International. The technologies of web 2.0 allow assembling and managing large global crowds with common interests in social interactions. Tim O'Reilly defines web 2.0 on his website as follows "Web 2.0 is the business revolution in the computer industry caused by the move to the internet as platform, and an attempt to understand the rules for success on that new platform. Chief among those rules is this: Build applications that harness network effects to get better the more people use them." Web 2.0 facilitates major properties like participatory, collaborative, and distributed practices which enable formal and in-formal spheres of daily activities on going on web. In other terms it resemble major distinct characteristics of Web 2.0 include "relationship" technologies, participatory media and a social digital technology which in term can also defined as the wisdom web. People-centric web and participative web is taken into concern and which facilitates reading and writing on the web which makes the web transaction bi-directional.

CHARACTERISTICS: Web 2.0 refers to World Wide Web websites that emphasize user-generated content, usability (ease of use, even by non-experts), and interoperability (this means that a website can work well with other products, systems, and devices) for end users. The term was popularized by Tim O'Reilly and Dale Dougherty at the O'Reilly Media Web 2.0 Conference in late 2004, though it was coined by Darcy DiNucci in 1999. Web 2.0 does not refer to an update to any technical specification, but to changes in the way Web pages are designed and used. A Web 2.0 website may allow users to interact and collaborate with each other in a social media dialogue as creators of user-generated content in a virtual community, in contrast to the first generation of Web 1.0-era websites where people were limited to the passive viewing of content. Examples of Web 2.0 features include social networking sites and social media sites (e.g., Face book), blogs, wikis, folksonomies ("tagging" keywords on websites and links), video sharing sites (e.g., YouTube), hosted services, Web applications ("apps"), collaborative consumption platforms, and mash up applications. Whether Web 2.0 is substantively different from prior Web technologies has been challenged by World Wide Web inventor Tim Berners-Lee, who describes the term as jargon. His original vision of the Web was "a collaborative medium, a

place where we [could] all meet and read and write. On the other hand, the term Semantic Web (sometimes referred to as Web 3.0) was coined by Berners-Lee to refer to a web of content where the meaning can be processed by machines.

LIMITATION: Sometimes it may happen that if the new technology meets expectations of the mass user at large, there may be a chance that these technologies may face lot of consequences from external environment which may suppress or limit the flow of technology in presenting results which might not be feasible and may lead to degrade the performance of the technology as a whole. Constant iteration cycle of Change and Updates to services. Ethical issues concerning build and usage of Web 2.0. Interconnectivity and knowledge sharing between platforms across community boundaries are still limited.

WEB 3.0: Web 3.0 is one of modern and evolutionary topics associated with the following initiatives of Web 2.0. Web 3.0 was first coined by John Mark off of the New York Times and he suggested web 3.0 as third generation of the web in 2006. Web 3.0 can be also stated as “*executable Web*”. The basic idea of web 3.0 is to define structure data and link them in order to more effective discovery, automation, integration, and reuse across various applications. It is able to improve data management, support accessibility of mobile internet, simulate creativity and innovation, encourage factor of globalization phenomena, enhance customers’ satisfaction and help to organize collaboration in social web. Web 3.0 is also known as semantic web. Semantic web was thought up by Tim Berners-Lee, inventor of the World Wide Web. There is a dedicated team at the World Wide Web consortium (W3C) working to improve, extend and standardize the system, languages, publications and tools have already been developed.

Major differences among Web 1.0, Web 2.0 and Web 3.0. **Web 1.0:** It is the “readable” phrase of the World Wide Web with flat data. In Web 1.0, there is only limited interaction between sites and web users. Web 1.0 is simply an information portal where users passively receive information without being given the opportunity to post reviews, comments, and feedback. **Web 2.0:** It is the “writable” phrase of the World Wide Web with interactive data. Unlike Web 1.0, Web 2.0 facilitates interaction between web users and sites, so it allows users to interact more freely with each other. Web 2.0 encourages participation, collaboration, and information sharing. Examples of Web 2.0 applications are YouTube, Wiki, Flickr, Face book, and so on.

Web 3.0: It is the “executable” phrase of World Wide Web with dynamic applications, interactive services, and “machine-to-machine” interaction. Web 3.0 is a semantic web which refers to the future. In Web 3.0, computers can interpret information like humans and intelligently generate and distribute useful content tailored to the needs of users. One example of Web 3.0 is Tivo, a digital video recorder.

	Web 1.0	Web 2.0	Web 3.0
Definition (According to)	Read-only	Read-write	Read-write-execute
Technologies associated with the era	File and Web Servers Content and Enterprise	Ajax and JavaScript frameworks	Semantic Searching Knowledge Bases
Precedence Order	First Stage	Second Stage	Third Stage
Type of Web	Simply Web	Social Web	Semantic Web
No. of users	Millions	Billions	Trillions
Basic concept	Connect information	Connect people	Connect knowledge
Associated websites	CNN	Flickr, YouTube, Blogger	GoogleMaps, My Yahoo!
Years	1990-2000	2000-2010	2010-2020
Features	Hyper linking and bookmarking on pages. No communication between server and user. Websites were Static. It allowed only browsing of content.	Better interaction. Includes functions like Video streaming, Online documents, etc. Introduction of web applications. Everything becomes online and stores on servers.	Smart, web based Applications and functionalities. An amalgamation of Web technology and Knowledge Representation (KR).

Conclusion: This paper provided an overview from the evolution of the web. Web 1.0, web 2.0 and web 3.0 were described as four generations of the web. The characteristics of the generations are introduced and compared. It is concluded web as an information space has had much progress since 1989 and it is moving toward using artificial intelligent techniques to be as a massive web of highly intelligent interactions in close future.

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WEB 3.0 USE IN DIGITAL LIBRARY

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Abstracts

This paper aims to discuss the concept of web 3.0, and possibilities to use these tools and technologies in library and Information Science. The internet has changed the way we think of information and technology. The web of documents has morphed into a web of data. The semantic wave embraces three stages of internet growth. The first stage, Web 1.0, was used as a Read only medium. Web 2.0 started as Read and Write medium. Now the current version of web i.e. Web 3.0 is the semantic web which allow the users to Read, Write and Execute web. This paper briefs upon Web 3.0 and also its application in library and information science which is known as Library 3.0. This paper discusses the definitions of Web 3.0 and its characteristics. Next, it discusses applications of Web 3.0 and its technology, then the paper briefs about Library 3.0 which is powered by the Semantic Web and their application to enhanced library services.

Keywords: Web 3.0, Semantic Web, WWW, Library Services.

Introduction:- John Markoff of the *New York Times* recently suggested naming this third-generation of the Web, "Web 3.0". This suggestion has led to quite a bit of debate within the industry. Those who are attached to the Web 2.0 moniker have reacted by claiming that such a term is not warranted while others have responded positively to the term, noting that there is indeed a characteristic difference between the coming new stage of the Web and what Web 2.0 has come to represent. The threshold to the third-generation Web will be crossed in 2007. At this juncture the focus of innovation will start shift back from front-end improvements towards back-end infrastructure level upgrades to the Web. This cycle will continue for five to ten years, and will result in making the Web more connected, more open, and more intelligent. It will transform the Web from a network of separately siloed applications and content repositories to a more seamless and interoperable whole. Because the focus of the third-generation Web is quite different from that of Web 2.0, this new generation of the Web probably does deserve its own name. In keeping with the naming convention established by labeling the second generation of the Web as Web 2.0, I agree with John Markoff that this third-generation of the Web could be called Web 3.0. Web 3.0 can be also stated as Executable Web". The Basic idea of 3.0 is to define structure data and link them in order to more effective discovery, automation, integration, and reuse across various applications. It is able to improve data management, support accessibility of mobile internet, simulate creativity and innovation, encourage factor of globalization phenomena, enhance customers satisfaction and help to organize collaboration in social web.

Definition:- According to Nova Spivack, the Chief Executive officer at Radar Networks, "Web 3.0 is a set of standards that turns the web into a big database." While Steve Spadling defines Web 3.0 as "highly specialized information silos, moderated by a cult of personality, validated by the community, and put into content with the inclusion of met-data through widgets." Conrad Wolfram stated "Web 3.0 is where the computer is generating new information, rather humans" Eric Schmidt, Google's CEO, stated about 3.0 "Web 3.0 is a series of combined applications. The core software technology of Web 3.0 is artificial intelligence, which can intelligently learn and understand semantics. Therefore, the application of Web 3.0 technology enables the internet to be more personalized, accurate and intelligent."

Features:- Below are 5 main features that can help us define Web 3.0

Semantic Web: - The next evolution of the Web involves the Semantic Web. The semantic web improves web technologies in order to **generate, share and connect content through search and analysis based on the ability to understand the meaning of words**, rather than on keywords or numbers.

Artificial Intelligence: - Combining this capability with natural language processing, in Web 3.0, computers can understand information like humans **in order to provide faster and more relevant results**. They become more intelligent to satisfy the needs of users.

3D Graphics: - **The three dimensional design is being used extensively in websites and services** in Web 3.0. Museum guides, computer games, ecommerce, geospatial contexts, etc. are all examples that use 3D graphics.

Connectivity: - With Web 3.0, **information is more connected thanks to semantic metadata**. As a result, the user experience evolves to another level of connectivity that leverages all the available information.

Ubiquity: - **Content is accessible by multiple applications**, every device is connected to the web, the services can be used everywhere.

Interoperability:- In the context of Web 3.0, the terms interoperability, collaboration and reusability are basically interrelated. Interoperability implies reuse, which is again a form of collaboration. Web 3.0 will provide a communicative medium for knowledge and information exchange.

Personalization:- Another feature of Web 3.0 era is Personalization. Personal or individual preferences would be considered during different activities such as information processing, search, formation of personalized portal on the web. Semantic Web would be the core technology for personalization in Web 3.0.

Virtualization:- Web 3.0 would be a web with high speed internet bandwidths and high end 3D Graphics, which can better be utilized for virtualization. The trend for future web refers to the creation of virtual 3-Dimensional environments. An example of the most popular 3-D web application of Web 3.0 is Second Life.

Characteristics of Web 3.0 : - The major characteristics of web 3.0 as marked by Nova Spivack are SaaS Business Model. Open source software platform. Distributed Database or what called as —"The World Wide Database". Web Personalization. Resource Pooling. Intelligent Web. Web 3.0 added machine readability feature to the web documents which did not exist in the web 1.0 and web 2.0. Web 3.0 is also known as semantic web. Semantic web was thought up by Tim Berners-Lee, the inventor of the World Wide Web. The word semantic stands for "meaning of" so Semantic Web term is understood as "to add meaning to the web." According to the W3C, "The Semantic Web provides a common framework that allows data to be shared and reused across application, enterprise, and community boundaries." Semantic Web is an efficient way to represent data on the Web, or as a database that is globally linked, in a manner understandable by machines, to the content of documents on the Web. Semantic technologies represent meaning using ontology and provide reasoning through the relationships, rules, logic, and conditions represented in those ontologies. The semantic Web is not a new Web but it is an extension of existing Web. Semantic Web provides an infrastructure to develop so many web applications which will reduce the human efforts required to search for products or services. Many media have confirmed that the Web 2.0 has been rendered obsolete and those now find ourselves in the next phase: Web 3.0, mentioned for the first time in 2006, which focuses on artificial intelligence and intelligent machines (Socco, 2011). Among the key elements of the Web 3.0, we find the changes in the habits and methods of website displays, the intelligence of available information, the users' search experiences and the opening of the Web (Tasner, 2010b). The combination of machine and human intelligence afforded by the Semantic Web make information richer, more relevant, timely and accessible by using more powerful languages, neuronal networks, genetic algorithms, etc. In this way, the Web 3.0 is focused on analysis, information processing and its later conversion into ideas. The web 3.0 was constructed as a revision of the Semantic Web. From a marketing point of view, the Web 3.0 is comprised of five key components (Tasner, 2010b): Micro blogging:- sites that consist of sharing one's thoughts in few characters. Examples: Twitter, Plurk and Jaiku. Virtual reality worlds:- spaces visited by users to interact with other users in a 3D platform. Customization/personalization:- features that allow users to create a unique and individual experience. Examples: SendOutCards, Google and Amazon. Mobility:- mobile devices and the ability to connect to the web through them make possible a huge amount of new applications. On demand collaboration:- users interact by supervising documents, collaborating and making changes all in real time. Examples: Google Drive, salesforce.com, slideshare.net and box.net. Vastness:- The World Wide Web contains many billions of pages. Redundancy in data may occur which has not yet been able to eliminate all semantically duplicated terms. Vagueness:- This arises from the vagueness of user queries, of concepts represented by content providers, of matching query terms to provider terms and of trying to combine different knowledge bases with overlapping but subtly different concepts. Inconsistency:- These are logical contradictions which will inevitably arise during the development of large ontologies and when ontologies from separate sources is combined. Deceit:- This is when the producer of the information is intentionally misleading the consumer of the information. Application of Web 3.0 in Academic Library System:- Digital libraries now become multidimensional in today's world of fast growing information society. Semantic digital library i.e. Library 3.0 is the next step in the evolution of current generation of digital library management systems. Its main features are: Anyone can use it; All knowledge is accessible here; We can access it anytime and anywhere; It features a user-friendly, multimodal user interface; It provides efficient and effective ways to access it; It makes use of multiple and interconnected devices. The semantic digital library is made of hyper books instead of traditional e-documents such as PDF or HTML files, Hyper book or hypertext book, is a term that is commonly used to refer to a hypertext that has some of the characteristics of a printed book. The main distinction between a traditional digital library and a semantic digital library is the disappearance of the monolithic nature of a book or an article. A hyper book, once inserted into a library, will automatically enrich itself by connecting to fragments of other books. Thus, a semantic digital library of hyper book is not a mere collection of hyper books, It provides a semantic interconnection among the hyper books.

Conclusion:- Web 3.0 will be more connected, open, and intelligent, with semantic Web technologies, distributed databases, natural language processing, machine learning, machine reasoning, and autonomous agents. The most important sphere of library 3.0 is to establish a semantic relationship between all available web contents to ensure seamless accessibility, search ability, availability and usability. Librarians need to be more inclined towards the use of latest tools and technology to create virtual library system. But basic aim remains the same i.e. right information to the right users at the right time.

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WEB 3.0

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Abstract

Google initiated the idea of sitemaps which is a supplementary of listing the content available on a website in a simple, open and crawler friendly format. Because sitemaps exhibits some limits, the need for implementation of artificial intelligence in making search engines more efficient is very imperative and is expected to be one of the feature of Web 3.0.

Keywords: Web 3.0, Digital Library, WWW

Introduction: The world of information Technology is undergoing rapid changes in the history of civilization. With the big advance in technology and the growth of the amount of content on internet, it has become difficult for users to find and utilize information and for content providers to classify and catalogue documents. It was very time consuming for users to browse and to get the required information from the net. Google initiated the idea of sitemaps which is a supplementary of listing the content available on a website in a simple, open and crawler friendly format. Because sitemaps exhibits some limits, the need for implementation of artificial intelligence in making search engines more efficient is very imperative and is expected to be one of the feature of Web 3.0. Nowadays, the users of web environment can share their own data by means of modern facilities offered by World Wide Web. Overcoming to the highest peaks of professional degrees, as an Information professional, Librarian have to update their knowledge and notice of the newest researches and results in Library science. Libraries are using Internet or Web as a tool to render the library services. The Web was created in 1989 by Sir Tim Berners-Lee, working at CERN (The European Organization for Nuclear Research) in Geneva, in guiding the development of web standards (such as the markup languages in which web pages are composed), in recent years has advocated his vision of a semantic Web.

Evolution of Web 1.0, 2.0 and 3.0:

Web 1.0: In web 1.0, a small number of writers created web pages for a large number of readers. As a result, people could get information by going directly to the source. Web 1.0 is a system of interlinked, hypertext documents accessed via the internet. The first implementation of the web represents the Web 1.0 which could be considered the “read only web”. In other words the early web allowed us to search for information and read it. There was very little in the way of user interaction or content contribution. The primary focus of Web 1.0 was one way communication. However, this is exactly what most website owners wanted. Their goal for a website was to establish an online presence and make their information available to anyone at any time. **Web 2.0:** The term Web 2.0 or “read-write” web is commonly associated with web applications that facilitate interactive information sharing, interoperability, user-centered design and collaboration on the World Wide Web. A Web 2.0 site gives its users the free choice to interact or collaborate with each other in a social media dialogue as creators of user generated content in a virtual community, in contrast to websites where users are limited to the passive viewing of content that was created for them. Examples of Web 2.0 include such as weblogs (blogs), social bookmarking, wikis, podcasts, RSS feeds (and other forms of many-to-many publishing), social software, web APIs, and online web services such as eBay and Gmail provide enhancements over read-only websites. etc. According to O’Reilly, Web 2.0 technologies provide rich and lightweight online tools that let users contribute new data that they can aggregate to harness a community’s “Collective intelligence”. Stephen Fry (actor, author, and broadcaster) describes Web 2.0 as “an idea in people’s heads rather than a reality. It’s actually an idea that the reciprocity between the user and the provider is what’s emphasized.”

Web 3.0: Web 3.0 is a term that has been coined to describe the evolution of Web usage and interaction that includes transforming the Web into a database. Web 3.0 is an era in which we will upgrade the back end of the Web, after a decade of focus on the front end. It represents an evolutionary shift in how people interact with the web, and vice versa”. The next generation of the web, Web 3.0, includes the concepts of semantic web, the mobile web, and the immersive Internet. The increasing trend to provide web experience through more versatile mobile devices is expected to extend to learning as well. Semantic web that understands the meaning of data and uses natural language searches, which enables finding and interacting with the right content and subject matter experts more easily. In addition to that, using virtual worlds, simulations, augmented reality, and multiplayer gaming technologies for learning are among the visions associated with Web 3.0. It will not result in a huge paradigm shift or a gilded age of computing”.

Library 3.0:

Definition: It is a model for a modernized form of library services that reflects a transition within the library world in the way services are delivered to users. It refers to libraries using technologies such as the semantic web, cloud computing, mobile

devices and re-envisioning our use of established technologies such as federated search to facilitate user-generated content and collaboration to promote and make library collections accessible. With Library 3.0, library services are frequently updated and evaluated to meet the emerging needs of library users. The end result of Library 3.0 is the expansion of the “borderless library” where collections can be made readily available to library users regardless of their physical location.

Semantic Web: The Semantic web provides a common framework that allows data to be shared and reused across applications, enterprise and community boundaries. It is a collaborative effort led by W3C with participation from a large number of researchers and industrial partners. Its objective is to convert all the unstructured documents on the Web into a web data. It is based on the Resource Description Framework (RDF). It will provide us with the option to share, unite, search and organize the web information in easy manner. Sharing and organizing information available in every corner of the web which is the main aim of this generation and expected to be achieved with the help of semantic web technologies.

Differences among Web 1.0, Web 2.0 and Web 3.0:

WEB 1.0	WEB 2.0	WEB 3.0
The mostly read only web	The widely read-write web	The portable personal web
Focused on companies	Focused on communities	Focused on the individuals
Home pages	Blogs	Life stream
Owning content	Sharing content	Consolidating dynamic content
HTML, Portals	XML, RSS	The semantic web
Web forms	Web applications	Widgets, drag and drop mash ups
Directories(taxonomy)	Tagging(folksonomy)	User behavior(meonomy)
Page views	Cost per click	User engagement
Netscape	Google	iGoogle, Net Vibes

Advantages and Disadvantages of Web 3.0:

The biggest web advantages of web 3.0 is that we can access our data from anywhere in the world where our data is kept this is possible by many cloud applications and smart phones. It is capable of understanding human language so it is both human readable and machine readable. Exclusive content will be given more priority.

Advantages : Knowledge sharing is made easier. Increased information linking. More relevant search results. More efficient searching. Cost saving. Flexibility and innovation. More efficient web browsing. Increased communication. Working on the Internet becomes easier because the Internet is more personalized.

Disadvantages : Less advanced computers won't be able to handle it. Technology is not entirely ready for it yet. A lot of money has been spent by the government on research for it. It is very complicated. Easier to find personal/private information. People will spend more time than ever on the internet. Less anonymity. Reputation management will become more important than ever.

Web 3.0: main features:

Semantic Web: The next evolution of the Web involves the Semantic Web. The semantic web improves web technologies in order to generate, share and connect content through search and analysis based on the ability to understand the meaning of words, rather than on keywords or numbers.

Artificial Intelligence: Combining this capability with natural language processing, in Web 3.0, computers can understand information like humans in order to provide faster and more relevant results. They become more intelligent to satisfy the needs of users.

3D Graphics: The three dimensional design is being used extensively in websites and services in Web 3.0. Museum guides, computer games, ecommerce, geospatial contexts, etc. are all examples that use 3D graphics.

Connectivity: With Web 3.0, information is more connected thanks to semantic metadata. As a result, the user experience evolves to another level of connectivity that leverages all the available information.

Ubiquity: Content is accessible by multiple applications, every device is connected to the web, the services can be used everywhere. Web 3.0 is being referred to by experts as the semantic web; semantic meaning data driven. The data will come from the user and the web will essentially adjust to meet the needs of the user. For example, if you do a lot of searching for ‘design blogs’, you’ll receive more advertisements related to design. Also, when you search for other things, for example, ‘computers’, the web will keep in mind that you often search for design and may pull up search queries that combine ‘design’ and ‘computers’.

Benefits of Web 3.0: A huge benefit of Web 3.0 is the move towards being able to access data from anywhere. This is mainly being driven by the heavy usage of smart phones and cloud applications. The idea here is to make sure that the user can access as much data as possible from anywhere, not just their home. Technology is trying to expand this idea in ways that allow TV's to pick up on user data, and allowing smart phones to access data on your computer. For designers like myself who typically forget their jump drives, this is an amazing and useful advancement!

Web 3.0's Effect on Design: So now that you have an idea of what Web 3.0 is and what it's going to be, we have to ask the most important question for us: what does that mean for design? Web 2.0 design was based around drawing attention and persuading your audience, because after all, web 2.0 made a huge deal about being able to purchase things online. Web 2.0 wanted to generate excitement and get people to make a purchase and understand what they were doing. You want to make a purchase? Sure, then click this button. You want to join the mailing list? Great, then there's no question about clicking this button. That is the basis of Web 2.0 design. Other elements were added to make things more fun and give a bit of style. The usage of linear gradients in web 2.0 is almost necessary. Whatever color combination you desire, linear gradients are typically present from your background to your buttons. Other trends surfaced like various badges, rounded corners and a necessary usage of icons. But again the question remains, what can we expect for web 3.0?

Web 2.0 Design vs. Web 3.0 Design: In web 2.0 we had to create design that was great for the web. I think in web 3.0, we will firstly have to create design that is going to be good not just for the web and the web browser, but for all sorts of media. With the growth in the usage of smart phones and tablets, people want more usage out of their items and to be able to access more things as best as possible. Design will have to be able to translate in great quality across all sorts of technologies

Web 3.0 Design Trends: Using these types of techniques plays into the increasing popularity of the minimalist design technique, where the focus is not necessarily making something as simple as possible, but making it as simplistic as possible. Creating a site with non-flashy web elements makes the user HAVE to focus on the content of the site. Of course designers desire to design and will 'fancily' some things, but in Web 3.0, that isn't the main focus. The focus is to draw the viewers' eye to the content or other important information on the page. Many of the design trends used in Web 2.0 will only change by way of design, but not really the usage. The change in Web 2.0 to Web 3.0 is about how the internet is used, not really how it's seen (with the exception of mobile devices and such). I believe designs will continue to get more and more minimalistic while maintaining a certain sense of beauty, but of course we will continue to use buttons and rounded corners and gradients. The design of Web 3.0 will be based on the way designers decide to design it and what becomes popular.

Application of Web 3.0 Technology for Libraries: Web 3.0 is a term used to describe the future of the World Wide Web. Some pioneers believe that emerging technologies such as the Semantic Web will transform the way the web is used, and lead to new possibilities in artificial intelligence based applications. Other visionaries suggest that increase in internet connection speeds, modular web applications, or advances in computer graphics will play the key role in the evolution of the new version of World Wide Web.

Conclusions: We are living in an interesting time in history, where the Web begins to bring more knowledge and action capacity for its users, resulting in considerable changes in several aspects of daily life. This new Web is moving fast towards a more dynamic environment, where the democratization of the capacity of action and knowledge can speed up all areas. For centuries, social and technological changes have been affecting every profession. During last two decades rapid technological development has affected library services as well. At the beginning Web 1.0 and web 2.0 are simple application of Internet, while Web 3.0 tools are increasingly being adopted by libraries to connect with patrons and announcing library news/events, online reference services, training resources, blogging, image & video sharing with users. Web 3.0 transforming web to 3D Web, the semantic web and the real world web which will play future role for providing the library and information services.

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WEB 3.0 IN LIBRARY

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Abstract

This paper aims to discuss the concept of web 3.0, and possibilities to use these tools and technologies in library and Information Science. The internet has changed the way we think of information and technology. The web of documents has morphed into a web of data. The semantic wave embraces three stages of internet growth. The first stage, Web 1.0, was used as a Read only medium. Web 2.0 started as Read and Write medium. Now the current version of web i.e. Web 3.0 is the semantic web which allow the users to Read, Write and Execute web. This paper briefs upon Web 3.0 and also its application in library and information science which is known as Library 3.0. the Semantic Web and their application to enhanced library services.

Keywords: Web 1.0, Web 2.0, Library 3.0, Semantic Web,

INTRODUCTION: The world of information Technology is undergoing rapid changes in the history of civilization. With the big advance in technology and the growth of the amount of content on internet, it has become difficult for users to find and utilize information and for content providers to classify and catalogue documents. Now-a-days there can be communication and interaction between machines, computers and devices over the internet using a software system known as Web Service. So for communicating and interfacing, we use Application Programming Interface, that is, rules and specifications to be followed by the software system. YouTube, Flickr, Facebook, Twitter are the examples of Web 2.0 social networking websites that provide a service for searching, sharing and connecting with people and communities. Combining the features of Web 2.0, semantic web and other web services, Web 3.0 will dominate the existing web services.

Web 3.0: Web 3.0 is a web where the concept of website or webpage disappears, where data is not owned but instead shared, where services show different views for the same web/ the same data. Those services have to be focused on content and personalization, and both will be reached by using vertical search. Web 3.0 is the next evolution of the internet. Some hypothesize that Web 3.0 will combine the best bits of both Web 1.0 and WEB 2.0 but will be a more user focused , personalized, intelligent, controlled or semantic web experience. Furthermore the web is set to become more mobile too, as demonstrated through recent trends in the marketplace whereby smart phones and the iPhones are improving the web experience for those accessing through a mobile phone.

DEFINITIONS OF WEB 3.0: The term Web 3.0 was first coined by John markoff of the New York Times in 2006 and first appeared significantly in early 2006 in a Blog article “Critical of Web 2.0 and associated technologies such as Ajax ” written by Jeffrey Zeldman. There is complete agreement among the experts about how Web 3.0 will evolve. According to **Nova Spivack**, the Chief Executive officer at Radar Networks, “Web 3.0 is a set of standards that turns the web into a big database.” While **Steve spadling** defines Web 3.0 as “highly specialized information silos, moderated by a cult of personality, validated by the community, and put into content with the inclusion of met-data through widgets.” **Conrad Wolfram** stated “Web 3.0 is where the computer is generating new information, rather humans” **Eric Schmidt**, Google’s CEO, stated about 3.0 “Web 3.0 is a series of combined applications. The core software technology of Web 3.0 is artificial intelligence, which can intelligently learn and understand semantics. Therefore, the application of Web 3.0 technology enables the internet to be more personalized, accurate and intelligent.”

FEATURES OF WEB 3.0: Web 3.0 or semantic web is an extension of the current web in which information is given well-defined meaning, better enabling computers and people to work in cooperation. The word ‘stands for ‘the meaning of’, and therefore the semantic web is one that is able to describe things in a way that computers can better understand. The basic features of Web 3.0 are as below:

Intelligence: The most promising feature of Web 3.0 will be Web with intelligence i.e. intelligent web. Applications will work intelligently with the use of human-computer interaction and intelligence. An application based on Web 3.0 can directly do intelligent analysis, and then optimal output would be possible, even without much intervention of the user. Documents in different languages can be intelligently translated into other languages in Web3.0 era. Web 3.0 should enable us to work through natural languages. Therefore, users can use their native language for communication with the others around the world.

Interoperability: In the context of Web 3.0, the terms interoperability, collaboration and reusability are basically interrelated. Interoperability implies reuse, which is again a form of collaboration. Web 3.0 will provide a communicative medium for knowledge and information exchange. When a person or a software programme produces information on the web and this information is used by another, then the creation of new form of information or knowledge takes place. Web 3.0 applications would be easy to customize and they can independently work on different kinds of devices. An application based on Web 3.0 would be able to run on many type of Computers, Microwave devices, Hand-held devices, Mobiles TV’s, automobiles and many others.

Personalization: Another feature of Web 3.0 era is Personalization. Personal or individual preferences would be considered during different activities such as information processing, search, formation of personalized portal on the web. Semantic Web would be the core technology for personalization in Web 3.0.

Virtualization: Web 3.0 would be a web with high speed internet bandwidths and high end 3D Graphics, which can better be utilized for virtualization. The trend for future web refers to the creation of virtual 3-Dimensional environments. An example of the most popular 3-D web application of Web 3.0 is Second Life.

TECHNOLOGY USED IN WEB 3.0: In Web 3.0 search engines will hopefully retrieve micro content texts which were tagged automatically. This implies translating billions of Web 1.0 macro contents into micro contents. The result could be more precise search because tagging can solve part of the ambiguity that homonyms and synonyms introduce into the process of search. The term Web 3.0 is used to describe various evolutions of Web usage and interaction among several paths. These include transforming the web into a database, a move towards making content accessible by multiple non-browser applications, the leveraging of artificial intelligence technologies, the semantic web, the Geospatial Web or the 3D web

APPLICATION OF WEB 3.0: Web 3.0 is a term used to describe the future of the World Wide Web. Some pioneers believe that emerging technologies such as the Semantic Web will transform the way the web is used, and lead to new possibilities in artificial intelligence based applications. Other visionaries suggest that increase in internet connection speeds, modular web applications, or advances in computer graphics will play the key role in the evolution of the new version of World Wide Web. Some of the applications of Web 3.0 will look like as follows:

Personal Desktop and Web spaces: It will allow bookmarking and tagging which will be browser independent. By just logging into your account it will offer space of 5 GB or more i.e. virtual directory for personal browser data or other private data anywhere in this world.

Remote Control: You can control your PC from distance about 1000 miles or ever more by just using internet. It is just like windows remote desktop control.

Mobile Web: Internet is not just limited to computers but to your mobiles. It will be operating system independent i.e. we will be able to use applications of Android, Blackberry, Apple, iPad, OVI, windows etc. simultaneously and will support Gigabytes of bandwidths.

Surface PC: It will support Personal Computers, Laptops, touch screen PC's and Surface PC's. Personal computers interact with the users through monitor and keyboard whereas Surface PC will interact through the surface of any object.

Internet Radio: This will be the audio streaming major in Web 3.0 with having digital quality sound and playing thousands of radio stations.

E-Learning: Improvements can be brought in teaching-learning process using online learning, its resources and innovative pedagogy.

In recent time, there is a dramatically changes in the library and information service due to technical changes in computing, communication and collection. At the same time the librarians also striving to cope with these changes to meet their user's needs. Already many libraries have made encouraging advances in their electronic offerings by providing access to top quality databases, downloadable audio books and music, and instant messaging reference services.

Currently libraries have a tendency to plan, implement and forbid the outdated service culture. Library 2.0 and Library 3.0 attempt to change this regularly soliciting customer feedback and evaluating and updating services. Both new and existing library services should be revisited routinely to ensure that they are still meeting expected goals. Even older or traditional library services should be reviewed with a fresh eye to determine if any aspect needs updating.

Semantic Web : Semantic web will provide us with the option to share, unite, search and organize the web information in easy manner. Sharing and organizing information available in every corner of the web, which is the main aim of this generation and expected to be achieved with the help of semantic web technologies. Semantic web requires librarian and information professionals to not only move beyond the physical and virtual document, which has been the focus of much of their attention up until now. It also requires them to start thinking of interacting with the data on the web as a large information resource, rather than in individual data repositories.

Real World Web : Connection between the web and the real world are not only possible through the increased sophistication of mobile phones, but also platforms that enable real- time updates from world objects. Mobile phones with high processing power, high-specification cameras and GPS receivers, offer a new way to provide information services. This can be a sophisticated augmented reality, overlaying a real image of the world with additional information from the web. A way to provide information services might be scanning simple 2D barcodes

Ontologies :The classification systems for book classification has been changed into ontologies to represent domain knowledge in machine process able form. These are the techniques to give riches semantic relationship between terms and thoughts of knowledge. These give more standardization in managing the web contents instead of merely indexing the terms. Ontology aims at how the information is organized rather than organizing the information. Librarian can adopt various ontological techniques to define the web contents in more professional as well as personal manner.

Metadata :The Metadata is data about data. The Cataloguing codes have taken shape of Metadata Schema for the description of web resources. There is wide variety of metadata schemas available for different kind of digital resources.

CONCLUSION: The faster and meaningful information retrieval has been the driving aim for the information retrieval systems since the beginning of automated information retrieval. During the database information systems, Artificial intelligence, and other computer-aided retrieval systems have made a very optimistic start. In the Internet era, Semantic Web came as a model of semantic retrieval in the web environment. Traditional libraries are in a stage of transition towards making the library without boundary with global access with Internet. Applications of mash up technologies will give us the virtual world of information in which web will be strengthen with more computing and analyzing powers through artificial intelligence. In Web 3.0 all created profiles and browsing history of an individual put together, on basis of analyzing the contents, computer will come out with the result needed by that particular individual. Web 3.0 stet up the linking between data, various devices to exchange, analyze and find the data and finally establishes the linking between all users of web.

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WEB BASED LIBRARY AND INFORMATION SERVICES IN ACADEMIC LIBRARIES**Mr. Sachin uday Wagh**, Librarian, S.G. Patil Arts, Science and Commerce College, Sakri (Dhule)**Abstract**

Library is as old as man himself. Library is place collects, organises provides and maintains documents for a particular type of users depending upon its function, it may be called public library, Academic Library. The function of a public library is mainly meet the cultural and recreational needs of the society, public is its users. While the function of Academic Library is mainly to meet the educational and research needs of the teachers and students of an academic Institution. In such libraries service is based on demand and initiative of the user. To offer rapid and technological based services to users academic library has to include we based services in their best practices.

Keywords: Introduction, Library and Information Services, Web, web based services web based library Services in academic libraries

Introduction : Technology change severything. With the ability to digitise any form of information, boundaries between the various forms of surveillance are disappearing. Information technology is an enormously powerful tool. It has the capacity to record vast amount of data which might previously have been held only in some memory, to process it in ways which would previously have been impracticable to transmit and share information with other information technology systems and networks on a worldwide basis to retain the information for a potentially unlimited period of time. Information is a great phenomenon which has lead education to research activity. The College library being the keystone in the college ARCH. The users of college library are teaching faculty, students and non teaching staff who want information timely as per their need. Itsa challenge for we librarian, to save the time of the users, updated and rapid information should provide with new technological environment. The main purpose of academic library is to support education and research. Libraries are mainly entrusted with a host of predetermined tasks like acquiring, Organizing, preserving, retrieving and disseminating information to the users. Right from ancient times to the present digital era, the primary objective of library has always been to achieve this goal. There is a need to use information accurately, precisely and systematically. Traditional methods of library and information services have changed greatly in recent years because of the development and application of new technology, especially the internet and web technologies. So libraries must strive to provide the right information to right clientele at right time .The demand and expectation of users has also changed considerably. In this changed scenario, services in libraries are more personalized, more interactive and more collaborative web-based services such as web OPAC, library blogs, e-resources, institutional repository etc.Web is a complement to traditional library service. The inherentThe web was designed as an information space with the goal that it should be useful not only for human –human communication but also those machines would be able to participate and help. One of the major obstacles this has been the fact that most information on the web is designed for human consumption and even if it was derived from a database with well defined meanings for its columns that the structure of the data is not evident to a robot browsing the web. As the Internet grows ever larger the sheer quantity of textual information continually increases basic text in ASCII, HTML, PDF probably makes up the bulk of the information that we add animation of Two D. And Three D. Facilities. Before going to discuss web based library and information service, it is essential to know what are the library services and web. Library and Information Services: Library services refer to facilities, which are provided by a library for the use of books and dissemination of information for the need and meet user’s requirement. The wel known existing library services are cataloguing, classification Circulation services, Inter Library Loan services, Reference service, referral service reservation, renewal, new arrival, current contents, current awareness service, selective dissemination of information, indexing abstracting ,document delivery service, externally purchased databases, CD ROM databases, internally published newsletter, reports and journals forthcoming meetings announcement, bibliographic service, newspaper clipping service, public relations and user’s orientation service etc.. All these services have changed its mode to an extent with web.

Web: Web is popularly used as the synonymous terms of world wide web or Internet/ online. The Internet and its publishing arm “the www. Are important components in the communication process. The web is a client or server system used to access all kinds of information to anyone on the net. The information can be in the form of regular text, hypertext, pictures, sounds, Usenet, newsgroups and other types of data. To access this information, use client programme called browser. Within the web the information is stored in web pages. Each page can hold not only information but links to other pages. Background of Web Based Library Services:Nowadays, library services have changed its mode to an extent with web or various Internet tools (web 2.0 web 3.00 technology) environment. On the other hand we can say that Web based library services means library services offered using Internet as medium and library websites as agateway with the help of integrate library management system software. Web based library services such as online databases. E-books, e-journals, virtual library of links to other useful resources. According to White (2001) It can be defined broadly as an information

access service in which user ask question via electronic plat form, means email o web forms. In past, library was just a store house of books and other document. Common persons were not allow but used that documents only aristocratic family members were allow.It means that document delivery service exist that period. In 19 thcentury there were drastic change of library services at that time numbers leading library services came in to picture.ICT application in library and information field has changed the traditional role of library and librarian. It converts library service into information service and new form of offline service came into picture. Last one decade of 20 th century it was started to provide Online service. We peep into history of web based services in library we come to know that it was 1960s developed countries begun to experiment with the use of computer in library and information processing activities./mainly, these systems were batch oriented and used punched cards a data input media. It was H.P. Luhn of I.B.H. U.S.A. during 1950s initiated computer based SDI, CAS and indexing services. Library of Medicine launched MEDLARS service in 1963 which was the first large scale system made available to the general public without any restriction. Even today, it is one of the most widely used services in the world. It became online during 1970 under the name MEDLINE. In the same way The American Chemical Society started the chemical abstract service in 1907, which then became online service in 1967. There were revolutionary change in library co-operation and resource sharing as a result several library network like OCLC came into existence. The online Computer Library Centre established in 1963. Which then became the pace-setter for many such library networks? In UK the British library offers an online information retrieval services with several databases called BLAISE (British Library Automated Information Service) There are also over 140 computer based International information systems in various disciplines and missions established on co-operating basis 36 UN organization and agencies within the conceptual framework of UNISIST many of them offering on-line information retrieval service also for e.g. INIS, AGRIS, GEMS. POPINS, INPADOC etc. From 1980s the provision of packaged hardware and software system has come in to practice and also gained popularity for information storage and retrieval process and reference network of the libraries and bibliographical information centre. Gradually, we come to diminishes delay of user demand of documents and its delivery. To save the time of the user, fifth law of library science we based library services assist as powerful tools for our librarians.Following, Advantages of Web based library Services for College Library To save the time of the faculty members and students To do rapidly and Proper Library functions and also provide best service with least staff. Less Dependence upon the library staff for required information by user. Make available library service in various department of college campus Cut in college library budget.Access to Databases : Several publishes today offer web based intranet solutions for providing local access to their databases example include silver platter Cambridge scientific Abstract and institute for scientific information. Journal publishes have also begun to offer similar situations i.eg ELSEVIER for electronic version of their journals.N-LIST National Library Infrastructure for scholarly Content is the best option for access to world class standard databases, for registered colleges under 12 F 2 B UGC Act .Bibliographic and Cataloguing Services: This service can be prepared from different databases available on the Web. F.eg. in physics the LOS ALAMOS e print archives is more productive means of communication o astrophysics, quantum physics considered matter theory etc. Current Awareness Service : A College Library can provide CAS service through email which is easiest and common procedure providing current awareness to literature, providing links of preparation of current list of references. F.eg. Bibliotech review this site provide recent information on global development of library automation industry scholarly articles research alerting provides table of contents of any of its 200 academic journals. Frequently AskedQuestions: This service is as helping desk where spontaneously asked his question without hesitate and obtain answered co-related topics. There are thousands of FAQs on the world wide web ASK ERIC is an Internet questions answering services run by CRIC clearing house on information and technology a Syracuse university New York since it began in 1994 it has answered more than 2 million education related questions from around the world.

Conclusion: Web based library and information services are essential for our users in college. The transfer of library services to the web based environment helps the users to find, evaluate, and use information effectively. The libraries hold the hands of the users who are moving towards new communication paradigm a shift from face to face human contact to human machine interaction, from paper to electronic delivery, from text centred mode to multimedia and from physical presence to virtual presence. The study would understand the web based information services in the college library, its benefits to users and problems while accessing it. As the outcome of the study it would propose measures for the improvement of web based information services in our college library.

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Abstract

Now a day's technical service are the backbone of academic libraries. Web based services are one of them. Users are taking full advantages of web facilities which is provide through the library. Academic libraries are also changing their role from the custodian of traditional information resources to the provider. This paper discusses the importance of web based library services, its advantages, future and challenges.

Keywords: Web-Based Services

Introduction: We live in an age where various information is a valuable resource. Information is needed to plan and execute about all type of human activities at local, regional, national and international level. So the well-developed academic libraries are needed for human being, because all social organizations need various information to solve their problems. Developed libraries are helps touser's development with the help of modern technical services. Web based services is one of the best services for scientist and students. Web is popularly used as the synonymous term of World Wide Web. The web is a client or server system used to access all types of information on the net. The information is in the form of sound, picture, text, hypertext etc.

Need of Web Based Library Services: Unavailability of sufficient trained staff; it is major problems in academic libraries. Library work and services is depending upon the library staff. So using new technology or web based services is the solution. Space for new arrivals, Cost of books and periodicals subscription, time saving is also a headache for librarian , so to give web based library services to users through new technology is the answers. Some common and general services offered by the web e.g. Subject database, library catalogue, Community information, document delivery, bulletin board, e-mail and surfing from the services. Some of them we can apply in the library, but most of them we don't use as a library services.

Web based services: Following are the web based services which is commonly used in the academic libraries. Access to Database, Cataloguing service, Bulletin board service, Push based service (CAS,E-SDI and profit based service), Acquisition list, E-mail delivery, Newsletter services, Document delivery services, OPAC, Reference service, Usenet, Internet subject gateways, Web casting Virtual library.

Future of Web Based Services: Library Web services will continue to change its policy offering, more full text electronic journals , link to other resources etc. OCLCs electronic collections online may mature as such a service, better bibliographic access to full text periodicals through cataloging, database or vendors aggregate access. Saving on interlibrary loan and user convenience are incentives, electronic reserves, either locally or through vendors who simplify copyright issues, more web form for user feedback and perhaps a virtual librarian who interacts in real time chat or video conferencing. While there is nothing like a simple phone call, the virtual librarian would not have to be in the library. Well-developed user education modules or tutorials, especially to support independent exploration of library and web resources. Library web authors are getting more sophisticated and able to take advantage of appropriate technologies and software. Most document delivery services to distance education or commuter students.

Challenges: Those libraries wants to provide web based library services should have technical infrastructure and librarian should take one more step further instead of just providing access to the internet. He or she should take the responsibility of evaluating the web resource for providing effective. The librarian should have also depth knowledge about technical resources or web resources and the various search engines, which will give the real power to the reference librarian to answer the problems. It is most important that, the librarian should create a web directory of the inter resources so that it can be used or referred to by a user whenever it is needed for providing the services.

Conclusion: Web based library services are highly effective in academic libraries .Lack of well trained library staff is big problem. So we want to arrange the training camp for library staff and users. Though we are thinking a lot but practically it is difficult to apply. Many institutes do not have well infrastructure to implement web based library services. Government policy of restricted employment opportunity compelled not to take professional manpower as many as required. Many networking system simply failed due to the lack of good will, effort and other problem of academic libraries. But we still hope we well able to overcome this entire problem and provide well web based library services.

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WEB OPAC: A REMOTELY ACCESS TOOL

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Abstract

Web OPAC feature is providing enhanced facility for easy to search and locate any article, catalog, book or any material held by your single or group of libraries. Web OPAC supported with most advanced search technology and allows you quick and timeless results of your search for article. It has adopted best information retrieval principal and supported with most powerful search engine facility. It has great features in terms of relevant ranking, faceted search, enriched user interface, tagging and reviews. Web OPAC is competent to support consortium of libraries to provide seamless integration of integrated online public access.

Keyword: OPAC Web OPAC, Remotely access tool.

Introduction: Information technology changed the entire environment of the library including resources, techniques, services, etc. OPAC(Online Public Access Catalogue) changed the traditional card catalogue system. In the new system, data can be spread within computer and then the required entry can be retrieved immediately through OPAC system in any format. Now, user can search for information via OPAC and most recently, the internet. Keyword searching and Boolean operators have made this feat even easier to find relevant information according to our needs. Library OPACs first emerged in the late 1970s and early 1980s and have gone through several cycles of change and development. The basic purpose of the OPAC is to create a database of library holdings which provides an online catalogue to help users to identify and find resources easily. In fact the OPAC was probably the inspiration for many of the cutting edge services we find on the Internet today. Online Public Access Catalogue (OPAC) is an electronic catalogue which contains complete bibliographic and holding information of all items in the library. The OPAC is the gateway to library's collection. Sabine defines, an OPAC as an electronic database that contains the same information: that is; author, title, and subject information about the materials that a library owns. Some OPACs are union catalogues meaning that several libraries share the same database. SIRSI: Glossary of Terms defines OPAC as a computer workstation used to search a library's catalog. OPAC can refer to either the actual workstation in the library, or to the interface provided by the library that is accessible from anywhere'. Another interesting definition found on the Internet says that 'OPAC is an online bibliography of a library collection that is available to the public.

OPAC Generation: OPAC stages are most often described in terms of 'generations'. The first generation of OPAC appeared in the early 1980s as crude finding lists, often based on circulation system records or based on simple MARC records, perhaps with a circulation, serials, or acquisition module. Based on card catalogue and early online information retrieval system, their searching capabilities were limited to author and 4 title searches, using only left anchored searching (i.e., all searches must be based on the first word or words of a particular text string starting at the left; for example, in left anchored searching the title "organization of information" must be searched starting with the word "organization" and cannot be found under "information"). The interface was menu based and fairly primitive. These early systems had no subject access and no reference structures.¹

First Generation OPAC: First generation OPACs were little more than poor imitations of print retrieval tools. Some systems were programmed to respond to commands in which a code (e.g. "a" for author, "t" for title, etc.) was to be followed by an exact string of characters that would be matched against the system's internal index. In some others, derived key searching was supported (i.e., taking parts of names and/or titles to create a search string). In many early systems, the display of results was by the "last in, first out" principle (i.e., the last records entered into the system were those listed first in the display). These first generation systems were highly intolerant of user mistakes. **Second Generation OPAC:** The second generation OPACs in the late 1980s showed major improvements. This generation was marked by significantly improved user interfaces. Keyword searching, with its use of Boolean operators was introduced, thus increasing the number of access points available for searching. This meant that searches were no longer required to be exact word or phrase, left-anchored searches; words could now be matched, even if they were in the middle of a text string. Also greatly enhancing the searching process were truncation and wild card support, browsing capabilities (including index term browsing), use of full MARC records, interactive search refinement, and subject access to items. Second generation OPACs also provided greater manipulation of search results and provided better help systems with more informative error messages (although there is still a lot of work to be done in this 5 area). Up to second generation of OPACs, the characteristics distinguishing each generation are fairly clear. As we move beyond the second generation, however, there are differences in how the profession refers to the more recent developments in OPACs. Some consider the systems that are currently in use (Web OPACs with GUI interfaces, Z39.50 compliant system, etc.) to be third-generation OPACs. Others describe the third generation as catalogues that are still in experimental stages. **Third Generation:** They move beyond simple matching and Boolean Operations towards more sophisticated search and matching techniques. It incorporates a number of techniques to improve subject access. Partial matching, stemming of keywords, ranking of retrieved output, coordination level

matching, automatic mapping and relevance feedback are techniques developed through two decades of research on OPACs and these carry great implications to the third generation OPAC

Web OPAC: Web OPAC is a library catalogue, it is an OPAC, which is provided on the web and with the help of internet anybody can access it even from remote quarters. According to Washington University in St. Louis, "A Web OPAC uses the World Wide Web protocol to act as an OPAC" According to ODLIS, "An Online Public Access Catalogue (OPAC) uses a graphical user interface (GUI) accessible via the World Wide Web, as opposed to a text based interface accessible via telnet" It is a program designed separately from the library program. It is programmed to facilitate members to access the library catalogue, through Internet, for the ease of borrowing, instead of searching through the card catalogue and provides direct access to a library's bibliographic database. It has the ability to use hypertext.² Library Web OPAC not only provide the browsing facility through Internet, but also provides the many unique services to library users. Through web OPAC users can, check our library outstanding transaction, users can reserve the books through web OPAC, and faculty members can recommend the books or any reading materials through Web OPAC..

Feature of Web OPAC It is accessible through internet. It is possible to search independently under categories of Author, Keyword, Title or Year. Displays complete bibliographic information as appearing on reprints. Graphical User Interface (GUI), which is typically thought of as a combination of windows with pull-down or drop-down menus, icons and a pointing devices such as trackball to manipulate information. Information available through one interface. e.g. catalogues, CD-ROMS, Internet sources.³

Customizing the Web-OPAC: A standard or "Out of the Box" series of web pages comes installed with an integrated library system. Libraries customized the web-OPAC pages, incorporating local design, images and content. After system installation ongoing maintenance of the web-OPAC is libraries responsibility. A web-OPAC has two types of HTML pages, Static and dynamic. Static pages are informational pages whose content changes only when the Library edit them. The opening web-page offering catalog search option. It includes link to local related information, such as new books and videos. By contrast, because the content of the each search varies, web-OPAC search result are dynamic, when the library system delivered a search result it create a new web-page each time, using a combination of system formatting and display options set by the library. The format of the search result is the same, but their content changes dynamically. If a search where for title containing HTML the resulting content would be different and the catalog would generate a new page.⁴

How to Install and Run Web OPAC: The software provides "Web OPAC" – a web based search interface to access the library catalogs over Internet/Intranet. The Web OPAC is a useful tool to publish the library catalog to be accessed and search the library catalogs as well as to provide the member-specific information like books overdue, recent arrivals, etc. In case your PC is on LAN then WebOPAC interface may be available from any computer in the organization and thus user will be able to search the library catalog from his/her desktop. The Web OPAC is a "Server-Based" component and must be installed in Server PC, generally in the same PC where your database is residing.

Advantages of Web OPAC

The following are the advantages of the Web OPAC: It is worldwide and all the time accessible. The status of any book may be known as to whether a book is issued or not, lost/transferred, etc. The status of an acquisition order may be available at both Staff and public terminals located throughout the library. It is possible for users to send reprint requests immediately by e-mail. Compilation of various lists of reprints becomes very easy.

Limitations of web-OPAC: Despite the increasing use of OPACs nowadays, there are many limitations of OPACs. These are listed below.⁶ Do not make available adequate help in the conversion of the inquiry terms into the terms used in the catalogue. Do not make available online vocabulary aids helpful for subject focusing/identifying Vocabulary that broader or narrower than the idea of search. Do not automatically help the user by providing substitute formulation of the fails. Do not guide the search from successful free wording search terms (e.g. title words) to the related subject headings or call numbers assigned to a broader range or linked resources. Do not give adequate information in the retrieved bibliographic records (e.g. table of Contents, abstracts and book reviews) to allow the user to judge the utility of the documents. between records in the database to retrieve resources linked to those already found

Conclusion: Web OPAC is an interactive search module of an automated library management system. Any record is searched directly from a node within a database of the organization or remotely through national and international networks. Thus finally we see that a lot of cataloguing work due to availability of various Web OPACs is reduced. Web OPACs improve the quality, speed and performance of the services offered by the libraries.

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SPJ COLLEGE LIBRARY WEBPAGE/PORTAL AS A NEW PLATFORM FOR LIBRARY SERVICES: AWARENESS & USABILITY STUDY

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Abstract

Due to rapid advancement in ICT the internet has become an inseparable part of today's higher educational system. There is an enormous range of available information in the world. Most Library users want information regardless of where they find it. They don't want to be limit themselves to their library collection. A portal offers them one stop solutions that takes them from the initial need for information through its delivery without using several different tools. So many libraries have created a presence on the Web by creating webpage/portal. This paper has tried to focus on various issues related to the library webpage, Awareness & usability study of SPJ library's homepage is presented. It discusses how SPJ Library has taken challenges of the new emerging technologies and increasing demands of its users by creating & adopting Library webpage/portal services and how it generates value added electronic information for its users. The article summarizes the results highlighting the major findings, suggestions and conclusion.

Keywords: Portal, Library Services, Library Webpage, Library Homepage, Electronic Resources

1.1 Introduction: Library Webpage services are considered a vital part of academic college services in the 21st century. It has tremendously changed the way of seeking information towards electronic resources and services. The study helps in planning, developing and extending the Library Webpage Services to academic Colleges. Library Webpage /portals are a single user interface for accessing wide variety of electronic resources, both within and outside the library. The joint Information System Committee defines a portal as a network service that brings together content from diverse distributed resources using technologies such as cross searching ,harvesting and altering and collates this in to an amalgamated form for presentation via a web browser to the user”.

Importance of Library Webpage: The Importance of Library Webpage is depends up of type of library. My own context is a academic library, so the mission of library's homepage is provides library service to teachers/students/Visitors etc of the Institutions for their information needs. The research library's homepage can support research in higher education through providing access to Internet research tools and full text databases, e-resources etc. It can support user's information requirement through online full text, Online journals, e-archive, and other means as OPAC etc.

1.1 Role of Librarian for library homepage: Librarians seeking to apply their traditional role of selection, organization, and dissemination to the Web environment. Selection of information resources can be reflected on the homepage through creating links to other relevant sites as well as creating links to full text electronic resources. It is in some ways more challenging, given the changing nature of Web resources. Providing access to information can be reflected on the Web through the following: internal search engines, online reference service, stable links to other Internet sites, access to the online catalog and other databases, basic information about the library (hours, staff, collections, etc.), and timely updates. Perhaps the most important of these is access to the online catalog of the library's local collection.

1.2 Literature Review: Here, an attempt has been made to cover a number of related works and highlight briefly the studies relevant to the present work. According to Garden M ,Library portals play very important role and libraries need to be at centre of enterprise portal for information services. Cox Andrew, explains in his article about choosing a library portal system its importance and role of librarian. Gowda, Basappa and Shivalingaiah, explains by portal servicemore students and teachers use e-journals .The Use of Information Resources by the Researchers in the University Libraries in imperceptibly become their important channel to obtain information.

1.3 Objectives of the study: The present study is an attempt of Library Webpage/Portal as a New Platform for Library services used by the faculty and students of the S P Jain Arts & Commerce College, Pabal .

The study was conducted with the following objectives: 1. To know the awareness of Library Webpage/Portal among users.2. To find the frequency and place of access to Library Webpage/Portal Services.3.To identify the most preferred Library Webpage/Portal Services.4. To understand the purpose for which they access Library Webpage/Portal Services. 5. To find out the problems faced by user while accessing the Library Webpage/Portal Services. 6. To find out the level of satisfaction about the information resources retrieved through Library Webpage/Portal Services.

1.4 Scope and Limitations: The scope of the present study is limited to study of use and awareness of Library Webpage/Portal Servicesby the student and faculty of SP Jain College, Pabal.

About Shri Padmamani Jain Arts & Commerce College & Its Library Webpage/Portal:

ShikshanPrasarakMandal, Pabal's-Shri Padmamani Jain Arts & Commerce College is one of the premier colleges in Rural Pune district. The College was established on year 2000 & Affiliated to Savitribai Phule Pune University and accredited by National Accreditation & Assessment Council (NAAC) WITH B+ Grade in First

Cycle. College has more than six Hundred students, 17 faculty members, eight subject branches, PG centers and good infrastructure. There is a common library for both the courses which is fully equipped with the latest technology to render effective library and information services to its users. College Library is the central library of the college. The library has collections of more than six thousand books, CDs/DVDs, 24 print journals, 200 bound volumes of journals, Nlist-Inflibnet subscribed online databases.

1.5 Methodology: The survey method was adopted, using questionnaire as a tool for data collection. A structured questionnaire was designed and distributed to library member i.e. faculty and students of the S P Jain Arts & Commerce College, Pabal. Out of 150 questionnaires distributed randomly among faculty and students 136(90.66%) filled in questionnaires were received back and they are using Library portal Services. In addition to questionnaire method, interview schedule and observation method were also used to collect required information as a supplement to the questionnaire method to bring more clarity to the data which are essential and use for analysis and interpretation of data.

2. Data Analysis The data collected were analyzed and interpreted and same are presented in the following tables. **2.1**The Demographic characteristics of the study population relating to designation and gender have been summarized in the Table-1. The table-1 depicts that out of 136 respondents 12(8.8%) are faculty members and 124 (91.17%) are students.**Table 1: Demographic characteristics of the study population**

	Number	Percentage (%)
Faculty	12	8.8
Students	124	91.17
Gender		
Male	53	38.97
female	83	61.03

The gender-wise breakup of the faculty and students has been shown in second part of the table1. It is seen from the table-1 that Out of 136 faculty and students, 53(38.97%) of faculty and students are male and 83 (61.03%) are female.

2.2 Awareness of Library Portal/webpage: Table 2 Ashows that 10(83%) Faculty members were aware of and 2(17 %) of Faculty members were not aware of Library webpage/Portal & its services. Similarly Among the students 94(89.28 %) were aware of Library webpage/Portal and 30(10.71%) were not aware.

Category of User	Yes	No	Total
Faculty	10 (83%)	02 (17 %)	12
students	94(89.28 %)	30(10.71%)	124
Total	104	32	136

Table 2B :Awareness of Library Webpage/Portal Services: The below figure clearly show that 79(58%) responses are received from the user are Through Librarian & Library Staff they are aware of library webpage, where as 31(22.79%) Through Notice board & Brochure, 15(11.02%) students have said for the category through teachers and very minimum numbers of responses 11 (8.08%) are for the category through friends. **Table 2B:**

Awareness about Library Webpage	No . of respondents Total (N=136)
Through Librarian & Library Staff	79(58.08%)
Through Teachers	15(11.02%)
Through Notice board & Brochure	31(22.79%)
Through Friends	11(8.08%)

2.3. Frequency of use of Library webpage/Portal Services.

The Frequency of access to Library webpage/Portal Services among the faculty and students of SPJ Arts and Commerce College are indicated in the table-3. **Table 3: Frequency of use of Services & Frequency of Access Library webpage/Portal**

Total (N=136)

Every Day	27 (19.85%)
Weekly	65(47.79%)
Fortnightly	29 (21.32%)
Occasionally	15 (11.02%)

2.4. Place of access to Library webpage/Portal Services.

The place of access to Library webpage/Portal Services by the faculty and students of college has been shown in the form of table-4.

Table 4: Place of access to Library webpage/Portal Services.

Library	35 (25.75%)
Own Department	15 (11.02%)
College Computer Centre	37(27.20%)
Mobile	49(36.02)

2.5. Purpose of access to Library webpage/Portal Services. Table 5

Purpose	Percentage (%)
For research	11(8.08%)
For teaching	10(7.35%)
For writing assignments , projects/ practical, seminar presentation	115(84.55%)

The table 5 indicates that 115(84.55%) faculty and students of College uses Library webpage For writing assignments , projects/ practical, seminar presentation, for research 11(8.08%) & for teaching 10(7.35%).

2.6. Use of various types of Library webpage/Portal Services: The Use of various types of Services by the faculty and students of SPJ Arts and Commerce College has been summarized in the form of table-6.

webpage/Portal Services	Students(%) Total (N=136)
E-Journals-Nlist& open source	09(6.61%)
E-Books	11 (8.08%)
Syllabus	15(11.02%)
Old Question paper-Annual-University	16(11.76%)
Old Question paper-Term end college	20(14.70%)
College Magazine	09(6.61%)
Newspaper Clipping	15(11.02%)
Notices –College & Library	06(4.41%)
Library Information	5(3.67%)
Competitive exams details	6(4.41%)
Current Awareness service-CAS	4(2.94%)
Audio Books download and Licensing	7(5.14%)
Library OPAC	13(9.55%)

Table 6: Use of various types of Library webpage/Portal Services

The table-6 depicts that in case of 20 (14.70%) faculty and students use Old Question paper-Term end , followed by 16(11.76%) *Old Question paper-Annual-University*, 15(11.02%), syllabus 15(11.02%) Newspaper clipping ,Library OPAC(9.55%).

1.5 Findings

In the present study the authors have provided a useful summary of Library Webpage/portal Services by the faculty and students of SPJ Arts and Commerce College. The major findings of the study and suggestions to improve the access and usage have been summarized below:

1. About (83%) Faculty members were aware of Library Webpage Similarly Among the students 150(89.28 %) were aware of portal. also figure clearly show that 79(58%) responses are received from the user aware of library webpage Through Librarian & Library Staff. they are aware
2. About 65(47.79) % faculty and students access Library Webpage services weekly.
3. Personal mobile phone 49(36.02%) and College Library is the place from where the majority of 25.75 % faculty and students access to Library Webpage.

1.7 Suggestions

The infrastructure in the college computer centre should be further improved for providing better Library Webpage services. The Library and Information Centre should organize seminars, workshops and orientation programme for faculty and students for accessing Library Webpage Services at regular interval of time to keep them update with latest changes.

1.8 Conclusion : With the development in the area of Internet and information technology, more and more of the educational resources are being produced, distributed and accessed in the digital format & creating information overload for users. Users find difficult to locate the more appropriate database or resource to search for information relevant to their need. Even if they find the right resources, as each service trends to have its own unique interface, they may struggle to search it effectively. This fact underlines the need for making library web environment effective and useful. Hence portal play very important role by customizing information content to meet specific end user need. This study of awareness & Usability shows that webpage/portal of SPJ College Library created a New Platform for giving Library Services successfully.

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IMPACT OF WEB 3.0 IN LIBRARY SERVICES

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Abstract

The advancements in web technology has converted whole world into global village. The web of document has morphed into web of data. Initially, web 1.0 began as passive feature of read only medium. The came web 2.0 with its interactive medium for sharing information with the world. Now the current version of web i.e. web 3.0 .web 3.0allows users to Read, write and Execute. It is a semantic web technology which allows sharing and refusal of data through artificial intelligence. This paper discusses the concept of web3.0 and brief upon applications of web 3.0 technology in libraries. It also impact of web 3.0 on libraries to enhance the quality of library services.

Keywords:-web3.0, semantic web, evaluation, technology.

INTRODUCTION:- Libraries have the major responsibility of managing information resources enabling their users quick and convenient access to these resources and to provide variety of on –demand and in anticipation information services. For many people the brand “library “is associated with books and physical spaces. Our challenges therefore include how to put the library where our customer is, in social pace, and create opportunities for discourse with our content and for the development of new ideas, and continue to promote brand “library”.

DEFINITION:-WEB 3.0 –John Morkoff of the new York Time recently suggested naming this third generation of the web, “web 3.0”.This suggestion has led to quite a bit of debate within the industry. Those who are attached to the web 2.0 moniker have reacted by claiming that such a term is not warranted while others have responded positively to the term, nothing that there is indeed a characteristic difference between the coming new stage of the web and what web 2.0 has come to represent. WEB 3.0 is a simple term with a much more complicated meaning , which is why the simple question of “what is web 3.0 “ May get you dozens of different answers.

Evaluation from web1.0 to web 3.0:-The continuous evolution of the internet has opened unimaginable opportunities and challenges in web based education and learning . The traditional version of web i.e.web1.0started as a Read only medium, the currently evolving versionofweb,viz,web3.0is said to be a technologically advance medium which allows the users to Read/-write/-Execute and also allows the machines to carry out some of the thinking so far expected only from the human beings**On a comparative scale web 3.0 can very well analyzed on the basis of following characteristics:-**

Web 1.0	Web 2.0	Web 3.0
1996	2006	2016
The web	The social web	The semantic web
Tim Berners Lee	Tim O’ Rely	Sir Tim Berners Lee
Read only	Web Read & Write	Web Read, Write and Execute
Information Sharing	Information Interaction	Information Immersion
Millions of user	Billions of users	Trillion of users
Ecosystem	Participation	Understanding Itself
Connect Information	Connect People	Connect Knowledge
The Hypertext /CGI Web	The Community Web	The Semantic Web

Source<http://www.icmr.nic.in/-library-bull/-2013/-July-dec%202013.pdf>(ICMRLIBRARY volume10,3&4July-December 2013)

FEATURE OF WEB 3.0:- Intelligence:-Intelligence is the forthcoming potential feature of web 3.0 Different artificial intelligence base tools and techniques will work intelligently with the use of human computer interaction without much involvement of user. Web 3.0 application can directly do intelligent analysis . Web 3.0 will enable us to work through natural languages. Therefore in web 3.0 era, user will be able to translate documents into their native languages for communication with other users around the world.

Virtualization:- creation of virtual 3 Dimensional environments with high speed internet bandwidth is the main feature of web 3.0 era. In feature, high end 3D graphics will be used by the user for virtualization. ‘Second Life’ is the popular 3D web application in web 3.0 environment.

Personalization:- As web 2.0 was characterized as user collaboration,web3.0 is mainly characterized with personalization . In web 3.0 environment user individual/ personal preferences will be given more importance during sever al activities such as information processing, search ,formation of personalized portal on the web. The core technology for this would be semantic web

Interoperability :- In web 2.0 era, the term collaboration was frequently used whereas in web 3.0 era, this term is used as a form of interoperability. Interoperability means reuse. When a user of software produces information on the web for the use of other, the output received is the new form of information or we can say creation of knowledge take place. Web 3.0 applications would easy to customize and they can independently work on different kinds of devices such a computers, microwave devices, mobiles, TVs etc.

Impact of web3.0 in library services:-Virtual Reference service:-Virtual Reference service means a type of service provided to the user through online medium, email or contact on phone.

OPAC:- In library 3.0 web OPAC s of various libraries which are forming a part of visible or invisible web would be brought together. **Ontologies:-**These are the techniques to give richer semantic relationships between term and through of knowledge. These give more standardization in managing the web contents instead of merely indexing the term. **Geo Tagging:-** This helps users to find specific information located at specific location. It is simply a marking of various media or digital contents like images, photographs, video ,websites or RSS fee etc. **Quick Response code :-** Quick Response code is one best tool for libraries to market their services .A QR code is alternate terminology for a Quick Response or 2D scanning capabilities .QR is a good service where libraries can market their services such as ask us ,search me hours and locations, social media contacts, video tours etc. using these codes. Users can access the codes from their mobile and can access any library services they want.**Semantic web :-** Semantic web will provide the option to share ,unit ,search and organize the web information in easy manner. Sharing and organizing information available in every corner of the web which is the main aim of this generation and expected to be achieved with the help of semantic web technologies.**Ubiquitous Contents:-**Ubiquitous contents are the personal contents of the people persistently started as the web inform of movies, blog posts, RSS. Feeds, wikis, articles, music, games etc. Today's generations contents need to be formed in various formats and can also be shared, transferred and accessible through all modes of communication.**Librarians:-**In Library 3.0 is not only to provide the service to the people but it is serving the user with various services. They should know how to get the request information and make it available to the user without concerning about the location. They should also help the users to make use of the given information .librarians will have to work on the alternative way of providing information if one mode of communication gets failed.**Librarians increasing role:-**Librarians are long familiar with the connections between data but not how these types of connections might changes or become enhanced with machine readability. Librarians have no reason to fear for our jobs or rather ,there is no reason to tear for our jobs as we know it) as there is a role for us in the new world of semantically driven information. We too can shape development and assist in the building of common links between data ,resources, and services. (Become The future.... Librarian 3.0, 2011) **Usefulness of web 3.0 in libraries:-**Where as it is being expected that web 3.0will bring information together. Application of mash up technologies will give us the virtual world of information in which web will be strengthened with more computing and analyzing powers through artificial intelligence. Web will produce the result by knowing searchers flavor of information through analyzing his /-her profiles and browsing history. Web 3.0 will work with more web semantic technologies library 3.0, (2009)

Web 3.0 will usher library service and facilities in to era of intelligent services by way of the following modifications.(1)Transforming the web into a large database(2)Creating "information" pathways for artificial intelligence and machine based reasoning (3) Applying varied technologies of the semantic web to improve information retrieval(4)Assimilating three-dimensional (3D), virtual, and simulated worlds into the web experience All these updation will ultimately result in speed, accuracy, precision and systematic organization of information available on the web in the most desirable way which infect constitute the elements of library 3.0.

ADVANTAGES OF WEB 3.0 FOR LIBRARIES :- web3.0 application will enhance the efficiency of libraries in various ways:- Library services will be portable and mobile. It will give social empowerment by way of social networking tools for managing and sharing information

BENEFITS OF WEB 3.0:- A hug benefit of web 3.0 is the move towards being able to access data form anywhere. This is mainly being driven by the heavy usage of smart phones and cloud application. The idea here is to make sure that user can access as much data as possible form any where, not just their home.

CONCLUSION:- web 3.0 will be more connected, open and intelligent, with semantic web technologies, distributed databases, natural language processing machine learning, machine reasoning, and autonomous agents. The application of semantic web, real world web will have a great role to play in the future provision of library and information services.

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Web 3.0 will usher library service and facilities in to era of intelligent services by way of the following modifications.(1)Transforming the web into a large database(2)Creating "information" pathways for artificial intelligence and machine based reasoning (3) Applying varied technologies of the semantic web to improve information retrieval(4)Assimilating three-dimensional (3D), virtual, and simulated worlds into the web experience All these updation will ultimately result in speed, accuracy, precision and systematic organization of information available on the web in the most desirable way which infect constitute the elements of library 3.0.

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WEB BASED LIBRARY AND INFORMATION SERVICES IN KNOWLEDGE AGE**Kiran G. Jayade**, Asst. Professor, College of Agriculture, Nagpur, Maharashtra**C. J. Gaikawad**, Librarian College of Agriculture, Nagpur, Maharashtra**Dr. Sangita Warade**, Asst. Professor School of Agribusiness Management, Nagpur, Maharashtra**Abstract**

Today's, age is called as the knowledge age due to the use of information and communication technology for dissemination of information worldwide with very high speed, anywhere and anytime. With the use of high speed internet in information technology, the library is becoming digital, automated, networked, web based and moving towards paperless or virtual. Now, dimension of education has been changed from traditional to virtual. Therefore, library services of educational institutions have also been changed from traditional to web based virtual library services to achieve the academic excellence in educational system. Many universities, colleges and institutions in the world are providing various web based online library services. In this paper, we are discussing about the virtual web based library services in the knowledge age.

Keywords: Knowledge age, virtual library, web based, e-library, services

I. INTRODUCTION: Web-based Library Services means, library services provided using Internet as medium and library website as a gateway with the help of integrate library management system. On the user perspective, web-based library services such as: online textbooks, databases, tutorials and a virtual library of links to other useful resources. Today's, age is called as the knowledge age due to the use of information and communication technology for dissemination of information worldwide with very high speed, anywhere and anytime. The library is a prerequisite for sustainable development of the education because education and library are two inseparable indivisibles, both being fundamentally and synchronically related and co-existent with each other. The data, information and knowledge are stored on many servers of high capacity worldwide and accessible from anywhere in the world at any time using the web sites of the institutions having their web address and universal resource locator.

II. INTERNET USERS: In 2017, India had 331.77 million internet users. This figure is projected to grow to 511.89 million internet users in 2022. Despite the untapped potential, India already is the second-largest online market worldwide. The majority of India's internet users are mobile phone internet users, who take advantage of cheap alternatives to expensive landline connections that require desktop PCs and infrastructure. In 2019, it is estimated that there will be around 258.27 million social network users in India, up from close to 196.02 million in 2017.

III. WEB BASED LIBRARY: Technology now allows users to submit their queries to the library at any time from any place in the world. Web Based Services, Digital Library Services, Internet Library Services and Electronic Library Services are terms with similar meanings. Digital Library service manages and develops electronic services, the library websites. The application of computers in special library services has enhanced the rate at which information and data are sourced from the library. This is because the computer retrieves information stored in them as fast as possible thereby enhancing the services provided by the web based library. Many universities, colleges and institutions in the world are providing various web based online library services.

IV. WEB BASED LIBRARY SERVICES The web based services provided and used to achieve online library status in education for customers are as given below: Web-portal of Library: The website or web portal of library is a virtual public face or front door and pathfinders to the collections, services and it is used as a window to the World Wide Web (www). It also works as an integrated interface to a wide variety of digital resources and web-based library services for users over a network. It may have online directories, encyclopedia, e-journals, e-newspapers, e-books, e-theses, etc. E-book: It takes much less space when we provide e-book service. Users do not need to come to library for reading and can access e-books from any place because it is portable. E-Thesis: Recently, so many theses and dissertations are available on the university, college or institutional websites.

V. CONCLUSION: The data, information and knowledge are stored on many servers of high capacity worldwide and accessible from anywhere in the world at any time using the web sites of the institutions having their web address and universal resource locator. Thousands of websites are available on the internet that are providing web based library and information services to their students and their customers. In 2017, India had 331.77 million internet users.

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Abstract

In this era of 21st century internet and web are playing very important role in many aspects of life. Everywhere use of technology increase day by day. The information seeking behaviour of today's academic library users has drastically changed in recent year. The Online Public Access Catalogue (OPAC) changed the conventional card index framework. Presently client can scan for library assets by means of OPAC successfully. Catchphrase seeking and Boolean Operators highlights have influenced this less demanding to discover applicable data as per client to needs. This paper examines about OPAC and Web OPAC innovation in libraries and clarifies different highlights, applications and points of interest of Web OPAC.

Keyword: OPAC, Web-OPAC.

1. Introduction: As per Dr. S. R. Ranganthan first laws of Library science "Books for the use", yes every library having number of book collection, but unawareness of searching user can't find it and he has negative view about library. The information seeking behaviour of today's academic library users has drastically changed in recent year. The Online Public Access Catalogue (OPAC) changed the obsolete card inventory framework. In the new framework, information can be spread inside PC and after that the required passage can be recovered promptly through OPAC framework in any arrangement. Presently client can look for library assets through OPAC adequately. Watchword looking and Boolean Operators highlights have influenced this simpler to discover significant data as per client to needs.

2. OPAC concept: OPAC is the Online Public Access Catalogue or, in other words, the library catalogue. It is bibliographic information of all reading resources available in the library. OPAC is the cutting edge and adaptable type of the index. Online Dictionary for Library and Information Science (ODLIS) characterizes OPAC as, "An acronym for online public access catalogue, a database composed of bibliographic records describing the books and other materials owned by a library or library system, accessible via public terminals or workstations usually concentrated near the reference desk to make it easy for users to request the assistance of a trained reference librarian. Most online catalogues are searchable by author, title, subject, and keywords and allow users to print, download, or export records to an e-mail account." ISIRSI: Glossary of terms defines OPAC as, "A computer workstation used to search a library's catalogue. OPAC can refer to either the actual workstation in the library, or to the interface provided by the library that is accessible from anywhere." 2 ALA Glossary defines OPAC as, "A Computer based and supported library catalogue (bibliographic database) designed to be accessed via terminals so that library users may directly and effectively search for and retrieve bibliographic records without the assistance of a human intermediary such as a specially trained member of the library staff." 3

2.1 Card catalogue Vs OPAC: There are numerous enormous contrasts between the OPAC and the card index.

Basis of	Card Catalogue	OPAC
Access points	Printed cards having limited access like title,	OPAC having so many access
Search tools	Printed cards arranged in ascending order	User can use advanced searched
Time	Take timing for searched.	Searching in minimum time.
Availability	Take time for searching. Not shown books	Not take so much timing for
Space	Took so much space.	No space required.
Result	The card inventory never delivers zero come	Some of the time an OPAC

3. Web-OPAC Concept: Web OPAC is provided on the web and with the help of internet anybody can access it from anywhere. According to Washington University in St. Louis, "A Web OPAC interfaces, which uses the World Wide Web protocol to act as an OPAC." 4 Rendering to ODLIS, "An Online Public Access Catalogue (OPAC) that uses a graphical user interface (GUI) accessible via the World Wide Web, as opposed to a text based interface accessible via Telnet." In other words, it utilizes the World Wide Web protocol to deliver a library's catalogue.

1.1 OPAC Vs Web OPAC:

OPAC	Web OPAC
Facilitate pre-coordination	Facilitate both pre and post coordination
Available only at LAN, User can used in	Available world wide web. User can used in

Take the bibliographic data from server	Take and provide information from Internet
User need to take after the program of the specific OPAC programming in that library	Web OPAC HTML records are utilized which hyperlink to branches of knowledge.

3.2 Generation of OPAC

1 st Generation	2 nd Generation	3 rd Generation
1 st Generation was developed before 1980	2 nd Generation was developed after 1980	3 rd Generation was developed after 1990
This OPAC system mainly based on circulation system	This OPAC system mainly based on simple MARC	OPAC with GUI interface and protocol support like Z39.50
Having limited access.	Used Boolean operator	Having many access.
Not having keyword searching	Having keyword searching option	Having keyword searching and phrase access searching
Non communicative	Partly communicative	communicative

3.3 Features of Web OPAC: It is accessible through Internet only. User can access by "Author", by "Keyword" in title or "Year", Combination of search keys - as Author + Year, or Keyword + Year is possible; Wildcard search for year is possible. Showcases finish bibliographic data as showed up on reprints. The corresponding author get highlighted in all search results those are displayed To select search keys Author and Year drop-down list-box has been provided, and Standardization of search key "Author" takes care to search all the related reference.

3.4 Advantages of Web- OPAC: User can search by Author, title, keyword, publisher, call numbers, subjects, type etc. 24 x7 availability of catalogue access. Shows details about book, which is available or issued. No limitation about OPAC search. Save timing of Library staff & User. Addition of library updation quickly. Importing bibliographic records. Updating can be done quickly.

3.5 Limitations of Web-OPAC Do not give adequate help with the interpretation of the question terms into the vocabulary utilized as a part of the inventory. Do not rank the recovery sets in diminishing request of plausible pertinence to the client's pursuit criteria. Do not give adequate data in the recovered bibliographic records (e.g. list of chapters, book audits) to empower the client to judge the helpfulness of the reports. Do not provide suggestions to users as like search engines i.e. Google. In short Web- OPAC is a library catalogue which is available on the internet or web, Users can search the required information by connecting to Uniform Resource Locator (URL) of Web OPAC anytime during the day and from anywhere in the world.

3.6 Some Leading OPAC in India:

Following are some Web OPACs in India: Indian Institute of Science Library, Bangalore :

<http://anagha.library.iisc.ernet.in/> Indian Statistical Institute Library, Delhi :

http://www.isid.ac.in/~library/new_search_lib.html American Centre Information ResourceCentres in India:

<http://americanlibrary.in.library.net/> British Council Libraries in India ;

<http://library.britishcouncil.org.in/simplecatsearch.asp> Cochin University of Science and Technology Library :

<http://opac.cusat.ac.in/> Health Education Library for

People <http://www.healthlibrary.com/search.html> Indian Statistical Institute Library, Kolkata :

<http://library.isical.ac.in/> Indian Institute of Technology Library, Mumbai:

<http://www.library.iitb.ernet.in/pustak/Display5.jsp?common=&pcommon=HI&field=TITLE&joinas=AND>

Indian Institute of Technology Library, Kharagpur : <http://www.library.iitkgp.ernet.in/lssearch.html>

4. Conclusions: Academic Library having end numbers of reading resources, it is not easy to find out user requirement in minimum time. As per Dr. S.R. Ranganathan 4th law "save user & library staff time" OPAC can full fill that law. The inter-library loan becomes easier with the use of e-mail and web. User can search their requirement through OPAC by title, author & publishers. User can add book review in the OPAC. Library client can see the accumulation and issue status of each document. Web OPAC enhance the quality, speed and execution of the administrations offered by the bookkeeper.

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CHANGING ROLE OF LIBRARIES IN INFORMATION TECHNOLOGY

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Abstract

Today we are living in the information age. The Information Environment around the world is changing day to day and growing at a tremendous seeds due to the emergence of the web based information and communication technology. In the present information environment has brought a lot of changes not only on the library services but also on the roles and expectations of the library professionals to satisfy their user's information demand. Library and information professionals are being affected by a range of digital developments and so find their roles changing world wide. A Librarian with diverse talents and training and who is flexible, will be able to meet the challenges of future library scene. Due to the rapidly growth of TI the Library has changed their work and moved from traditional to modern era. Library and information centers want to adopt the Information technology for Information Storage, Library management, Library Services, resources sharing, information retrieval and daily library housekeeping operation. The present paper has discusses on the development of information technology and its application in the library services.

Keyword: ICT, Information Environment, Library Services, Information Technology, Information Services, Information Retrieval, Library Housekeeping operation.

Introduction: In the present information era the ICT plays a very important role in human life. Now the ICT is the one of the important part of everyday activities. The ICT also play a very important role in Education. Internet is one of the important tools of ICT. So, the ICT has also changed the path of activities and services of library. The ICT has also changed the totally work of library as well as Library management system, access method of information and library services, by using new advanced devices. LIS Professionals have been playing a versatile role beyond their traditional job. They have to gather adequate knowledge of computer and communication technologies, network and networking, operating system, internet concepts, database management system, along with adequate practical exposure to handle technological devices. The role of librarian and the needs of user also changed due to the all these development.

Definitions of Information Technology: According to ALA Glossary of Library and Information Science, Information Technology is the application of computers and other technologies to the acquisition, organization, storage, retrieval and dissemination of information. Caster defined information technology as, 'the systems and devices used for receiving, storing, analyzing and communicating information in all its forms, and their application to all aspects of our lives, including the office, the factory, and the home. H. M. Stationer (1980) is,

Benefits of ICT Services for the Libraries: The ICT Products & services are beneficial for the library in the following ways: It provides efficient and accurate services; It saves the time, Space, energy, Money, Mean Power and resources; It helps for controlling the tremendous escalation of information; It assists to provides high quality of services and increases the range of services It has invented the ways of resources sharing by cooperation and coordination; It helps for the betterment of library image by providing better services in modern ways. It helps for Library Management and daily library housekeeping operation.

Modern Library Services: According to demand of user in the present technology era it is the necessity of modification of traditional library services into modern library services. Following are the some important technology based library services useful in the digital environment.

Web OPAC service: Search Library Catalogue the entire Library collection including books, journals, thesis, etc. can be searched through the web enabled online public access catalogue. Users can access the OPAC to find out the real time availability of library materials form their own computer terminals. Faculty and study can reserve items, which are on loan. Faculty is also encouraged to send request for new acquisition in the library through the OPAC. On the OPAC the users can be search the document by name of author, title of document and by subjects. Web OPAC is a web based searching platform, developed with advanced information technologies for dissemination of information to the users. **Online Search Service:** Online search service system that provides access to a large number of database, generally convert those databases into uniform format with some standardization features so that the basic commands and search techniques apply across all the databases offered by a given vendor. **SMS Alerts Services:** It provides CAS & SDI services by e-mail or SMS Alerts Services: In the present environment every library should adopt these techniques for users, provide Current awareness services like TOC of journals, newspaper clippings, and new arrival list etc. should send the user as per their requirement or frequent intervals by using email or SMS alerts services. Through users can aware or up to date by getting this kind of services. **E-reference services:** Electronic reference, e-reference, services are Internet-based question and answer services that connect users with experts in the information sources in a variety of subjects areas through web forms and/ or e-mail. E-reference can be interpreted to cover

support via direct contact with reference librarian through e-mail, telephone, video-conferencing, and dedicated pages on the World Wide Web. **E-mail:** E-mail is the most universal application on the internet and it can be used for direct communication with potential users. There are many benefits to using email as a promotional tool. Mail shots are an effective medium that creates personalized services, with information about library activities and events, membership renewal. **Instant Messaging:** Library help the patron enquiry answering service is trialing an online instant messaging service for answering enquiries. The service is aimed at library users with quick enquiries, and those users who may not be able to telephone us. **Wi-Fi Service:** Wi-Fi, short for wireless fidelity, is set of standards that enable to access the internet on your laptop or other supported device through wireless technology. Wi-Fi may offer some better services in the libraries and information centers. It provides access to the remote users, where user community can access the databases like CD-Rom databases, bibliographic databases and services like library web pated, off campus services through the library web pages. **New Arrivals:** Libraries and Information Centers are online display new arrivals through library webpage like new book, E-books, reports, e-journals, online databases, online reference works and DVDs arrive in regularly. You may use instant messaging and other types of alert services for new arrival. **E-Books:** E-Books are the most useful product for use digital age users. Libraries and resources centers should be compilation of E-books in such a manner which is beneficial to our patron in finding according to their requirements. E-books offer advantages like portability, 24 hours access, text search, annotation, linking and multimedia and self-publishing. In the library number of CDs comes with printed books, if the library has uploaded these CDs on Library Computer or website, library users can use these books for free any time anywhere. **E-Journals:** E-Journals can be accessed via internet form any web enabled PC. One or more users can access the service simultaneously. E-Journals also offer benefit of full text searching and downloading of articles. Technology based libraries can subscribe electronic journals through library consortia, portal or databases, so that they can provide e-journal product to the users. E-Journals are easily access by the users anywhere, any time.

E-Database: E-database is online collection resources, like a collection of abstract, newspaper articles, maps, online resources collection etc. Libraries and resources centers con subscribe to patron needs so they can get the information as they required. **Institution Repository:** Library and information professional must create their own institutional repository. In the institutional repository, library includes their own research materials such as research articles of institutional researchers, theses and dissertation of student and faculties, administrative documents, course notes, mate to retrieve and use of this material as their educational or research needs in the institutional repository in digital form. **Audio/Video Lecture:** As per the subject coverage of the institution, library may link the audio/video lectures on the library website. users will prefer the library website for those lectures **CD/DVD Collection :** Libraries and information centers should be produce CD/DVD collection like guest lecture, precious delivery of the prestigious personalities etc. when library users are not able to attending the conference, seminar and guest lecturers then they have the facility of same CD/DVD in the library.

Blogs: These are a continuously updated websites, created by individuals or organizations. They are generally free. The library and information centers cab be created their own library blogs and provide the services through the blogs. **E-CAS & SDI:** The library and information centers can be provide the E-current Awareness and E-Selective Dissemination of information Service to the users with a list of latest e-documents and new issues of e-journals on specific subjects available in the library. Using the web tools we can design the strategy for providing current services through the website. **Online Exhibition:** Librarian may organize online book exhibition through library webpage to promote use of library resources. **E-Syllabus:** Library and information centers can be upload the all the syllabuses and related notes over the library website. **E-Newspaper:** Now a day's all news paper are available in the E-format. The library and information centers can provide the e-newspaper service through library webpage.

Conclusion: ICT is one of the most important parts for every person and every profession now days. Library is very developing field in this world and changes is a continuous process. Library profession must able to accept this all changes and live up to date with current technology. Using the ICT tools and techniques we can reengineer our library services. Using the web based library services library towards the reengineering traditional library system. The web based library services may become more feasible and sophisticated to the users. Above some important technology based services and products are very useful to introduce in the libraries and information centers. So, ICT based Library services is most important and need of the day.

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ONLINE TOOL BASED USABILITY TESTING OF THREE UNIVERSITY LIBRARY WEB OPACS OF MAHARASHTRA

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Abstract

The aim of the paper is to analyze the performance of three Web OPACs and compared in terms of their different performance parameters. Three Universities libraries Web OAPCs have been selected from Maharashtra to conduct the performance testing. Online tools such as pingdom, WAVE, juicy studio etc, have applied to conduct the usability testing of Web OAPCs. The finding reveals that all the Web OAPCs under study available globally from all the selected locations and their response time is also permissible limits and speed of the said Web OPACs are ideal. The findings of the readability test shows that all the Web OPACs under study have Gunning Fog index either less than 6 or more than 8 which shows difficulty in reading to end users. Therefore there is need of regression testing to check the technical perspective to make system more efficient and effective.

Keyword: Online Catalogue, OPAC, Web OPAC, Usability Testing

INTRODUCTION: Performance testing is process of checking technical capacities, verification, error detection and validation in order to find the problems and fix them to improve the quality of the website or any web appliances. It assists developer to determine the response time and through put of any web application. The performance testing of Web PACs can check for its availability, speed, readability, load handling capacity, accessibility and aesthetic quality and overall performance of the Web OAPCs. It is essential process to analyze and evaluate the technical components of Web OAPCs to verify the specific requirements are satisfied or not for which it is developed. There are number of tools available such as Apache Jmeter, pingdom, Juicy studio, Httpriider, WAVE, site 24*7 etc. to check the performance testing of website, web appliances or online system. User based studies highlights issue of problems, improvement areas and lacunas in existing Web OPAC where as checklist based studies evaluates or analyze the features, functions and facilities of Web OPACs. But none of the single study conducted to measure the technical capacities or performance of the Web OPAC. It helps to understand the strengths and lacunas of the Web OPACs for further improvements in this regards. Therefore, the present topic "**Online Tool based Usability testing of three University Library Web OPACs of Maharashtra**" has been undertaken for study.

RELATED LITERATURE: Several user based studies have been conducted to check the usefulness of the Web OPAC. Similarly, few studies have been carried out to evaluate the feature and functions and facilities of the Web OPAC. In which, Babu is an eminent researcher in the area of web OPAC usability. **Babu and O'Brien (2000)** carried out study in which the design, features, interface and functions of the web OPACs are examined. **Kapoor and Goyal (2007)** have done proportional analysis of five web-based OPACs to check their functionality. They have selected five web OPACs from Indian academic libraries which are mainly using Libsys, VTLS's iPortal, NewGenLib, Troodon, and Alice for Windows. In the study of **Sangam and Hadimani (2004)** users stated the need of intermediary like librarians for users during the search sessions of web OPAC.

OBJECTIVES The present study aimed to achieve the following objectives: To identify and select the online tools of usability testing. To conduct the online tools based usability testing of Web OPACs under study. To know the technical capacities of the Web OPACs To suggest, suitable measure to improve the technical capacities of the Web OPACs.

SCOPE AND LIMITATION: It is noticed that out of 10 traditional Universities across Maharashtra in which 6 University libraries have Web OPAC facility. Researcher has selected three University libraries Web OPACs from Maharashtra. The automation of these University libraries are done in LIBSYS, SLIM and SOUL software. The study is limited to the Web OPACs of following University libraries. The technical capacities like speed test, page load time, availability, performance testing and accessibility and aesthetic quality of Web OPACs has been tested under study. Jaykar Knowledge Resource Center, SPPU, Pune (LIBSYS) Central Library, North Maharashtra University, Jalgaon. (SLIM) University Library, SNDT Women's University, Mumbai. (SOUL)

RESEARCH METHODOLOGY: There are number of online tools available to measure the performance testing of web appliances. These online tools are used to measure the technical capabilities of the Web OPACs such as readability, speed test, availability, page load time and aesthetic quality and availability. Researcher has applied following online tools to test the performance or technical capacities of the Web OPACs.

Site 27x7: Availability is the technical prototype concern with 'Up Time' of the systems. The site 24x7 (<http://site24X7.com>) is a tool used to check the availability of the Web OPACs from different locations such as Toronto, Johannesburg, Singapore etc. on a global scale.

Pingdom: The success of any system is very much depends upon its page loading speed. The speed of the Web OPACs is major issue of usability testing which directly affects on users failure in retrieving documents.

Pingdom is popular software tool which tests the uptime, downtime and performance of websites or any online systems.

Juicy Studio: Juicy studio is popular and widely used online tool to measure the readability of any web appliances. Readability is required in designing and developing process of any Web OPAC. It helps to make redesign system more user friendly and user oriented where users can easily read the content available in Web OPACs. In Juicy studio score of Gunning fox Index are measured to know the readability of the system. The fog index is generally used to verify that text can be read easily by the intended audience.

WAVE: The testing of accessibility and aesthetic quality helps to know the available linking errors and contrast errors in Web OPACs. The popular tool WAVE (<http://wave.webaim.org>) is a web accessibility evaluation tool which helps to identify various types of errors.

DATA ANALYSIS: There are numbers of free online software available on internet which permits to conduct tests and attempt to identify problem areas of the websites or web appliances. In order to know the lacunas of the system various online tools have been applied to test technical capabilities and system competencies which are explained in following way.

I. Availability of Web OPACs: The result of the testing shows availability, loading time, Internet protocol (IP) address and response time of the system etc. Following are the availability testing screen shots of University library Web OPACs.



Screen Shot 1: Availability SPPU Web OPAC

The finding of the availability testing shows that all the Web OPACs under study available globally from all the selected locations and their response time is also permissible limits.



Screen Shot 5: Availability of SNDTWU Web OPAC

Table 1: Speed Test Evaluation of Web OPACs

According to Nielsen a page load beyond 15 seconds starts getting intolerable for web users whereas Hoxmeier and Dicesare place this limit at 12 seconds. The table 2 illustrates that Web OPAC of SNDTWU have taken

Sr.No.	University Library Web OPACs	Performance	Load	Page Size
1	SPPU University Library Web OPAC	83	7.25	1.7 MB
2	SNDTWU University Library Web OPAC	86	23.27	201.9KB
3	NMU University Library Web OPAC	86	1.16	51.3KB

more time i.e. 23.27 (Sec.) to load the page whereas Web OPACs of SPPU and NMU loaded their pages within time. It is clear from the analysis that Web OPAC of SPPU has shown bulky page size i.e. 1.7 MB, followed by Web OAPC of SNDTWU found 201.9 KB page size whereas Web OPAC of NMU has shown 51.3KB page size. The performance of the Web OPACs speed is measured in grade in 1 to 100. The performance grade of Web OPACs is given based on load time and page size. The finding of the study highlights that Web OPACs of SNDTWU and NMU retrieved 86 performance grade points where as Web OPAC of SPPU has shown 83 performance grade points. It is clear from the analysis that all the Web OPACs have ideal performance grade points which is more than 80.

III. Readability: The readability test of the selected Web OAPCs are carried out through online software Juicy studio (<http://juicystudio.com/services/readability>) Following table reveals the readability analysis of Web OPACs under study.

Table 2: Readability Testing of Web OPACs

Summary	SPPU	SNDT	NMU
Total sentences	223	5	117
Total words	692	24	207
Average words per Sentence	3.1	4.80	1.77
Gunning Fog Index	10.09	6.92	8.24
Flesch Reading Ease	54.41	71.54	56.27
Flesch-Kincaid Grade	6.44	4.47	5.85

The best score for the readability with the Gunning Fog Index is 7 or 8 (Robert Gunning). The Web OPACs having score above 8 or below 6 pose difficulty in reading for most of the users. All the University libraries Web OPACs are tested and the analysis reveals that 223 sentences found in Web OPAC of SPPU, followed by, 117 sentences found in NMU Web OPAC whereas only 5 sentences noticed in Web OPAC of SNDTWU. The best score for the readability with the Gunning Fog Index is 7 or 8 whereas the findings of the study shows that all the Web OPACs under study have Gunning Fog index either less than 6 or more than 8 which shows difficulty in reading to end users.

IV. Accessibility & Aesthetic Quality of Web OAPCs: Following charts shows the linking errors and contrast errors available in University library Web OPACs under study.

Table 3: Accessibility & Aesthetic Quality testing of Web OPACs

WAVE SUMMARY	SPPU	SNDT	NMU
Errors	33	6	117
Alerts	20	48	207
Features	0	18	1.77
Structural Elements	9	46	8.24
HTML5 and ARIA	60	0	56.27
Contrast Errors	7	3	5.85

The analysis of accessibility and aesthetic quality depicts that 117 errors found in Web OPAC of SLIM, followed by 33 errors in SPPU and 6 errors are identified in Web OPAC of SNDTWU. It is also reveals that majority of the alerts i.e. 207 found in NMU, followed by 48 alerts in SNDTWU, 20 alerts in SPPU. The table also describes that 7 contrast errors traced in Web OAPC of SPPU followed by, 5 contrast errors found in NMU Web OAPC and only 3 contrast errors found in Web OPAC of SNDTWU. About structural elements, the data reveals that 46 structural elements discovered in SNDTWU Web OPAC, followed by 9 elements traced out from SPPU Web OPAC and 8 structural elements found in Web OPAC of NMU.

CONCLUSION: All three University Library Web OPACs under study are available globally from all the selected locations and their response time is also within the permissible limits. The page loading time and page size of the Web OPACs are ideal which reflects good performance whereas the result of readability test shows that end users' have difficulty in reading. From technical perspective parameters like Security Testing, Penetration Testing, Regression Testing, capacity planning, etc. seem to be not applied while designing / installing these systems resulting in low speed and security vulnerabilities or performance issues. Therefore there is need to conduct regression testing to check the technical aspects of the Web OPACs which is difficult to test through questionnaires, interviews and observations. The regression testing prior to launch any system helps to make it error free and to satisfy the end users.

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USE OF WEB OPAC BY THE STUDENTS OF LAW COLLEGE, OSMANABAD: A STUDY

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Abstract

This paper examines Web Online Public Access Catalogue (OPAC) usage by the students of Sant Dnyaneshwar Library (SDL) of Law College Osmanabad (Maharashtra). A questionnaire-based survey on use of OPAC was conducted for SDL on various categories of users such as faculty members, research scholars and postgraduate students, covering different disciplines such as basic sciences, applied sciences, social sciences, and humanities. The paper discusses various aspects of OPAC such as frequency of use, purpose, ease of use, satisfaction level, etc. An attempt is also made to explore the reasons for the least used search options of OPAC. Lack of basic skills among users was found to be the major reason for not utilizing full features of OPAC. This paper describes the importance of Web OPAC of a SDL for students and their experience in exploring it.

Keywords: Web OPAC, Automation Software, OPAC, SOUL, N-LIST, INFLIBNET, E-Books, E-Journals and Legal Education.

INTRODUCTION: A large number of libraries in India have automated their operations and services using this technology to fulfill their users' needs. Public catalogue, which is an important service of the library, is not exceptional to computer technology. Computerized catalogue is termed as Online Public Access Catalogue (OPAC). It acts as an information retrieval system for the user. OPAC has revolutionized access to bibliographic information through search capabilities such as keyword searching, Boolean searching, truncation, proximity searching, and item identity number searching. These were not possible in the traditional catalogue. Today, a number of libraries are providing OPAC service to their users to find out their documents. In such a situation, the libraries should examine periodically how much comfort the users feel with this service so that some initiatives could be taken timely to improve this facility. Therefore, a study has been undertaken on the use of OPAC by the users in SDL, Law College, Osmanabad. A Web OPAC is a systematic list of all bibliographic items available in a library or group of libraries. A bibliographic item can be any information entity (e.g., books, e-books, theses, periodicals, computer files, and so on) that is considered to be a library material. The role of the library is to organize information resources and services in a way that supports user needs. Web OPAC, an information retrieval system, has revolutionized access to bibliographic information through search capabilities such as keyword searching, Boolean searching, truncation, proximity searching, and item identity number searching.

LAW COLLEGE, OSMANABAD: Law College, Osmanabad is affiliated to Dr. Babasaheb Ambedkar Marathwada University, Aurangabad. Osmanabad is considered as semi-urban area. Until, 17th September, 1948 it was under Nizam rule. Later it was merged with Union of India. Our Management started the Law College to cater the needs of Legal Education in backward area. This College is 250 Km away from University Headquarters. To provide Legal Education to the needy & poor people of this area in terms of fees & expenses, this college location is beneficial to all the people here. We also conduct Legal Aid & Legal Literacy Camps to have the Legal Awareness as well as National & State Level Moot Court Competition. The College being affiliated to Dr. Babasaheb Ambedkar Marathwada University, Aurangabad. The faculty members actively participate as the members of Board of studies, Faculty of Law, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad. The college has provided wide range of core options, elective options, interdisciplinary courses and flexibility to the students as per their interest and likings. The adequate infrastructure and learning resources in respect of classrooms, library, playground, hostels, canteen (sharing with the sister institution), and other amenities have been consistently developed, extended, maintained and enriched from time to time. The college library has the extensive reference books for research. It contains the infrastructure facilities like a computer lab, internet, printer and photocopier. In addition to that an extensive database of Supreme Court, High Court cases, State and Central legislations has been provided along with up to date collection of journals, magazines and periodicals. The involvement of faculty in research activities is promoted through Research Committee. Moreover the college has planned to initiate the work towards an academic association with various other organizations. The library has rich collection of text books, reference books, journals, e-books, e-journals. Internet access to students is provided through Information Center of the College. Understanding the need of Osmanabad Districts, Shri Swami Vivekanand Shikshan [SSVSS] Kolhapur's founded this College in 1984 under the leadership of Honourable Bapuji Salunkhe. The College has following full-fledged facilities - Library with 9,661 books 16 Journals + 04 Newspapers N-LIST E-resources Computer Lab with 10 computers Ladies Hostel Gymkhana

SANT DNYANESHWAR LIBRARY (SDL): The library is the lung of every educational institute, which breathes knowledge and information into the minds of the students. The SDL has well-equipped Library and Information Centre with an elaborate collection of books, e-books, CD-ROMs, journals, e-journals, project reports, audio-visual materials and other resources to serve its users. The Library Advisory Committee considers

the development proposals of the library and budget allocations and policy decisions. It also provides directions for a structured and balanced growth of the library and to provide improved facilities and innovative services. Allocation and utilization of funds and introduction of developmental programs and requirements of the users are addressed and approved by the Library Advisory Committee.

Collection development: The Library and Information Centre came into existence in the year 1984. The main Library is equipped with a good number of national and international books, journals in the field of Family Law, Company Law, Labour Law, CRPC, CPC, ADR, Human Right, English, Management and General reading, etc. and also with the modern and latest technology to cope up with latest development to provide quality and quick services to its users.

Library Staff: Library and Information Centre has good team of qualified Professional and Non-Professional Staff.

Library Services: ASPC's Library and Information Centre is providing the following services to its users. Circulation, Reference Service, Current Awareness Service, Selective Dissemination Service, Reprographic Service, Audio-Visual service, News Paper Clipping Service, WEB OPAC, Legal Awareness, Interlibrary Loan

Library Automation of SDL: Law College, Osmanabad is one of the Best College of its kind in Marathwada Region to have a computerized Library Services. Computerization started since January, 2013 and built a complete database of over 10,246 books. Further we have Online Services provided to our users through UGC & INFLIBNET N-LIST program with INTER LIBRARY LAN SYSTEM consisting of 7 terminals connected to, the library and information center Server storing our database. The project was implemented at the SDL, Law College, Osmanabad. It deals with the automation of the entire library system thereby reducing paperwork and increasing efficiency.

SOUL Software: Software for University Libraries (SOUL) 2.0 is state-of-the-art integrated library management software designed and developed by the INFLIBNET Centre based is used. The latest version of the software i.e. SOUL 2.0 was released in January 2009. It is user-friendly software developed to work under client-server environment. The software is compliant to international standards for bibliographic formats and circulation protocols. After a comprehensive study, discussions and deliberations with the senior professionals of the country, the software was designed to automate all house-keeping operations of library. The software is suitable not only for the academic libraries, but also for all types and sizes of libraries, even school libraries.

OBJECTIVES OF THE STUDY

The objectives of the study are as follows: To investigate the frequency of use of Web OPAC by students. To assess as to what extent the users are using WEB OPAC. To find out the purpose of use of WEB OPAC. To know whether the users face problems while using WEB OPAC. To study the satisfaction of users while using WEB OPAC. To discern the users' search approach in using the Web OPAC.

METHODOLOGY: This study was conducted at the Library of the Law College, Osmanabad. The study employed descriptive research, using a questionnaire as an instrument for eliciting information on the use of the library catalogue among students and research scholars. A questionnaire was designed to gather primary data which was distributed among 200 users / students of SDL during 2017 – 2018 academic year. Proper care was taken to select the representative sample from each category proportionately on the basis of total strength of category concerned. A total of 176 out of 200 respondents completed and returned the questionnaires giving overall, a response rate of 88.00%. The investigator also had discussions with some users on various issues of OPAC to make the data and information more convincing and authentic. The collected data was analyzed by using SPSS statistical package.

DATA ANALYSIS AND INTERPRETATION

Frequency of WEB OPAC Use: It is important to know how frequently the users use OPAC to locate their required documents. The frequency of using OPAC indicates its value in the library.

Table No. 6.1

Frequency of WEB OPAC Use

Frequency of Use	No. of Students
Unaware	7
Very Frequently	47
Frequently	73
Occasionally	37
Rarely	11
Never	1
Total	176

Table No. 6.1 highlights the frequency of WEB OPAC use. The table depicts that out of the total 176 users very few, i.e., 7 (03.98%) were not aware of OPAC service. Majority 73 (41.86%) students reported that WEB OPAC used frequently, almost 47 users used very frequently. It is observed that shows that majority of users regularly (very frequently and frequently) used OPAC and a little more than one-fourth users moderately/occasionally used O

Knowledge of Using WEB OPAC: The users' knowledge about using WEB OPAC is an essential factor for searching the resources of a library efficiently. Therefore, the opinions of the users were collected to rate the knowledge of using WEB OPAC.

Table No. 6.2 Knowledge of Using WEB OPAC

Knowledge of Using WEB OPAC	No. of Students
Excellent	69
Above a Average	49
Average	38
Below Average	11
Extremely Poor	9
Total	176

Table No. 6.2 shows that Majority 69 (39.20%) out of 176 users were of the views that they have excellent knowledge of WEB OPAC, almost 49 (27.84%) of students were above average, 38 (21.59%) average. It also revealed that only one-fourth of users stated that they have adequate (excellent and above average) knowledge of using OPAC.

6.3 Purpose of Using WEB OPAC

Table No. 6.3 shows the purpose of using OPAC is indicated

Table No. 6.3 Purpose of Using WEB OPAC

Purpose of Using WEB OPAC	No. of Students
To know the availability of required document	123
To know whether required document issued	96
To know the location of required document	103

It depicts that 123 (69.89) users / students consulted WEB OPAC to know the availability of the required document in the library, 96 (54.55%) to know whether the required document issued/checked out, and 103 (58.52%) to know the location of the required documents. It is clear from Table No. 6.3 that the majority of users consulted OPAC to know the availability and location of the required documents.

6.4 Users' search approach to using the Web OPAC Table No. 6.4 depicts the various search techniques used to access the Web OPAC.

Table No. 6.4 Users' search approach to using the Web OPAC

Users' Search approaches	No. of Students
Title	134
Keyword	92
Subject	107
Author	114
Call Number	32

Majority of students 134 (76.014%) representing expressed that they search the Web OPAC by title, while 92 (52.27%) scholars expressed that they search Web OPAC by keyword and 107 (60.80%) students representing stated that they search Web OPAC by subject.

CONCLUSION: The library is the lung of every educational institute, which breathes knowledge and information into the minds of the students, Online Services provided to our users through our Inter Library LAN System in which users can access the library database from the OPAC and also helps to library staff to provide good reference service to staff and students. Library Automation is very important in the libraries. Time saving, avoid of duplication, ordering, time and many more functions are done through SOUL 2.0 Library software.

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Abstract

Quite understandably, it is felt that in the vortex of the changing scenario of modern Library & Information Science the phrase 'exponential information' and its ilk are per se seemingly clichéd. Erstwhile conventionalism, be empirical. In both actuality and exactitude, the nub of the genre is shifted to the apt and appropriate use of the latest supportive tools and technologies in different spheres of library's functioning. This issue stands more relevant than emotive. Raison d'etre is unclashing user friendliness. Librarians can hardly create technological experience; they must undergo it. Successful coupling of selective techno-scientific facilitative capabilities with engine of well-oiled functioning library is necessitated. It must run cheek by jowl. Artificial Intelligence is rearing its head at regal regularity. Of late, there has been perceptible interest on Library 3.0. With the advent of Information and Communication Technology (ICT), Library services have undergone sea-change. Today a new era of Web 3.0 has come up. The transformation from Library 2.0 to Library 3.0 is being observed with the application of Web 3.0. The original Web was about browsing contents, 2.0 is about uploading contents and 3.0 is about developing services that have the capability to merge separated uploads into more elaborated pieces of contents. In Library 3.0, library professionals need to adopt themselves according to latest innovations provided by Web 3.0.

Keywords: WEB 1.0, WEB 2.0, WEB 3.0, Semantic Web, Library3.0, Librarian3.0

INTRODUCTION: In recent years, many of the universities and educational institutions world wide offer online services such as for admissions, virtual (online) learning environments in order to facilitate the lifelong learning and to make this compatible with other educational management activities. The reform of the early 20th century was based on a set of values, where the patron should have the best possible access to and the best possible benefit from library resources, all built on democratic values. In respect of different versions of web, the Wikipedia states, "Web 1.0 is Read Only, static data with simple mark up for reading. Web 2.0 is Read/ Write dynamic data through web services customize websites and manage items. Web 3.0 is Read/ Write/ Execute." Now a days all our College students and researcher are born into a digital era that is significantly changing their literacy and information encounters and the ways they can learn. Library and information science professionals around the world are deep in the midst of implementing user-generated content and social Web applications..

WEB 1.0, 2.0 AND 3.0: Since the 1990's when the World Wide Web was established it has evolved from the earlier versions, viz, Web 1.0 to Web 2.0 and finally is evolving into the newest version i.e. Web 3.0.

WEB 1.0 (1991-2003): The traditional version of Web i.e. Web 1.0 is a system of interlinked, hypertext documents accessed via the internet. The first implementation of the web represents the Web 1.0 which could be considered the "read only web". In other words the early web allowed us to search for information and read it. There was very little in the way of user interaction or content contribution. The primary focus of Web 1.0 was one way communication. However, this is exactly what most website owners wanted. Their goal for a website was to establish an online presence and make their information available to anyone at any time.

WEB 2.0 (2004- present day): The term Web 2.0 is commonly associated with web applications that facilitate interactive information sharing, interoperability, user-centred design and collaboration on the World Wide Web. A Web 2.0 site gives its users the free choice to interact or collaborate with each other in a social media dialogue as creators of user generated content in a virtual community, in contrast to websites where users are limited to the passive viewing of content that was created for them. Examples of Web 2.0 include social networking sites, blogs, wikis, video sharing sites etc.

WEB 3.0: Web 3.0 is a web where the concept of website or webpage disappears, where data is not owned but instead shared, where services show different views for the same web/ the same data. Those services have to be focused on content and personalization, and both will be reached by using vertical search. Web 3.0 is the next evolution of the internet. Some hypothesize that Web 3.0 will combine the best bits of both Web 1.0 and WEB 2.0 but will be a more user focused, personalized, intelligent, controlled or semantic web experience. Furthermore the web is set to become more mobile too, as demonstrated through recent trends in the marketplace whereby smart phones and the iPhones are improving the web experience for those accessing through a mobile phone.

DEFINITIONS OF WEB 3.0: The term Web 3.0 was first coined by John Markoff of the New York Times in 2006 and first appeared significantly in early 2006 in a Blog article "Critical of Web 2.0 and associated technologies such as Ajax" written by Jeffrey Zeldman. There is complete agreement among the experts about how Web 3.0 will evolve. According to Nova Spivack, the Chief Executive officer at Radar Networks, "Web 3.0 is a set of standards that turns the web into a big database."

STRUCTURE OF WEB3.0: Web3.0 has totally different structure when compare to the earlier versions of the web. The basic structure is characterized by semiotic and semantics. Semantics refer to the study of meaning in communication, whereas, Semantics is the study of sign processes (semiosis), or signification and communication, signs and symbols, both individually and grouped into sign systems. It includes the study of

how a meaning is constructed and understand. Semantics can be very useful to the user as it helps him in arriving at the right answer for his query.

FEATURES OF WEB3.0 Convergence of the virtual and physical world-metaverse. Access to information anywhere. Anytime. It is mainly driven by the heavy use of smart phones and cloud applications. It is Web development layer that includes T.V. quality open video, 3D simulations, augmented reality, human constructed semantic standards and pervasive broad-band, wireless and sensors.

Difference among Web1.0, Web2.0 and Web3.0

WEB1.0	WEB 2.0	WEB 3.0
The mostly read only web	The widely read-write web	The portable personal web
Focused on companies	Focused on communities	Focused on the individuals
Home pages	Blogs	Lifestream
Owning content	Sharing content	Consolidating dynamic contents
HTML, Portals	XML, RSS	The Semantic Web
Web forms	Web applications	Widgets ,drag and drop mashups
Directories(taxonomy)	Tagging(folksonomy)	User behavior(meonomy)
Page views	Cost per click	User engagement
Netscape	Google	iGoogle.Net Vibes

LIBRARY 3.0: Belling (2011) explain that the term Library 3.0 to the use emerging technologies such as the semantic web, cloud computing, mobile devices and established tools like federated search system, to facilitate the development, organization and sharing of users-generated content through seamless collaboration between users, experts and librarians 3.0 is to promote and make library collections widely accessible, searchable and usable. The end result of library 3.0 expansion of the “borderless library”, where collection can be made available readily to library users regardless of their physical location. Library 3.0 is a virtual complement to the physical library space, and should ideally work seamlessly within established library system, services and collections.

APPLICATION OF LIBRARY 3.0 IN ACADEMIC LIBRARY SERVICES

a) Web OPAC:- A Web OPAC is a library catalogue on the Web or Internet by connecting to Uniform Resource Locator i.e. URL of Web OPAC user can search the required information from anywhere in the world at any time during the day. In library 3.0 Web OPACs of various libraries which are forming a part of visible or invisible web would be brought together. Metadata of contents (contents in any format) would be seamlessly accessible and search able from single user interface.

b) Ontologies: The classification system for book classification has been changed into Ontologies to represent domain knowledge in machine process able form. These are the techniques to give richer semeiotic relationship between terms and thoughts of knowledge. These give more standardization in managing web contents instead of merely indexing the term. How the information is organized rather than organizing the information is the main aim of Ontology. Librarian can adopt various Ontological techniques to define the web contents in more professional as well as personal manner.

c) Geo Tagging: Users can find specific information located at specific location with the help of Geo Tagging. It is simply a task of marking of various media or digital contents like images, photographs, video websites or RSS FEED etc. GPS (Global Positioning System) is available in most at the cell phones and mobile devices; which allows users to add metadata exactly where the data or image or video was created. So tagging is helpful to users in marking their information in which they are interested for.

d) Ubiquitos Contents: The ubiquitous computing offers various contents which can be used or re-used frequently and will also not get absolute in near future. The contents generation of this need to be created in various formats which can also be easily shared, transferred and accessible through all models of communication. Ubiquitos contents are the personal contents of the people persistently stored on the web in the form of movies, blog spots, RSS Feeds, Wikis stories, articles, music, games etc. These are always there on the web and accessible from everywhere over the internet through all mobile and internet accessible devices.

e) QR Codes: A QR Code is a matrix barcode readable by smart phones and mobile phones with cameras. Library exhibits that include a QR code link to songs, videos, web sites, surveys, contests etc. codes in the library stacks/ end caps or magazine/ journal area that point to online electronic holdings of print materials or related subject guide. Linking to library audio tour for orientations. In catalogue record to offer patrons basic information about an item, including the location and call numbers users can scan the code and head to the stacks rather than writing or painting.

f) Virtual Reference Service: Science Technology is developing very fast in all domains, librarians are more determined to serve the users who are away from the libraries. Linda Berube (2003) define that Digital reference

or Virtual reference primarily refers to a network of expertise, intermediation and resources placed at the disposal of someone seeking answers in an online environment. A part from helping the users in personal on telephonic way, in virtual reference service libraries are now developing the contents which can easily be transferable and readable in cell phones and other mobile device to help users at any point of time.

g) Semantic Web: To provide effective Library services to the users the semantic Web has been proved very useful for the Librarians. Semantic web will provide us with the option to share, unite, search and organize the web information in easy manner semantic web is a remarkable tools for libraries where it protects proprietary information and helps in sharing the wealth of knowledge. Semantic web and libraries have common vision and goals of accessing information available in abundance and discovering the knowledge through co-operation and collaboration for the advancement of society search access and retrieval of learning resources can be facilitated with the use of semantic web technologies in developing Library Portals. The implications of Library Portals with Semantic Web Services will full fill the vision of library.

CONCLUSION: In its entirety, the present age stays wedded to the unprecedented invasion and resultant supportive tools and technologies to embrace and be in use and utilization in different aspects of the libraries. User friendliness is the sine qua non. Adaptability breeds salutary result. The future world will be guided by the ubiquitous web 3.0 systems. As a result, Library 3.0 paves the way for libraries to offer access to relevant and engaging services and collections that will meet and hopefully exceed the expectations and needs of the users in the coming years. Library 3.0's definition is shaped by individual or organizational needs. It will continue to unfold ineluctable impact on storing and delivering information. It is increasingly felt that we start preparing to become librarian 3.0 now.

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WEB 3.0

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Abstract

Quite understandably, it is felt that in the vortex of changing scenario of Modern Web & Information science the phrase 'exponential Information' and its like are per se seemingly clichéd.' Erstwhile conventionalism, be empirical or ex Voto, is passé. In both actuality and exactitude, the nub of the genre is shifted to the apt and appropriate use of the latest supportive tools and technologies in different spheres of Web's functioning. This issue stand more relevant that emotive Raison d'être is unlacing user friendliness. Librarians cand hardly create technological experience. They must undergo it successful coupling of selective techno-scientific facilitative capabilities with engine of well-oilde functioning Web in necessitated . It must run cheek by jowl. Artificial intelligence is rearing its head at regal regularity. Of late, there has been perceptible interest on Web 3.0 with the advent of Information and communication Technology (ICT), Web service have undergone sea change Today a new era of web 3.03.0 has come up. The transformation Lab 2.0 to 3.0 is being observed with the from the with the application of web 3.0. The original web was about browsing content 2.0 is about uploading contents and 3.0 is about developing services that have the capability to merge separated uploads into more elaborated pieces of contents. In Web 3.0, Library professionals need to adopt them Selves according to latest innovations provided by web 3.0

Keyword:- Evolution of web 3.0, web3.0 features, Diffrence between web 0.1 web 2.0 and web 3.0 Web 3.0 features and applications, responsibilities of Web 3.0

Definition :- Web 3.0 is a phrase penned by John Markoff of the New York Time in 2006. It refers to a supposed third generation of Internet based services that collectively comprise what might be called "the intellgent web", for instance, those using semantic web, micro formats, natural language, search date mining. Machine learning, could computing and artificial technologies which put stress on machine facilitated. Understanding in information with a view a more productive and intuitive user experiences. It is no wonder that Nova spivack daffiness Web 3.0 as the third decade of the web (2010-2020)

#Evolution of Web 3.0-**# Web 3.0 features**

Convergence of the virtual and physical word- metaverse Accesses to information anywhere , anytime

It is a web development layer that layer that incldyes T.V.Quality open video 3D simulations, augmented realitys human constructed semantic standard and pervasive broad-band, wireless and sensors . It is mainly driven by the heavy use of smart phones & could application.

Web 3.0 :0 Defⁿ- It is a model for a modernized from of Web services that reflects a transition within the Web world in the way services are delivered to user. It refes to libraries using technologies such as the semantic web, could coopyuting. Mobile devices and reo re-envisioning our use of established technologies such as federated search to facilitate user- generated content and collaboration to promote and make Web collections accessible with Web 3.0, Web services are frequently updated and evaluated to meet the emerging needs of Web uses.

Features and Application :- a) Web OPAC :- One of the key aspects of Web 3.0 web OPAC. A web OPAC is a Web catalogue one the web or Internet. User can search the required information by connecting to uniform Resource Locator (URL) of web OPAC anytime during the day and from anywhere in the world. It is Programmed to facilitate the Web's member to access the OPAC through their own sreach for the ease borrowing instead of searching through the card catalogue In addition, members would also be able to request for the inforatmation about borrowing reservation etc. related to their own Web profile, as well as to make automatic reservation. In Web 3.0 web OPACs of various libraries which are forming a part of visible or invisible we would be through together metadata of contents (orents in any format) would be seamlessly accessible and searchable from single user interface. **b) Ontologies :-** Ontologies are used annotating information to the web content and expressing its semantic in a machine reddablemannar. These are the techniques to give richer semantic relationships between terms and thoughts of knowledge. These give more standardization in managing web contents instead of merely indexing the them ontology aims at has the information is organized rather than organizing the information. These will able to give more file bility in providing semantic description to the content in learning object. repositories and at the same time these facilstate automated functions and task delegation to intelligent agent ontology deals with question concerning what entities exist or can be said to exist and how such entilties can be grouped related within a hiearchy and subdivided according to similarities and differences. **c) Ubiquitous contents :-** The ubiquitous computing offers various contents which can be used or refused frequently. The contents of this generation need to be created in various formats and can also be easily shared. trarstreed and accessible through all modes of communications. Ubiquitous contents are the personal contents of the people persistently stored on the web in the form of moives, blog spots, RSs feeds, wikis, stories, articles, music, games etc. these are alwyys there on the web and accessible from everywhere over the internet through all mobile and internet accessible devices **d) Geo Tagging :-** This help user to find specific information locater specific location. It is simply a marking of various media or digital contents lilce, images, photographs, videos, websites or RSS feeds etc most of the cellphone and mobile

devices have Gps (Global Positioning system) facilities. **e) Virtual Reference services** ; since technology is developing vary fast in all domains, librarians are more deferentiated to serve the users who are away from the libraries Linda Berube (2003) defines that Digital reference or virtual reference primarily refers to a network of expertise intermediation and resources placed at the disposal of someone seeking answer in online environment. In virtual reference service apart from helping the users in personal or telephonic way, libraries are now developing the contents which can easily be transferable and readable on cellphones and other mobile device to help users at any point of time. **f) Semantic Web** :- The semantic web provides a common framework that allows data to be shared and reused across application enterprise and community boundaries it is a collaborative effort led by web with participation form a large number of researchers industrial partners. Its objective is to convert all the unstructured documents on the web into a web data. It is based on the Resource. Description framework (RDF) . It will proved us with the option to share, unite, search and organize the web information in easy manner. Sharing and organizing information available in every corner of the web which is the main aim of this generation and expected to be achieved with the help of semantic web technologies. **#components** : Resource Description framework (RDF) RDF Schema (RDFs) Simple knowledge organization system (SKOS) SPARQL Which is a RDF query language. Notation 3 (N3) N-Triples is a format for storing and transmitting data Turtle [Terse RDF Triple language] Web ontology language [OWL] **g) Cloud computing** :- 'Cloud computing' mean using the Internet and central remote servers to maintain data and applications instead of maintaining data on 'individual mainframe. Computers or PCs. In short, cloud computing refers to the technologies that provide software, data access, storage devices that do not require. Physical location of the system. It is one of the most important Web 3.0 applications that is gaining popularity day by day. **h) Federated search** : Modern day searching is synonymous with federated searching which is one of the aspects of Web 3.0. it can help users to take greater advantages of online resources offered by libraries many online databases needs different logins, look vastly different and search and display result in different ways. It would be easier for users to have all the search result displayed in one place and in one way. Much as a Google search does. At present federated searching is not widespread amongst modern day libraries. This is partly due to this functionality not being enabled in older. LMS Software, but also because for some external applications the cost is prohibitive. It is anticipated that as demand for Federated search functionality increases, these costs will come down. Another solution to this problem may be found in open source software, such as 'Web Find' which is federated search software developed by librarians. As the cost comes down the technology improves more libraries want to move towards federated search. **#Recommendation** : Modern day libraries need to be aware that the nature of searching for information is changing and they need to investigate and implement federated searching options to the best of their abilities. Consortia collaboration for e-resources purchasing such as e-book and journals. **i) Mobile Web Catalogues** : The use of mobile phones and mobile application has increased dramatically over the past 10 years. At present not many libraries in India offer mobile friendly versions of their website and LMS. This technology is only fairly recent so there will be some debate as to the best way to proceed. All libraries should cater to users who access their Web through their phones or other mobile devices. Developing an app is not necessary in most cases rather making the website/catalogue clear and easy to move around should suffice. There is great potential for expansion of this technology in modern day libraries in India. More people are using mobile phones and devices as tools for tasks for which they previously may have used a laptop or desktop computer. **# Recommendation** :- Website and OPACS need to be mobile device compliant and embracing user-generated content/ capabilities. **j) Quick Response (QR Code)** :- A QR Code is matrix barcode readable by smart phones with cameras. They are sometimes referred to as 2d Code, 2d barcodes or mobile codes . it is one of the important aspects of Web 3.0. **# Responsibilities of Web 3.0** :- In today's times the role of the LIS professional is that of a bridge between an information specialist- the subject matter experts and the users. Web 3.0 technologies and ontology have enabled Web 3.0 and have brought about fundamental changes in the way the information is collected and disseminated with the role of the information professional becoming more and more prominent, the Web professional will have to additionally learn about the related subject with the existing knowledge base. **Conclusion** : In its entirety, the present age says wedded to the unprecedented in vision and resultant supportive tools and technologies to embrace and be in use and utilization in different aspects of the libraries user friendliness is the sine qua non. Adaptability breeds satisfactory result. The future world will be guided by the ubiquitous web 3.0 systems as result, Web 3.0 paves the way for libraries offer access to relevant and engaging services and collations that will meet and hopefully exceed the expectations and need of the users in the coming years. Web 3.0's definition is shaped by individual or organization needs.

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Abstract

The concept of a web resource is primitive in the web architecture, and is used in the definition of its fundamental elements. The term was first introduced to refer to targets of uniform resource locators (URLs), but its definition has been further extended to include the referent of any uniform resource identifier (RFC 3986), or internationalized resource identifier (RFC 3987). In the Semantic Web, abstract resources and their semantic properties are described using the family of languages based on Resource Description Framework (RDF). Web based services are very much used in libraries

Background The concept of a web resource has evolved during the web history, from the early notion of static addressable documents or files, to a more generic and abstract definition, now encompassing every 'thing' or entity that can be identified, named, addressed or handled, in any way whatsoever, in the web at large, or in any networked information system. The declarative aspects of a resource (identification and naming) and its functional aspects (addressing and technical handling) were not clearly distinct in the early specifications of the web, and the very definition of the concept has been the subject of long and still open debate involving difficult, and often arcane, technical, social, linguistic and philosophical issues

Shift From Documents And Files To Web Resources In the early specifications of the web (1990–1994), the term *resource* is barely used at all. The web is designed as a network of more or less static addressable objects, basically files and documents, linked using uniform resource locators (URLs). A web resource is implicitly defined as something which can be identified. The identification deserves two distinct purposes: naming and addressing; the latter only depends on a protocol. It is notable that RFC 1630 does not attempt to define at all the notion of resource; actually it barely uses the term besides its occurrence in URI, URL and URN, and still speaks about "Objects of the Network". RFC 1738 (December 1994) further specifies URLs, the term 'Universal' being changed to 'Uniform'. The document is making a more systematic use of *resource* to refer to objects which are 'available', or 'can be located and accessed' through the internet. There again, the term *resource* itself is not explicitly defined.

Resources in RDF and the Semantic Web First released in 1999, RDF was first intended to describe resources, in other words to declare metadata of resources in a standard way. A RDF description of a resource is a set of triples (subject, predicate, object), where *subject* represents the resource to be described, *predicate* a type of property relevant to this resource, and *object* can be data or another resource. The predicate itself is considered as a resource and identified by a URI. Hence, properties like "title", "author" are represented in RDF as resources, which can be used, in a recursive way, as the subject of other triples. Building on this recursive principle, RDF vocabularies, such as RDFS, OWL, and SKOS will pile up definitions of abstract resources such as classes, properties, concepts, all identified by URIs.

Using HTTP Uris To Identify Abstract Resources URLs, particularly HTTP URIs, are frequently used to identify abstract resources, such as classes, properties or other kind of concepts. Examples can be found in RDFS or OWL ontologies. Since such URIs are associated with the HTTP protocol, the question arose of which kind of representation, if any, should one get for such resources through this protocol, typically using a web browser, and if the syntax of the URI itself could help to differentiate "abstract" resources from "information" resources. The URI specifications such as RFC 3986 left to the protocol specification the task of defining actions performed on the resources and they don't provide any answer to this question..

2xx Success indicates resource is an information resource. 303 See Other indicates the resource could be informational or abstract; the redirection target could tell you. 4xx Client Error provides no information at all.

Resource Ownership, Intellectual Property And Trust In RDF, "anybody can declare anything about anything". Resources are defined by formal descriptions which anyone can publish, copy, modify and publish over the web. If the content of a web resource in the classical sense (a web page or on-line file) is clearly owned by its publisher, who can claim intellectual property on it, an abstract resource can be defined by an accumulation of RDF descriptions, not necessarily controlled by a unique publisher, and not necessarily consistent with each other. It's an open issue to know if a resource should have an authoritative definition with clear and trustable ownership, and in this case, how to make this description technically distinct from other descriptions. A parallel issue is how intellectual property may apply to such descriptions.

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User Education - IV

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ROLE OF LIBRARIAN FOR USER ORIENTATION IN COMPUTERIZED LIBRARY

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Abstract

Knowledge of information handling concepts is of great importance for students, faculty and research workers. Number of users are spending number of aimlessly hours for locating the information. In order to fulfill the second law of Library Science librarian has to play a vital role regarding to orient the system of retrieval of information in computerized library. To utilize the growing range of web resources, faculty and students have to acquire and practice the skills necessary to exploit them. Organizing user orientation program is became essential need to train the user to seek the required information and then only users are able to consult directly to the necessary source of information.

Keywords : *User Orientation web resources practice skill, Role, Computer, Instruction, Plan*

Introduction: In order to meet the demands of the user libraries built their own database with the help of the computer and the user-friendly software. Database of various reading materials is computerized by putting the effects of the library professionals. The aim of computerization is to provide the timely service to the user. Once the library is fully computerized, role of librarian began to orient the users of the library for consulting and locating the required piece of information. Number of users and available equipments is to be considered while planning the user education. If librarian of the institute of higher learning is not planned for the user orientation program then the entire efforts taken by the institute will no importance. In a institute librarian have to organize such type of orientation programs as & when required for the optimum use of the reading material acquired by the library. Traditional catalogues are replaced by the online public access catalogue (OPAC). If orientation programs regarding OPAC is organized then only students & faculty are able to search the information properly. User Orientation Program is never ending process in libraries. In fast growing era of information, user orientation becomes worthwhile. There should have well developed plan to improve the awareness of user to locate the relevant document & retrieve the necessary information. "The growth of Information Technology particularly in terms of memory and power of computers has made the storage of information easier to handle. Now we can store vast amount of information, the hard copies of which might have occupied a more space on the selves. But while doing so, we have to pay much more attention for organizing and retrieval of information."

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Why user orientation? Searching the information stored in digital format or in computerized library needs orientation program to the user, because it is more difficult than finding the printed material in traditional library without the proper orientation. Users wasting their valuable time before seating the computer & they find it difficult to retrieve the information. In this context user orientation becomes necessary need to acquaint the users to seek the required information of his/her interest. The information available on the internet can overwhelm the students who lack the skills for verifying the quantity of information available online. Arora (2005)

Elements involved in user orientation Computerized library enable many users to use the modules involved in a system & to know the what each module contains. Users have been, by and large deeply rooted in traditional methods and have not seen some difference in them that they are not experts in automation. In this connection following elements should have to be considered by librarian while providing the user orientation program . 1. Information & its handling. 2. Sources of Scientific, Technical and Industrial information 3. Organizational communication Apart from above considerations librarian should not assume that the user have the knowledge of following advances in information technology i.e. 1. Online access to database. 2. Electronic Journals. 3. Electronics Knowledge Book. 4. Direct document delivery 5. Teletext. 6. Teleconferences. 7. Other multimedia Instead having the awareness of the above advances user caused for increased complexity in finding & selecting the useful information. Therefore, it is the prime function of librarian to orient the user for above advances and then only users are able to get the absolute advantage of the computerized/Technology enabled library. So for librarians first task is to motivate user to get trained for computer based library services. In brief user should be provided necessary and proper skill to retrieve the stored information stored in various kinds of information.

User Orientation & Librarian Librarian should do keen observation of user information seeking behavior. Librarian and faculty can form a partnership to situate the teaching of information literacy skills of students. As soon as students/users enters the higher learning institution librarian should have a plan of user orientation program & accordingly he have to implement it effectively. The librarian needs to develop benchmark for students information orientation competency. Wang and Artoe (2505), "Information literacy training has been considered the sole domain of librarians. Nevertheless, a multidisciplinary approach is the most effective way to play an active role in this process. It requires joint efforts from librarians and faculty to interpret information literacy across the curriculum."²User orientation is necessary for users as they access, evaluate, organize and use of information from a variety of source, select the appropriate terminology that translates the concept or subject for formulating a search strategy, analyze the data collected for value relevancy quantity and suitability. Therefore, librarian has to put his efforts to improve the information literacy skills in the modern world due to the explosion of information available from sources such as internet.

“Information systems are complex and information resources are many and varied. Without instruction, obtaining desired information can be arduous and time consuming. Librarians are both educators and experts in the use of information technology. It is their role to foster information literacy in partnership with faculty and teaching assistants.”³

User Orientation Plan :It is important that all times there is an obvious indication of what is being shown & what should be done with it. It is also important that user is given a simple way of finding what is the system and how to get it out and a clean indication of any action which could make permanent change in the data or system operation. While forming the plan of user education following factors have to be taken in to account. 1. The different levels for which training is required. 2. The variety of methods required to train user in locating the information. 3. The user Education plan must be of short duration.

Conclusion : When computerizing library a information system, it should be considered how it affects the user operator. The computer is being used only to serve and extend its capabilities, as such it may be wise for management to automate all possible tasks with due consideration of the effect, it will have the correct allocation of tasks to machines and human being is essential for users general wellbeing and overall performance. User may not vary in their mental characteristic but also in qualitiveness and quantitiveness also. Obviously, these differences must be considered when designing equipment, environment and tasks. User orientation is necessary for access the stored data in the computer need to use skills, be oriented to all users of higher learning and carefully designed for students teaching staff research fellows both by initial and continuing education.

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PROBLEMS AND CHALLENGES OF SERVICES IN LIS EDUCATION IN CHANGING TECHNOLOGICAL ENVIRONMENT

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Abstract

Now The Global era Emerging technology identify, evaluate and implement the application of current and emerging technologies for use in the library management and services Challenges emerging out of library services and in management, technological advancements has to be updated at regular times to compete the faster growing environment. This paper elaborates on how technological innovations have led to the improved information management and library services. The overall purpose of study is to share the resources using new technologies with the facilities available that would provide a variety of features to save time, promote community development and drive better services for the library users. This paper fills a gap in the digital library project management literature by providing an overview of the issues related to implementing and using emerging technology and innovative practices within libraries

Keywords: *Emerging, Challenges, innovations, digital*

INTRODUCTION: In the 21st century, several professions are adapting with changes and pacing with new useful technologies for their survival and advancement. In this century creation of new knowledge, capturing of new ideals promptly and their timely application is crucial for success in any endeavor. Integration of ideas to find solutions to complex problems, technological convergence to develop better and cheaper products, and progression towards greater interface between policy, strategy, research, practice and service to clientele is taking place. A new kind of competitive work environment, is emerging where cutting edge knowledge, ingenuity and new ideas make a big difference in advancement and hence there remains a constant hunt for talent and hiring people having agility, requisite skills and competencies, inclination for updating, penchant for learning and doing work in a better way through constant innovative approach. In the knowledge based societies organizations are metamorphosing to learning organizations, creating knowledge infrastructure for churning new ideas to ensure enhanced earning by creating economic value out of new ideas. Learning organizations encourage their employees to continuously upgrade their skills and competencies and have knowledge of state of the art technologies that are applicable to their work. "Any large organization to-day has to survive, grow and prosper in a highly competitive, dynamic rapidly changing complex environment, where human obsolescence is as common as that of machines and where survival is only of the fittest." (Bhatia & Singh, 2000) The present networked information environment has facilitated increased awareness of learning opportunities through greater flow of information and helped the people to realize their true potentialities.

OVERVIEW ON DEVELOPMENT OF LIBRARIES: Ongoing Development in Libraries and Information Centers: Libraries and information centers are undergoing metamorphosis and are reengineering their services, reskilling their staff and reorganizing their work space in consonance with changing information systems, better and more effective information communication channels, and users' preferences for accessing information. The networked transmitted digital documents are increasingly accepted as a medium for recording and transmission of information because of elimination of need for physical storage, economical accessibility at the fast speed, possibility of using the same documents by several users at the same time, and multimedia integration. Digital collections have helped to realize the goal of universal availability of publications in the true sense and provided freedom to have personal space to instantly communicate ideas through blogs.

Challenges and Problems of LIS Education: There are several challenges in keeping the LIS education programs relevant to new kind of jobs in the market and new work performance requirements at work places. Whenever, some changes are introduced in the educational programs, needs for still more changes emerge to align such programs with the job markets and new roles and responsibilities in the libraries and information centers. So long as the information environment remains fluid, LIS education programs will remain in a state of flux, demanding constant change and adaptation to new developments, technologies and desired service levels. However, there was ever no time in the history as to-day when library and information science educators are able to offer broad based, flexible and diversified LIS education and training programs that can suit the manpower requirement for knowledge management in different sectors of economy. Further, the courses of study can be tailored to any requirement of imparting specific need based skills and competencies.

SUGGESTIONS FOR IMPROVEMENT: 1 Indian library schools need to develop a flexible and scalable system of LIS education. It requires not only tailoring LIS education programs to the existing societal needs but also step into areas of enormous service gaps that exist to adequately cater to the information and communication needs of the Indian society. LIS schools should spearhead across boundaries, grow across horizons and diversify educational programs in areas such as social informatics, medical informatics, legal informatics, financial informatics so on and so forth. This will facilitate a very flexible system of LIS education and offer greater choices to learners to opt courses that suit their qualifications, individual needs, interests and levels. The emergence of interdisciplinary subjects too demands cutting across boundaries of traditional curricula. The present compartmentalized type of curricula that is concentrating mainly on core subjects must be revamped because of its limitation to expand the knowledge base of students. 2 The present LIS courses have

been developed on the premise of librarianship as humanism in practice and information service as a work activity for societal good and free for all. The emerging information environment offers enormous opportunities to create economic value through knowledge management and strategic information handling provided the LIS education and training programs are properly oriented to such objectives. Efforts should be continuously made to prepare professionals and empower them with knowledge and skills that not only help them in self employment but also offer them better opportunities for employment than what exist at present. Some professional librarians in India have very successfully set up corporate houses in information products and services in the cities of Bangalore and Gurgaon.³ Library and information professionals are increasingly working in a networked environment, dealing with library automation packages and web based information resources and services. Every LIS professional irrespective of his future place of work must have knowledge and skills for handling information technology and has the competency for creation and collection of information using the Internet. The course contents must incorporate practical training of information technology and the Internet to the extent that library professional should have knowledge of database development, handling familiar library software packages, are able to create dynamic web pages and collect information fragment and documents on the Internet and aggregate them to virtual library resources of the institution. They should also be able to handle routine hardware problems in libraries and create necessary information tools and content through collaborative efforts in the network environment. Library professionals should be trained to organize personal services to clientele that approach for service as well as network enabled services that reach up to their desktops.⁴ Coordinated and well planned research effort in LIS research is desired in the country to enhance the knowledge base of the profession and pursue areas of practice that not only helps the professionals to better serve the society but also make them more indispensable for employment. The LIS research should be more focused on key issues of current and recurring concern. Coordinated research can even be initiated in the Asia-Pacific region after analyzing and identifying key professional issues and concerns.⁵ LIS research must be focused on development of new information products and services as well as improvement of existing practices. Encouraging joint research programs, we should leverage advantages from co-lateral disciplines such as e-publishing, information technology, data mining, sociology, psychology, management sciences, etc, in the interest of growth of our own profession and enriching our own educational programs. Adequate balance and priorities in research must be set. For instance, before emphasizing on marketing of library and information services, we must see what we are supposed to sell.⁶ The technological developments are flashed before they are actually practiced and used at large. LIS programs must accommodate such developments leveraging applications for better performance in services and keeping the education training programs ahead of times. Some large libraries are also testing technologies and developing methods to better serve the user communities. We are therefore heading towards an era where synergy without jeopardizing the autonomy will be required for joint mission oriented research with the participation of libraries and library schools in the interest of extending the frontiers of knowledge of our domain and advancement of professional practice.⁷ In the ever-changing landscape of information, obsolescence of existing methods of information handing is now a reality. We require constantly scanning the newly emerging information environment and proactively anticipating changes to quickly adopt new ideas that offer our professionals opportunities for more learning and training to render enhanced services to society and more convenience to user communities.⁸ LIS schools should have strategies in place for continuous change management and structural changes in courses they teach and training they impart.

CONCLUSION: Endnote Taking into consideration the emerging electronic information scenario, perceiving the need for new possibilities of desired skills and Competencies in the ensuing years, library schools in the Asia –pacific region should collaborate to identify what way new competencies can be imparted to aspirants of LIS education with the twin objective of giving learners a better deal in life and offering the society and institutions effective knowledge managers. According they should build curricula and create infrastructure that not only match the dynamics of the knowledge society but also creates excellent job opportunities and better placements for their graduates. Emerging new information environment do have the potential to create new opportunities and avenues for young graduates but profession must oversee these developments and initiate appropriate actions so that employment generated in the domain of managing the knowledge resources, are not governed and geared by long years of service but by cutting edge knowledge, skills and competencies one possesses. Discussion on LIS education and training is never ending.

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SELECTED WEB- RESOURCES ON LEGAL EDUCATION (LAW FACULTY)

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Abstract

The present paper discusses and throws light on concept of use of selected web resources on the legal education because the impact of ICT and his development change the education scenario. This paper will attempt to understand what is legal education? What is web resources and how to impact of legal education to the legal profession as well as to the society? Today the library promotes the global use of digital information through internet and provides the information to our user. It is also discuss the web- based learning. Web- based learning consists of technology that supports traditional classroom training and online learning environments. It is also discuss the various type of web resources on legal education for law faculty for educational purpose.

Introduction: Legal education is the education of individuals in the principal, practice and theory of the law it may be undertaken for reversal reasons including to provide the knowledge and skill necessary for admission to legal practice in a particular jurisdiction to provide a greater breadth of knowledge to those working in other professions such as politics or business. Today the law education is most important for societies today some journals and database are avail be the target recipients of law information are broadly group into many categories. Researcher, teachers and students, lawyers, judge, law administrator law staff and societies law information is mainly provide for legal awareness among common people. The web resources have revolutionized the delivered of law information. Impact of telecommunication technology have fostered the development of computer networks that allow access vat information and services of the many computer network that have been developed the most prominent is the internet. The amount of information available on the internet is already enormous. Online resources have made an entire revolution in education not only because they are convenient and accessible but because they make the entire process of teaching and learning more interesting and memorable. Web based resources are very powerful and conducive to learning when used correctly student are able to see how different variables impact the simulation through its interactivity they can change values move objects around and more student have more thorough understanding of the content education institute are provide the required resources and platform where anyone can access any kind of information anytime and anywhere irrespective of physical boundaries Law libraries play a central role in information dissemination for their institution by selecting the most useful and authoritative law publications and making them available to faculty, student and researcher.

Web -based resources:- Web based resources are very powerful and conducive to learning when used correctly science benefits particularly well from these resources in the form of simulations. Simulation can demonstrate to students a physics concept in an interactive environment.

What is web-based learning:- It has many names we have probably heard the following terms online learning, e- learning, computer- based training technology- baed instruction. Web- based learning is one way to learn using web- based technology or tools in a learning process. Web- based learning consists of technology that supports traditional classroom training and online learning environments.

What is legal Education:- Legal education is a professional education faculty of law prepares its students to fill a variety of societal role like becoming judge, lawyers, corporate Executive public services operating NGO and as politicians. The basic obligation of a law faculty is to provide essential skill, legal knowledge, developing competence and providing motivation for engaging with the moral dimenssons of professional life law faculty has responsibility to the legal profession as well as to the society

Online legal information sources

International online legal Databases:- 1. Westlaw International, 2. HeinOnline, 3. LexisNexis 4. JSTOR 5. E-Hart

Westlaw International: Westlaw International is online research service, providing legal professionals with legal, news and business information from around the world. It provides laws and legal information from another country or international information for legal researchers, law students, and lawyers for their practice area. Westlaw International is a password based and IP address based online legal research database.

Hein Online: Hein Online is product with more than 50 million pages of legal history available in an online, fully searchable, image-based format. Hein Online provides comprehensive coverage from inception of nearly 1,300 law and law-related periodicals

LexisNexis: LexisNexis® Academic is a service for researching news, business, and legal topics. It contains more than 6,000 sources from all over the world, drawn from print, broadcast, and online media. Topical indexing and powerful search features help to find exactly the information in need.

JSTOR (Journal Store): JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. JSTOR offers a high-quality, interdisciplinary archive to support scholarship and teaching. It includes archives of over one thousand

leading academic journals across the humanities, social sciences, and sciences, as well as select monographs and other materials valuable for academic work

E-HART book publication: E-Hart Book publishing is an online database providing books published by E Hart Book Publishers. Library may choose selected book titles through one time subscription fee. Being an IP based database, students, faculty members and research.

National (Indian) Online Legal Databases: 1. Manupatra 2. Indlaw 3. SCC Online 4 AIR SC & High Courts 5 AIR Criminal Law Journals

Manupatra: Manupatra.com is India's most comprehensive online legal & business policy database. Manupatra revolutionized the way in which people do legal researches in India. Since its beginning in 2001, has come an online research tool for legal research in India. Manupatra is the only legal publishing database with presence in all three segments of Print, CD Rom publishing & online publishing. It covers the following legal information.

Indlaw :INDLAW is a business-to-business Internet provider of research modules relating to Indian legal, tax, business and regulatory issues. Indlaw is part of the Indian law online project which was launched in April 1997 as a collaborative exercise between professionals and academicians based in U.K. and in India to build an electronic legal library to enable solicitors, advocates, students and clients to have access to on various primary and secondary legal documents like the constitutional texts, parliamentary debates, case law, Parliamentary and State enactments and delegated legislation in both India and the U.K. Indlaw is today a leading provider of easy-to-use comprehensive and cost-effective legal, tax and regulatory information

SCC Online: The Law Library may provide Supreme Court Cases online with the help of SCC Online commercial software. A case may be searched by General Search, Topical Search (subject based), Case Index (Nominal Search) and Find by Citation. The latest judgments may be downloaded through internet with the help of SCC Online Search Engine.

AIR Supreme Court/High Courts:The AIR High Court Software contains data of 22 High Courts 1965 till 2009. This data contains approximately 52,000 judgments in over Two Lakh Pages, delivered by over 3800 Hon'ble High Courts Court Judges on 5042 Statutes/Acts covering over 550 Sub-edited Topics. The Software is easy to install, use and customer friendly, keeping in view International Standards and norms. This Data is the store-house of decisions on various Topics and Subjects including Central and State Legislations from across the country.

Open access journal for law: 1. Journal of open access to law – <https://joal.law.cornell.edu> 2. openaccess journals search engine (OAJSE) – www.oajse.com 3. journal of legal analysis – <https://academic.onp.com>

Best website for law students: 1. Parliamentary Debates:

1. Parliament of India Debates - <http://164.100.47.132/LssNew/Debates/debates.aspx>

2. United States of America Senates Debates - <http://www.house.gov/>

2. Legislation: 1. Indian code textbase - (<http://indiacode.nic.in/>) 2. United state code- (<http://www.gpoaccess.gov/uscode/>)

3. Case Law: 1. Indian Courts- (<http://www.indiancourts.nic.in/>) :-The 'Indiancourts' is a bouquet of Web Sites of the Supreme Court and all 21 High Courts and their Benches in India. It provides a single point access to information related to the Supreme Court and any High Court in India.

2. Supreme court of India & Indian High courts Judgements (JUDIS)

(<http://www.judis.nic.in/supremecourt/chejudis.asp>)

4. Constitution: 1. Constitution of India - (<http://indiacode.nic.in/coiweb/welcome.html>) 2. Constitution of united state of America - <http://www.gpoaccess.gov/constitution>

5. Legal Databases: 1. Social science research Network - <http://www.ssrn.com/>, 2. Global Legal Information Network <http://www.glin.gov/search.action>

6. Law commission: 1. International Law Commission - <http://untreaty.un.org/ilc/guide/annex2.htm>

2. Law Commission of India - www.lawcommissionofindia.com

7. Human Right Commission: 1. Asian Human Rights Commission <http://www.ahrchk.net/index.php> 2. Human Rights and Equal Opportunity Commission <http://www.hreoc.gov.au/index.html>

8. Commission & committee Reports: 1. National Human Rights Commission Reports - <http://nhrc.nic.in/>

2. Law Commission of India Reports - <http://www.lawcommissionofindia.nic.in/>

Conclusion: So many web sites available on law and related to legal education. It is impossible for any user to get the information in the shorted time so the some selected web resources mentioned in the paper will help in locating to law related information for law profession, teacher, students, judge, lawyers and researcher. However in most of the cases free access to the full text may not be possible as one has to be a paid individual or institutions.

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WEB BASED LIBRARY SERVICES AND USER EDUCATION IN INDIA AND UK UNIVERSITY LIBRARIES

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Abstract

Information literacy education is being used to help users' increase such skills in an electronic information society. User education is one of the necessary activities of the library to optimize the use of library services. User education often includes: library orientation, induction and information skills training. The main concern of this paper is to recognize the concept 'user education' in the global context and its present practices in university libraries. This paper discusses the status of web based user education in Indian University libraries and UK University Libraries. This study intends to identify with problems encountered, challenges being faced and potential new opportunities available on user education in university libraries.

Keywords: User education, University library, web technology, Web-based library services, User Interaction.

Introduction: Libraries today are well equipped with the latest technology and different types of e- resources, tools which satisfy expectations and demands of users. Academic libraries are building great efforts to open the gates to information as widely as possible to let students and faculty freely and ably seek and retrieve the information they need. The main task of user education is to guide library users to make best use of library resources, including collection resources and human resources, as well as training their skills in the use of library resources. User education is broader than reference service in regards to exploring, collecting, and using information resources by users (Sun & Rader, 1999). User education is an educational activity of the library and information organization, which is carried out intentionally and systematically to increase users' information awareness and retrieval skills. Library orientation programmes are one of the most common practices by the librarians to educate the new Students. This paper discusses the current status of various web-based services offered by selected top university libraries in the UK and in India to educate their patrons.

Significance of user education in library

The purpose of this research is, To study and evaluate prominent library websites from UK and India in order to better understand innovative services. To examine the web-based services provided by the libraries To study how these libraries educate their User through library websites and by various ways and what more they can do in this direction

1. Review of Related Literature: Tobin & Kesselman (1999) suggested that today web based environment for distributing information over a large network and web-based instruction is becoming the desired tool for these new users. In the web environment it doesn't matter if the user is connecting to library resources on the computer in the library, elsewhere on campus or from his/her home. **Rhodes & Chelin (2000)** his paper summaries the findings that relate to the methods used in university library user education in UK university libraries would like to offer comprehensive user education programmes to all students. Ideally libraries would offer various approaches to user education, tailored to suit students' differing learning styles. The provision of user education via the Web is inevitably a relatively new practice. Almost 80% of the sample makes use of the Web as a medium for some elements of user education. This reflects growth in use of the Web, generally. **Zhang (2006)** point out that the users of the library not only in academic but any library system to adopt the power of Web 2.0 and web 3.0 technology which is gaining rapid importance in the emerging trends and technologies in libraries and information services to educate its user for better utilization of the library resources. **Zhu (2009)** he noticed that the content is to enable users to understand the basic overview of the library and master library's basic common sense and skills, with an initial capacity of intelligence, specifically including: the introduction of nature, functions and internal system of organization of the library; brief introduction about library and its services.

Methodology : My research from a methodological point of view contains the following elements:

Identification of a proper subset of libraries for the UK and India. Creation of a list of web-based services from what could be found on the library websites/blogs. Analysis of library services and patron education practices through web. Comparing the results for UK and Indian university library websites.

2. Limitations: The study will be limited to the top 05 Universities from the UK as per QS World University Rankings 2017 on the one hand, and top five Universities ranked NAAC "A" Grade University Libraries in India.

3. Sample: The following are the list of University libraries selected for the study Following Are the

Top Five Universities in UK Ranked in QS World Ranking

Sr. No	Name of University	Place	Founded
1	University of Cambridge	Cambridge	1209
2	University of Edinburgh	Edinburgh	1582
3	University of Oxford	Jericho	1096
4	University of Manchester	Manchester	1824

5	University of Bristol	Bristol	1876
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Top five Universities from India

Sr. No	Name of University	Place	Founded
1	Jawaharlal Nehru University	New Delhi	1966
2	Banaras Hindu University	Varanasi	1916
3	Jadavpur University	Kolkata	1955
4	Anna University	Chennai	1978
5	University of Hyderabad	Hyderabad	1974

The main focus of this research was the careful checking for each website of the services offered and noting them down. Only just quantitative analysis could be done.

Web based user education in UK : The UK Government highlighted the importance of information skills at National Curriculum level for primary and secondary school pupils, through the introduction of 'key skills', and at higher education level with recommendation 21 of the Dearing Report. Libraries need to adopt approaches to user education which will reach nontraditional students such as part-time and distance learners. Recent initiatives include the Teaching with Independent Learning Technologies project funded by the Higher Education Funding Councils in the UK, and EDUCATE, a European Union funded project. Most research was designed to discover whether web technology has had an impact on user education, particularly information skills instruction, in UK university libraries (Rhodes and Chelin, 2000).

Findings, Preliminary Data Analysis and Observations

The List of Services and Their Clustering

Bibliographical Services Access to Databases Search/Discovery tools Catalogues Find a Library Archives /Digital Collection

Comparing Bibliographical Services : Below diagrams shows the **Bibliographical Services availability** difference for both UK and Indian universities. When I present the number of **Bibliographical Services** offered divided by the number of libraries, an 'average' is derived. I can compare the averages then in between UK and Indian university libraries. The main finding of my analysis is that while UK libraries on average offer all **Bibliographical Services** but Indian university libraries offer some services.

User Education Tools News, Upcoming Events, Blogs, Twitter, Facebook, Email, Instant Chat, Ask Us, Linked in, Video Tutorials, FAQs, YouTube, Service directory, Tips for access and use, Newsletter

Comparing User Education Tools : Below diagrams shows the **User Education Tools Uses** difference for both UK and Indian universities. When I present the number of **User Education Tools Uses** offered divided by the number of libraries, an 'average' is derived. I can compare the averages then in between UK and Indian university libraries. The main finding of my analysis is that while UK libraries on average offer more **User Education Tools** comparing to Indian university libraries. Suggestion is that as per present research finding is that Indian University libraries can using the Web for information skills instruction, train more students in information skills.

Web-based Best Practices: Higher-sophistication specific services. Online Exhibitions. Virtual Book Tour

Comparing Web based Best Practices: Below diagrams shows the **Webbased Best Practices** difference for both UK and Indian universities. When I present the number of **Webbased Best Practices** offered divided by the number of libraries, an 'average' is derived. I can compare the averages then in between UK and Indian university libraries. The main finding of my analysis is that while UK libraries on average offer more **Webbased Best Practices** comparing to Indian university libraries. **Conclusions** University libraries would like to offer comprehensive user education programmes to all students. Ideally libraries would offer various approaches to user education. The main finding of my analysis is that while UK libraries on average offer more **User Education Tools and Webbased Best Practices** comparison to Indian university libraries. Library induction appears to be a fairly well established practice for most university libraries in UK. This paper made an inventory of these services and clustered them together in groups: bibliographical services (5), patron education services (28), web-based best practices (5). My method of analyzing each of the websites of a sample of university libraries, on the one hand of the top-5 UK universities, on the other hand of the 5 top-Indian universities, allowed ranking the universities based on the number of such services offered. There is a role for instruction in library use. There is a role for the Web in instruction.

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ICTS: A STUDY OF ITS IMPACT ON DIGITAL KNOWLEDGE MANAGEMENT AND INFORMATION ACCESS IN TEACHER EDUCATION IN INDIAN HIGHER LEARNING INSTITUTIONS TOWARDS SOCIO ECONOMIC AND CULTURAL DEVELOPMENT

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Abstract

The Information and Communication Technologies (ICTs) play a vital role for knowledge access in “social and Educational Network Programmes” such as e-education, e-learning, e-governance, e-health, e-commerce, audio and video method of communication handling techniques, information and Knowledge Dissemination/Delivery Strategies and Pedagogical Skills for teachers towards handling classes in teaching etc. are promoting through ICT’s application tools in academic and R&D environment institutions for societal development. In view of this, the present scientific study research paper presents the “Digital Knowledge Management and Information Access in Teacher Education in Indian Higher Learning Institutions towards Socio Economic and Cultural Development” The ICT’s serve as a tool for Knowledge Indicators for Knowledge Access and Sharing Information for Resources Approach Objectives (KASIRAO) in Knowledge Organization Management Skills (KOMS) to acquire knowledge in Teacher Education and Training in the present pattern of education and curriculum development. Discusses the effect of e-knowledge communication access and its impact on Knowledge Sharing Values (KSVs) for sustainable development in education sectors. Highlights the key issues in relation to the paper theme concepts under study. Provides the policy guidelines for issues related sources and implementing strategies for promoting Teacher Education and empowering students in education sectors towards sustainable development in the present Digital Knowledge Society.

Keywords: Information and communication Technologies (ICT’s), Digital Knowledge Management, Knowledge Access and Sharing Information for Resources Approach Objectives (KASIRAO) in Teacher Education in Indian Higher Learning Institutions towards Socio Economic and Cultural Development.

INTRODUCTION: The information and communication Technologies (ICTs) play a vital role for Knowledge Access and Sharing Information for Resources Approach Objectives (KASIRAO) on Digital Knowledge Management and Information Access in Teacher Education in Indian Higher Learning Institutions towards Socio Economic and Cultural Development. and decision making policy for Master Plan on Education and Training (MPET) for sustainable development in academic and R & D environment institutions

REVIEW OF LITERATURE: The ‘Web-Knowledge Literature’ sources served as a tool for this present study scientific paper on “ICTs: A Study of Its Impact on “Digital Knowledge Management and Information Access in Teacher Education in Indian Higher Learning Institutions towards Socio Economic and Cultural Development.”

DEFINITIONAL ANALYSIS The value added paper theme related concepts are identified on ‘Definitional Analysis’ part in Table - 1.

TABLE – 1 The value added paper theme concepts

S.No	The value added paper	Definitional analysis view
1.	Information and	The term “ICTs” may be defined as the use of hardware and
2.	Digital Divide	The term “Digital Divide” may be defined as the disparity
3.	Sustainable Development	The term “Sustainable Development” may be defined as the
4.	Information and	The term “Information and Documentation Management”
5.	Pedagogy	The term pedagogy may be defined as a modern tool for

Scope and Objectives of the Paper The scope and objectives of the present study paper are significant in the following respects. To create Knowledge Awareness and Access on e-knowledge resources and Knowledge Sharing Values for social constructions (Connecting teachers in to a learning community) for pedagogical skills and curriculum development towards sustainable development in Education system and services. To promote National Policies on ICT’s use in teaching, learning and research activities towards socio-economic and cultural development. To establish the steering committee on ICT in educational policy and planning strategies in examination and evaluation system towards sustainable development. To identify the planning strategies on issues in relation to examination and evaluation system and providing solutions for quality education.

RESEARCH DESIGN/METHODOLOGY ADOPTION The Web Knowledge Resources (WKR) served as a tool/research design for data collections, analysis and interpretation for this present paper theme related study.

LIMITATIONS: The Limitations of the study is confined in relation to the present paper theme study titled “ICTs: A Study of Its Impact on “Digital Knowledge Management and Information Access in Teacher Education in Indian Higher Learning Institutions towards Socio Economic and Cultural Development”.

ROLE OF INNOVATIVE CONCEPT KNOWLEDGE INDICATORS TOWARDS

INSTITUTIONAL DEVELOPMENT: In view of the subject content as indicated above, the innovative concept titled “Knowledge Access and Sharing Information for Resources Approach Objectives (KASIRAO)” is essential for “Knowledge Sharing Value and its Impact on Curriculum Development and Pedagogical Skills

in ICT Environment for sustainable development in educational system and services in academic R&D environment institutions”. The innovative concept as identified in Section - 7(**Figure-1**) on education and sustainable development perspectives.

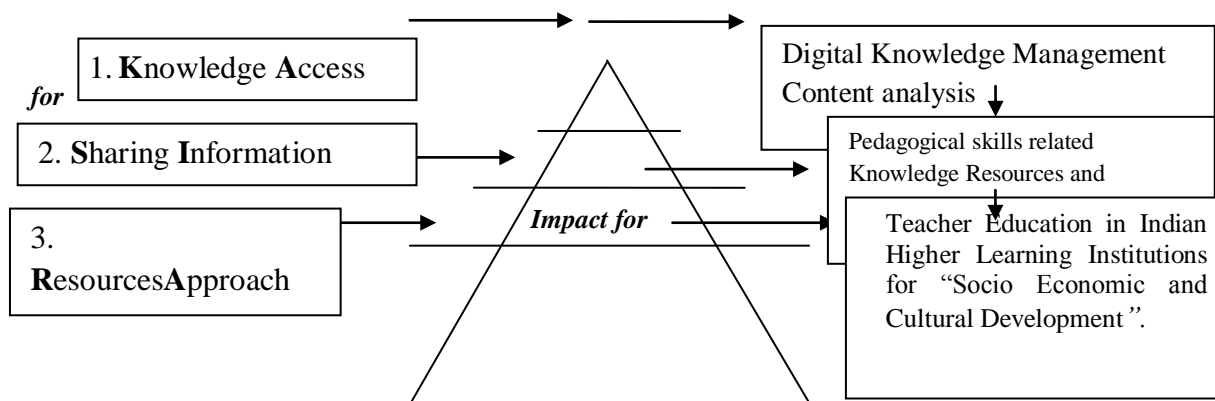


Figure – 1 Innovative Concept “KASIRAO” and Sustainable Development in Education System and Services in ICT Environment

KNOWLEDGE INDICATORS ON ISSUES AND STRATEGIES

The issues and strategies are indicated in Table - 2

Table – 2 The Issues and Strategies

S.No	Issues	Planning strategies
1.	Education and Development	Creating Awareness on e-Knowledge Information Resource
2.	Equity consideration	Encouraging and motivation factors are essential for
3.	Quality education	Reformation is essential for curriculam change and
4.	Structure, administration and	Providing adequate funding facilities (cost and financing of
5.	Curriculam	Providing training to the faculty members and e-learning
6.	Cost and financing of	Planning techniques and approaches are essential for web-
7.	Planning technique and	Adequate follow up action is essential for information system

Concluding Remarks: Based on the Paper theme study, the following suggestions were observed leading to Concluding remarks:

Digital knowledge Dissemination and Access towards sustainable development in Educational Sectors. Realizing the importance of “Web Knowledge Information Resources” and their access facilities in Information and Documentation Knowledge Resources Centers, it is suggested that the Information and Documentation Knowledge Resource Centres need to have ICT based laboratories in the academic and R&D environment organisations to access with e-knowledge scientific communication resources to generate innovative ideas to the teaching community in relation to curriculum development and pedagogy skills for handling classes in the modern class rooms towards sustainable development in educational system and services.

Knowledge Dissemination and Knowledge Sharing Value. In view of “Knowledge Dissemination and Knowledge Sharing Value” in relation sustainable development concepts such as ICT and pedagogy skills, ICT in teaching, education, ICT policy in e-learning education and open educational resources, international collaboration and networking in education and professional development among the academic and R&D environment educational institutions for sustainable development, it is essential that the concept on Knowledge Access and Sharing Information for Resources Approach Objectives (KASIRAO) in Digital Knowledge Management and information access in teacher education and training towards socio- economic and cultural development.

ICT AND DIGITAL LITERACY Realizing the importance of “ICT and Digital Literacy” in Information and Documentation Knowledge Resources Centers, it is suggested that the government should take initiatives to develop NEC App.(National E- corner) for available e- resources, open web resources and services in different libraries/institutions in the country to make best use of them which are just a click away on nominal fee to complete vision Digital India 2020.

GLOBAL TRADE AND E- COMMERCE Realizing the importance of “Global Trade and E- Commerce” it is essential that for Small and Medium Enterprises (SMEs) and besides that will help to eliminate gender barriers in trade and commerce in relation to the concept on World Trade Organisation(WTO).

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PROFESSIONAL ETHICS & VALUES OF LIBRARIANSHIP

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Abstract

Writing the history of libraries in India has not yet received the attention it deserves. Unfortunately, even the library schools in India have also not given due importance to the study of library history. The pathetic scenario obtains in sparse literature available on this area and the students of Library and Information Science also have not taken serious studies in this regard. Academic libraries are considered to be the nerve centres of academic institutions, and must support teaching, research, and other academic programmes. The situation in academic libraries of India is the same as that of academic libraries the world over; however, Indian libraries must provide maximum information with limited resources. Professional ethics is a field of applied ethics whose purpose is to define, clarify, and criticize professional work and its typical values. Professions are characterized sociologically by means of their members' scientifically grounded expertise and their service ideal. Such a definition applies to what can be called classical professions. Their service ideal can be understood in reference to values that define the goals of their work; for example, a physician's primary goal is to promote health.

KeyWords: LIS behavior, Ethics, Role of UGC in higher education, Information and communication technologies (ICT).

INTRODUCTION: Every profession in the human history has its origin, prospects and challenges; it is the desire of every member of the professional body to seek for solutions to the problems militating against their successful journey in the society.

VALUES OF LIBRARIANSHIP PROFESSION : According to Lester (2010), professional is someone who claims to possess knowledge of something and has a commitment to a particular code or set of values, both of which are fairly well-accepted characteristics of professions. In a literature review on professional values in Library and Information Science (LIS), Finks (1989) argues that these values fall into four categories: **Professional values** are inherent in librarianship and include recognizing the importance of service and stewardship; maintaining philosophical values that reflect wisdom, truth, and neutrality; preserving democratic values; and being passionate about reading and books. **General values** are "commonly shared by normal, healthy people, whatever their field." Librarians' work, social, and satisfaction values express a commitment to lifelong learning, the importance of tolerance and cooperation, and the need to feel accepted. **Personal values** specifically belong to librarians and include humanistic, idealistic, conservative, and aesthetic values. He must be passionate towards people and reading. **Rival values** threaten the mission of libraries with bureaucratic, anti-intellectual, and nihilistic (useless and senseless) ideas. Librarians must have faith in the profession's ability to do good (Finks, 1989; Wikibooks, 2013).

ETHICS, VALUES AND LIBRARY PROFESSIONAL'S BEHAVIOR IN ICT ENVIRONMENT: Ethics or morality is to give uphold and give due respect to the library as an integral part of institute. Finally ethics is most useful to establish the library status and task in providing information for the modernization of society because library is a social institute.

CORE VALUES FOR LIBRARY AND INFORMATION PROFESSIONALS : Acting aright maintains good relationship between library and users. Development of the profession. To strengthen the cooperation among library professionals and to increase good relationship with colleagues. To maintain library standard and commitment in providing knowledge for the development of society.

ROLE OF UNIVERSITY GRANTS COMMISSION (UGC) IN HIGHER EDUCATION: UGC, established by an act of parliament in 1956, coordinates and monitors the higher education system in India and provides grants to the universities and colleges. Two hundred ninety four universities/institutions in the country are directly under the purview of UGC. It also advises the union and state governments on measures to university education

TRENDS AND DEVELOPMENTS IN HIGHER EDUCATION : It is acknowledged that universities all over the world face an imperative to adapt and adjust to a whole series of profound changes that fall into six major categories: the increased demand for HE in a lifelong learning context, the internationalization of education and research, the need to develop co-operation between universities and industry, the proliferation of places where knowledge is produced, the reorganization of knowledge, and the emergence of new expectations (European Commission, 2003, Virkus and Wood, 2004a).

CONCLUSION: In this paper, several issues that we believe are related to the professionalism of librarians have been fairly discussed. Librarianship profession has been seen as the most important profession in the land in which every other professions depend on for their survival; also, everyone in the human society rely on our profession to provide them with informational resources that will adequately meet their information needs. Hence, the practitioners of this laudable profession must possess some characteristics that would make them to be more effective in providing the much needed information to an individual, organizations and the general populace.

<http://www.ugc.ac.in>, <http://www.inflibnet.ac.in>

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NEED OF COLLEGE LIBRARY AUTOMATION

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Abstract

Information technology is a boon for the present century. It is a combination of several technologies and systems, such as computer technology, telecommunication technology, micro-graphic technology and information retrieval technology. Application of IT is very imperative for sustainable development in all spheres of human activities. IT, as a tool for harnessing information, needs facilitation in particular libraries of higher learning institutes with long term vision and prospective planning at a time when the country has entered the new millennium. The challenges of 21st century, such as, globalization, privatization and liberalization should not be neglected by higher education system. Hence the application of IT in higher education should consider these aspects. A properly computerized library will help its users with quick and prompt services. Library automation refers to mechanization of library housekeeping operations predominantly by computerization.

Keywords: Library Automation, Open Source Software, Computerization.

Objectives : To maintain bibliographical records of all the materials, in a computerized form. To provide bibliographical details through a single enumerative access point of holdings of a library. To reduce the repetition in the technical processes of housekeeping operations. To provide access to information at a faster rate. To improve the quality of teaching and research in institutions of higher learning by making provision for current books, journals and other library resources

Introduction: "Information" is the communication of news, knowledge, or facts. It consists of data endowed with relevance and purpose. Its main function is to present facts so that man's vision is broadened, thereby, enabling him to fight against the problems posed by ignorance and superstition. It is therefore considered to be a basic need of man, ranking after air, water, food, clothing, and shelter. Modern means of transport, computers, and telecommunications have reduced the world to a global village; wherein one need only to in, in order to be connected to the whole world. It is only recently that information has been recognized as a valuable commodity. Computers are capable of introducing a great degree of automation in operations, functions since they are electronic, programmable and are capable to control over the processes being performed. Open Source Software (OSS) has revolutionized the modus operandi of library software for library automation. There is a paradigm shift in the role of libraries from mere storehouse of information/ knowledge to knowledge disseminations to knowledge providers and further transformed as digital library. Information/ knowledge itself is of no value. It is the use of information that makes it voluble. The role of computers and their associated peripheral media are being increasingly used in library and information services for acquisition, storage, manipulation, processing and repackaging; dissemination, transmission, and improving the quality of products and services of library and information centers. There is a global change in the libraries, which indicate a shift from owning technology to using technology.

Need for computerization in college libraries: The main functions of a library are acquisition, technical processing, storage, retrieval and dissemination. The traditional methods of doing these result in slow, laborious and repetitive manual routines. With the advent of modern technologies and their applications, manual routines have transformed into machine oriented ones, which are more tedious. The application of modern technology has allowed access to and storage of information quickly anywhere in the world speedily. The availability of computers has gradually changed the library scene. The convergence of computers with new developments in telecommunication. Techniques and equipment is considered as new information technology. The new information technology has a wide range of services which libraries can avail them of an offer to supplement the existing ones to users. Some of the areas to which the modern technology could be applied in day to day activities of the libraries are acquisition, cataloguing, circulation, indexing and abstracting of articles etc. Computerized catalogue is best instrument to carry out the traditional work, the libraries cataloguing and indexing continue to be vital to incorporate vital information always paying attention to the international cataloguing regulation and the exchange of information format D line MARC 21. Maintaining order information. A computerized cataloguing system can facilitate the following : Efficiency and speed in cataloguing. Improved updating of the catalogue. More bibliographical details and depth of subject cataloguing.

Before Computerized	After Computerization
Acquisition Section : Indent registration duplicate checking preparation of on order cards, placing orders with vendors, receiving the books and invoices, verifying with the purchase order, returning damaged and other information, which are not in conformity with the purchase order, accessioning and preparing bill vouchers for payment, maintenance of claque forwarding memos etc.	Duplicate checking and placing orders are made easy by the application software which further avoids the preparation of on order cards and their filing. Receipts and monitoring budgets were done with one time entering of bibliographic records. The same record will be recalled for updating status and the linked files such as budget and order files will be automatically updated showing the actual status of the books in the OPAC.

<p>Circulation Section :</p> <p>Registration of library membership, issue and return of books manually, book reservation, book card filing, collection of overdue charges, sending reminders for overdue books and recalling the book against reservation, monitoring inter library loans.</p>	<p>Since barcode technology and hand held scanners are being used, the issues and returns of books and other services are made easy.</p>
<p>Information Services :</p> <p>Manual abstracting and indexing, current Awareness Service, Selective Dissemination of information matching document profile and user profile, Referral services, supplying journal articles on request.</p>	<p>Since Several databases both full text and abstracts are available online now the section can be changed to digital services section with the same strength of the staff. However, some relaxation may be extended to internal candidates possessing skills and competency to work in a computerized environment.</p>

Computerization in college libraries as pointed out line requires.

Library Automation: Software and Hardware: The systems can be used to clear all the pending technical and other works. The same systems after completing the arrear works can be used to automate the day to day functions and services of the library as well as to offer new and innovative services. Even with one system the work can be started and additional systems can be acquired subject to availability of the funds. The author recommends a Pentium computer with minimum 40 GB HDD, 256 MB RAM, cd Writer, 15" Color monitor, speaker, 54 kbps modem and other standard accessories. Software required will be Windows 95 or its later versions. MS Office and library application packages. If more systems are used Windows NT software for networking them needs procurement. If cataloguing work only is to be done at the first instance CDS/ISIS package developed by UNESCO can be used. Data from this can be exported to other integrated packages which libraries decide to use later. From the catalogue database prepared using CDS/ISIS other similar packages stock registers also can be printed. If other library housekeeping operations are also to be automated library packages from various commercial and government agencies are to be considered and one apt for the system is to be selected. **Meaning of Automation:** Automation is technology of automatic working in which the handling method, the process and design of professional material are integrated. This is the effort to achieve an automatic and self-regulating chain of processes. According to **Encyclopedia of library and information science**, "automation is the technology concerned with the design and development of process and system that minimize the necessity of human intervention in operation".

Need for automation: Library automation, involved in creation of database and information retrieval, computerized library network and use of telecommunication for information needs a careful handling and systematical planning. It reduces the work stress of library staff and helps in getting the information immediately. Increase the processing efficiency than a manual system. Realize financial saving or continuing cost in certain cases where cost saving has been realized through automation. Improve library services. Make library administration and management efficient. Avoid duplication of the work. Facilitate resource sharing and increase technical processing efficiency over a manual system. Automation has increased the use of collection through improved information retrieval and has ultimately led to increase user satisfaction. It has helped in extending library services, enhanced the prestige of the library, and has helped in resource sharing.

Library's operations and services are automated and computerized and is using open source software: OSS is currently one of the options preferred by some of the libraries, which are not financially sound because of the facilities available in OSS. This new development towards the use of OSS in libraries is also incorporated in LIS curriculum in the universities of India. Keeping in view, this increasing use of OSS in libraries and easy accessibility, it is freely available in the net, which can be downloaded for use. The automation is economically feasible and technologically required in libraries to cope up with the requirements of new knowledge, the enormous increase in the collection of materials, problems of their acquisition, storage, processing, dissemination and transmission of information. It covers all basic as well as advanced operations and services of the library.

Open Source Software: Historical Perspectives: OSS describes the future use of software and methods for its distribution. Depending on the perspective, the concept of OSS is a relatively new idea, being only six to seven years old. On the other hand, the GNU Software project—a project advocating the distribution of free software—has been operational since the mid 80s. Consequently, the ideas behind OSS may have been around longer than we think.

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E-JOURNAL CONSORTIA AT A GLANCE

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Abstract

This paper discusses the overall study of E-journal and its consortia. Beginning from the Journal, E-journal it covers the evaluative history of consortia and e-journal consortia. Covering all aspects it clears the concept of e-journal and e-journal consortia describing its journey and developments with experiences of various initiatives. For understanding the structure of the possible consortia the models of consortia are also discussed. Hope the reader will understand in a better way after studying the present paper.

Keywords: Electronic Journal, Consortia, E-Journal Consortia, Models of Consortia

Introduction: Lancaster (1995) defines E-journal as "a journal created for the electronic medium and available only this medium" and the term consortia means 'a joint venture involving three or more participating entities'. (itcdonline, 2006). On the basis of working conditions and methods there are various models of the consortia. In India a big start to academic e-journal consortia is UGC-Infonet. Functioning of consortia uses different models. UGC-Infonet Digital Library Consortium is best example in India.

E-Journal: "The term journal denotes material published in regular and separate parts. Journals deal with matters of current interest, or with specialist subjects. They can also record the transactions of the public body or a learned society. The frequency of journal publication varies; it might be weekly, fortnightly, monthly, quarterly, biannually or annually biennially." (University of Bath, 2006)

Consortia: Most libraries did not, do not and will not have all the information resources their patrons need as individual universities across the country have faced with limited budget at the same time the cost of information access was very expensive resulting in limited print purchases. Fortunately the electronic publications has resulted in an easy access to large no. of electronic resources with much affordable cost as more and more publishers offer competitive models when these resources are subscribed collectively in a consortia mode.

Importance of Consortia: Kushwah, Jambhekar and Gautam(2003) observed the needs as libraries in the fast changing environment are facing difficult challenges, and the major challenges are cut in their budgets on one hand and pressure to perform better and serve a wide variety of clientele, on the other. Clientele is ever growing. They are expected to achieve efficiency and effectiveness while cuts are being imposed on the resources. They are expected to find out new and creative way with the limited rather dwindling resources. Sharing of resources seems to be the panacea for these problems; however this spirit should not get suppressed by the feeling of being superior or inferior. This structure is well accepted as is evident from numerous resources sharing mechanism operating in the west and a few in India.

(a) Developing the collection on shared basis, and (b) Developing services for exploiting such collection.

Need of Consortia Facilitates the libraries to get the benefit of wider access to electronic resources at affordable cost. Difficulty to maintain subscriptions to core journals. Shrinking fiscal resources, price hike. Academic and research users can now hope to have access to their learned journals. Rational utilization of funds.

Models of Consortia Sreekumar and Sunitha(2004) denoted the consortia model as following.

1. **Open Consortia:** This type of consortia is open ended and provides facility for the libraries to join and leave as they please. In this case, publishers define a minimum number of libraries for the consortium to take off a specific rate per product. This type of consortia are generally driven by small homogeneous groups who have a need to cross-share the resources in the specific subject area. INDSET consortium run by the MHRD is an example of this.
2. **Closed group consortia:** This stays exclusive with in defined group. This type of consortia emerges either by collation, affiliation and collaboration among them. (CSIR, DAE, IIM consortium). Here the formation and operation of the consortia guidelines and its administration are fairly simple and easy.
3. **Centrally Funded Model** is very existence of the consortium will solely depend on the central funding agency. The strength of this model is that the financial responsibility of running the consortium by the parent body. INDSET, UGC, INFONET, CSIR and ICMR consortia etc.
4. **Shared budget Model** In this model the participating libraries take the lead and form the consortium. IIM and FORSA are examples of this model. The operational aspects of the consortium especially the management of funds etc. are individually handled. Entering into a MoU for a better and strong footing is always recommended for this model.
5. **National consortium** is a conceptual model or framework as far as India is concerned, which is not being seriously attempted by any of the ongoing consortia in the country. There are some isolated efforts from UGC and INDSET in this regard, but they are yet to make any significant strides. National level licensing of information products could be achieved towards this end.

Library Consortia in India: In Indian perspective there are some consortia. A glance on following table would clear the status of consortia in our country.

Members of UGC-Infonet Digital Library consortium in India.

Sr. No.	Consortium	Funding Agency	Members
1.	UGC-Infonet Digital Library Consortium	INFLIBNET	More than 146 Universities
2.	INDSET-AICTE Consortium	MHRD/ IIT Delhi	48 Institutions with 1096 Members.
3.	NKRC E- Journal Consortium	NISCAIR	40 CSIR and 26 DST
4.	DAE Consortium of Atomic Energy	Department of Atomic Energy	36 Institutions
5.	MCIT Library Consortium	Ministry of Communication and IT	All Subordinate Institutions
6.	IIM Consortium	IIM	All IIMs
7.	DRDO	DESIDOC	DRDO Labs
8.	FORSA Consortium	Indian Institute of Astrophysics	11 Related Institutions
9.	RGUHS-HELNET Consortium	Rajive Gandhi Institute of Health Sciences	All affiliated institutions
10.	DELCON Consortium	Department of Biotechnology	32 related institutions.
11.	ERMED Consortium	National Medical Library	72+ Institutions
12.	Consortium for AgricultureCeRA	Indian Council for Agricultural Research	123+ Agricultural Institutions
13.	N-List Consortium	INFLIBNET	Govt. Aided Colleges

Amongst the all above consortia, initiative of INFLIBNET by forming UGC-Infonet Digital Library consortium is identical. Here a brief study of which is given.

Role of UGC: "UGC has signed an MoU with ERNET India giving them the responsibility to establish and operate UGC-Infonet on turnkey basis. UGC is the owner of this network and will provide grants for universities for this purpose. ERNET will design, commission operate and maintain the entire network. ERNET will also conduct training courses at its HQ in New Delhi. And at University sites for the university network managers" (INFLIBNET, 2004).

UGC-Infonet: UGC-infonet is a wide Area Network WAN connecting more than 170 Universities, R & D institutes, UGC HQ, UGC Regional Centres' etc. UGC-Infonet will also provide access to internet to all these institutes. (INFLIBNET, 2004) Cholin(2005) in his study stated that in order to support the research and academic activity in the country UGC initiated a program to provide electronic access over the Internet to scholarly literature in all areas of learning to university sector in India is UGC-Infonet. UGC-Infonet program is an ambitious program of UGC to bring about a qualitative change in the academic infrastructure, especially for higher education. Under this initiative UGC is modernizing the university campuses with State of the Art Campus wide networks. (Murthy, 2005).

UGC-Infonet Digital Library Consortium: Murthy, Cholin, and Vijaykumar(2005), Rath (2006) and Murthy(2005) described "UGC-Infonet Digital Library Consortium" in the same way with minor differences. UGC has initiated a program to provide electronic access over the Internet to Scholarly literature in all the areas of learning to the university sector in India.

Network Topology UGC-Infonet: Mix of terrestrial and satellite technologies. ERNET has eleven PoPs points of presence in the country. Out of these, seven are satellite gateways. All PoPs interconnected by 2 Mbps/ 8Mbps fiber optic lines. (INFLIBNET, 2004)

Benefits and Features of UGC-Infonet: Sharing of library resources. Peer level interaction communication. Collaborative research. Training. Distance learning. Multimedia applications and . Broadband intranet/ Internet access. (INFLIBNET, 2004)

Conclusion: Discussing from the e-journal to e-journal consortia and need, importance and various models of consortia it has been now clear its functionality among the academicians and research scholars. Furthermore need, importance and models of consortia clarifies its actual working. An UGC-Infonet digital library consortium is one of the best in Indian perspective. Features and benefits of UGC-Infonet show the beneficent existence of the consortia.

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OPEN SOURCE DIGITAL LIBRARY SOFTWARE'S

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Abstract

Open source software is, software that users have the ability to run, copy, distribute, study, change, share and improve for any purpose. Open source library software's does not need the initial cost of commercial software and enables libraries to have greater control over their working environment. Library professionals should be aware of the advantages of open source software and should involve in their development. They should have basic knowledge about the selection, installation and maintenance. Open source software requires a greater degree of computing responsibility than commercial software. Library professionals do not think seriously about the advantages of open source software for automation and hence are reluctant to use it. They do not have the expertise to support open source software. Paper highlights major open source library software.

General Terms: Open source Digital Library Management Software, Information Dissemination.

Keywords: Open source, Digital Library, Digital Library Management Software, Information Dissemination.

INTRODUCTION: In the present era digitalized databases are being compiled in majority of the library services, which are based on information technology as well as resources available in electronic formats. In order to manage all kinds of resources and information, libraries require high quality integrated software, along with cutting edge retrieval tools. However, the high price of such software prevents most of the libraries from using them. So as to deal with this issue, and for the benefit of research scholars and the user communities of libraries, different NGOs, organizations and individuals have developed software, which are distributed free of cost. Known as free/open source software, these are extensively available on the internet and can be downloaded, installed and distributed.

What is Open Source Software? Open source software is software that provides access to the source code, meaning that users are free to see how the product is made. Additionally, users have the right to modify the product (change the code) to their liking, experiment with different versions, and give away or resell the new product with the guarantee that they must also provide their source code, and so on. Modifying the product and redistribution are the two main components of open source software.

Reasons to Use Open Source Software: It promotes creative development those who can't afford proprietary software can Download open source programs for free Money saved can be used to purchase other needed materials Can easily modify your software to suit patron's needs and your needs Little to no upgrade costs No more grueling over software that doesn't meet your standards -- create it yourself based off of a close preexisting piece of software The price (free) makes it easier to change your mind when the software doesn't live up to its expectations Little to no viruses!

Definitions: Proprietary - the software costs money and the source code is restricted. You cannot modify, fix, add to, take away, or change the code in any form.

Open Source - the software is most likely free and the source code is completely open. You can modify, fix, add to, take away, and change the code any way you wish.

Advantages of Open Source Software: The availability of the source code and the right to modify, it is very important to enable us to improve and extend the lifetime of a software product. Source code availability also makes it much easier to identify errors, and to fix them. The right to redistribute modifications and improvements to the code, and to reuse other open source code, permits all the advantages due to the modifiability of the software to be shared by large communities. For continuous improvement does not require users to pay for it. There is no single entity on which the future of the software depends. This is a very common concern with proprietary software. There are fewer conflicting priorities due to marketing pressures. Usually open source software is delivered "when it is ready", and when the development team feels that its quality is good enough. This means that software usually does not need as many "service packs", updates as such thereby reducing the maintenance cost. It provides a new forum for democratic action, collaboration, mutual benefit without geographical or any other barrier/bias. It forces commercial software vendors to keep their product price at a reasonable level.

Limitations of Open Source Software: For any up gradation/change in the OSS, the library needs support. In case of OSS, there is no body to solve problem, either one has to hire some expert to solve the problem or library should make arrangement with some company. Open source products require technical expertise to operate and maintain open source costs more to support because the software is typically self-supporting. Generally, a commercial software company will immediately respond on customer requests for any problem. With OSS, if one doesn't do it himself, he/she is at the mercy of a disjoint community of developers.

Selected open source software's: Major software's developed and available are described briefly hear;

KOHA : KOHA has the distinction of being the first open source integrated library management system, which includes all the main functions related to library management. It is web-based open source software distributed under the general public license. Koha supports windows as well as Linux platform. The first version of it was

released in year 2000. The 'KOHA Development Team' offers to host the website for KOHA library system on its server. KOHA also has the capacity to manage digital libraries and online and offline electronic resources.



Figure no.1. Some of open source software's.

D-Space: D-Space is an open source software package that provides the tools for management of digital assets, and is commonly used as the basis for an institutional repository. It supports a wide variety of data, including books, theses, and 3D digital scans of objects, photo-graphs, film, video, research data sets and other forms of content. The data is arranged as community collections of items, which bundle bit streams together. D-Space is also intended as a platform for digital preservation activities. D-Space was released by HP-MIT Alliance in 2002 and since its release is very popular open source software. It has been installed and successfully working extensively and widely in universities, higher education colleges, cultural organizations, and research centers etc. It is shared under a Berkeley Software Distribution license, which enables users to customize or extend the software as needed.

Evergreen: Evergreen is an open source Integrated Library System (ILS), initially developed by the Georgia Public Library Service (2006), Public Information Network for Electronic Services (PINES) and the Evergreen Community. It is distributed under the GNU General Public License. Evergreen has been written primarily in Perl and Postgre SQL, with a few optimized sections (Singh, 2007) rewritten in C. The catalog interface is primarily JavaScript with XHTML, and the staff client user interface is written in Mozilla's XUL (XML + JavaScript). **PhpMyLibrary:** PhpMyLibrary is a PHP/My SQL web-based library automation application meant for smaller libraries. The software has the facilities of cataloguing, circulation, and OPAC module. The software also has an import export feature. It strictly follows the USMARC standard for adding materials. This software is compatible with the content management system and has as facility of online reservation system for library and also supports import from ISIS database with an ISIS2MARC program. **Fedora:** Fedora software gives organizations a flexible service oriented architecture for managing and delivering their digital content. Digital objects exist within a repository architecture that supports a variety of management functions. All functions of Fedora, both at the object and repository level, are exposed as web services. **E-Prints:** E-Prints has been developed at the University of Southampton School of Electronics and Computer Science in 2000 and released under a GPL license for building open access repositories that are compliant with the Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH). It shares many of the features commonly seen in document management systems, but is primarily used for institutional repositories and scientific journals. **OpenBiblio:** OpenBiblio is an easy to use, open source, automated library software written in PHP. This software has facilities of OPAC, circulation, cataloging, and other administrative work. OpenBiblio is well documented, easy to install with minimal expertise and designed with common library feature.

Avanti: Avanti Micro LCS Software is developed by Avanti Library Systems in Java language. This is a small, simple, and easy to install and use open source software. It is a platform independent, and can run on any system that supports a Java runtime environment. This software is useful for small libraries; it has a powerful and very flexible architecture that allows it to be adapted for use in libraries of any type. This software incorporates standards such as MARC and Z39.50 as modules and interfaces. **Greenstone:** The Greenstone Digital Library Software (GSDL) is a top of the line and internationally renowned 'Open Source Software' system for developing digital libraries, promoted by the New Zealand Digital Library project research group at the University of Waikato and is sponsored by the UNESCO (<http://www.unesco.org>).

CONCLUSION: The Library & Information Science (LIS) professionals should keep eyes on development in order to choose appropriate technology depending upon Institution's needs. Since, numbers of libraries worldwide are using OSS for managing their library systems more economically and effectively.

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OPEN SOURCE SOFTWARE FOR LIBRARY MANAGEMENT - A STUDY

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Abstract

Open source software was a revolutionary concept among computer programmers and users. To a certain extent open source solutions could provide an alternative solution to costly commercial software. Open source software is, software that users have the ability to run, copy, distribute, study, change, share and improve for any purpose. Open source library software's does not need the initial cost of commercial software and enables libraries to have greater control over their working environment. Library professionals should be aware of the advantages of open source software and should involve in their development. They should have basic knowledge about the selection, installation and maintenance. Open source software requires a greater degree of computing responsibility than commercial software. Library professionals do not think seriously about the advantages of open source software for automation and hence are reluctant to use it. They do not have the expertise to support open source software. Paper highlights problems of selection, installation and maintenance of open source library software.

Keywords: Greenstone, D-Space, Koha, E-Prints, NewGenlib

Introduction :-In the present era digitalized databases are being compiled in majority of the library services, which are based on information technology as well as resources available in electronic formats. In order to manage all kinds of resources and information, libraries require high quality integrated software, along with cutting edge retrieval tools.

Criteria for Selection of Open Source Software :Important points should be taken into consideration while choosing an OSS are:i) Reputation of the software ii) Monitor ongoing efforts and local usability iii) Support for Standards and Interoperability iv)User support

Open Source Library Management Software: Open source Library Management System is a valuable catalyst for change in terms of exploring possibilities and pushing boundaries for the community. There are many open source Library Management System being used in the libraries. Some of open source Library Management System are: **Koha :-**Koha is open sources integrate library system using an OPAC interface.Koha is a promising full featured open source integrated library system (ILS) created in 1999 by Katipo Communications for the Horowhenua Library Trust in New Zealand, and currently being used by thousands of libraries all over the world. It includes modules for circulation, cataloging, acquisitions, serials, reserves, patron management, branch relationships, and more. Koha has web-based Interfaces. **Koha Features** -Simple clear interface for librarians and members (patrons) -Union catalog facility -Irculation and borrower management - Various Web 2.0 facilities like tagging and RSS feeds .3 **NewGenlib :-**New Genlib is intergrated library automation and networking solution developed by verus solution Pvt. Ltd. & the kesavan institute of information & knowledge management. **NewGenlib Features** -Functional modules are completely web based uses JAVA web start in teaching -Uses chiefly open source components -Scalable manageable and efficient - Complies with international metadata and interoperability standard like MARC-XML, 239.5., ---SRU/W, PAO-PMH **BiblioteQ :-**This library management system works with Qt interface the software is available for all major operating systems and compatible with any system that supports Qt. **BiblioteQ Features** -Cover images with drag and drop facility-Customized display -Cataloguing different types of material **Evergreen :-** Evergreen is an open source integrated library system designed by the Georgia PINES consortium & used in over 544 libraries of all types worldwide used to help manage catalogue and circulate materials. **Evergreen Features** -It is stable robust flexible secure and user friendly -Circulation for staff to check items in and out to patrons **Greenstone:-**It is digital library software is open source system for the construction & presentation of information collections.

Greenstone Feature - Greenstone builds collections using almost popular and standard digital formats such as HTML, XML, Word, Post Script, PDF, RTF, and many other formats which include audio as well as video - It is provided with effective full-text searching and metadata-based browsing facilities that are attractive and easy to use - It runs on a wide variety of platforms such as Windows, Unix/Linux, Apple Mac etc. and provides full-text mirroring, indexing, searching, browsing and metadata extraction - UNICODE based multi-lingual capabilities and a user-friendly multimedia interfacing Customization of various features fulfilling specific user requirements - Browser based access- Use of Dublin Core and other metadata scheme - Use of plug-in for converting the file format into standard XML-based internal format for indexing purposes

D-Space :-D-Space is one of the first OSS platforms to store,manage and distribute the collections in digital format.D-Space is the choicest software for academic, nonprofitand commercial organizations, building opendigital repositories.

D-Space Feature-D-Space is written in Java -Browser based access -Administrative features that support access control and user avtivity logs -Multilingual interface available in English Arbic Chinese Dutch French German Maori Portuguese and Spanish etc

ABCD :-ABCD in English stands for automation of libraries and centers for documentation it was developed by BIREME in collaboration with the Flemish Interuniversity Council Belgium this automation system is based on UNESCO ISIS database technology.

ABCD FeaturesIt is a very flexible and versatile Fully web based can be managed through web browser Bibliographic records can be imported form other sources through 239.50 Available in multi language like English French Spanish etc Statistical report generation with graphical presentation of any defined set of variables in the databases Freedom of database structure it accepts any record structure and includes structure definition tools

Fedora :-It is an open source software gives organizations a flexible service oriented architecture for managing and delivering their digital context. Fedora software gives organizations a flexible serviceoriented architecture for managing and delivering their digital content. Digital objects exist within a repository architecture that supports a variety of management functions. All functions of Fedora, both at the object and repository level, are exposed as web services. These functions can be protected with fine-grained access control policies.

Avanti :-Avanti Micro LCS Software is developed by Avanti Library Systems in Java language. This is a small, simple, and easy to install and use open source software. It is a platform independent, and can run on any system that supports a Java runtime environment.

Advantages of open source software No cost or a lower cost for licensing open source solutions Flexibility to adapt the software for particular health care solutions Continuing software enhancements available through the open source community Mission rather than marker objectives focused on patient centered population based health improvement

Disadvantages of open source software Open no single source to support all aspects of the application multiple sources of technical and clinical support may be required Must understand business logic to adjust configuration or make code adjustments to meet unique work flow and clinical needs

Conclusion: The library and information science professionals should keep eyes on development in order to choose appropriate technology depending upon Institution's needs since numbers of libraries worldwide are using open source software for managing their library systems more economically and effectively librarians and programmers should worked together in order to implement open source integrated library systems and at the same time library professional are also required to acquire new skills for developing and managing the library by using open source library management system for taking benefit form open source software additional technology education and training of the professionals is essentially required.

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THE USE AND APPLICATION OF OPEN SOURCE INTEGRATED LIBRARY SYSTEM

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Abstract

The Open Source Software (OSS), term was coined by Eric Raymond; it is software for which the source code is freely and publicly available, though the specific licensing agreement varies as to what one is allowed to do with that code. OSS become very famous worldwide from the last few years open source software has triggered a vast volume of research and has entered the mainstream software market and available in various computer languages. Library professional are not lagging behind with the hour, simultaneously they develop their own in different skills from daily. Open source software requires a greater degree of computing responsibility than commercial software. Library professionals do not think seriously about the advantages of opensource software for automation and hence are reluctant to use it. They do not have the expertise to support opensource software. Paper highlights major open source library software.

Keywords- Open Source Software, Integrated Library System, Academic Library, OSS history.

1. Introduction- However the Free software [FS], term was given by Richard Stallman in 1984, it is the software which can be obtained at zero cost i.e. software which gives the user certain freedoms. FS provides only executable file to the end user, through public domain and end user is free to use that executable software in any way, but the user is not free to modify that software. Similarly the alternative term Free/Libre and Open Source Software (FLOSS) refers to software licenses which give users four essential „freedoms.

2. History of Open Source: The open source movement started in the 1980s with Richard Stallman who resigned from MIT founded GNU project. Unix is an operating system, whose functionality he wanted to copy and build upon, but it required community effort. Wanting it to be a free software, he created a different kind of copyright license, which he termed “copy-left”.

4. Common OSS licenses

Some of the most common licenses used for Open Source are:

4.1. GNU General Public License (GPL) - GNU is the most common of OSS licenses, the GPL implements a concept known as “copy left” that attempts to negate copyright for the purposes of collaborative software development. Under the GPL license, the code for a GPL-licensed application can be used anywhere in any situation; it can be distributed to anyone as long as the code is included and the GPL license is retained; and anyone can create a derivative work from the code and redistribute it, as long as the resulting code is made available and also licensed under the GPL. The Affero General Public License is almost identical to the GPL but includes additional provisions for network access.

4.2. Creative Commons – Creative Commons licensing is similar to that of the GPL, but is not designed around software. The Creative Commons license was originally designed for other creative works such as music and film, though it is increasingly utilized within software projects.

4.3. GNU Lesser General Public License (LGPL)/ Artistic License- LGPL is normally used to designate source code that can be used by applications for which a charge is levied, so that this code can be used in commercial products, hence “lesser”. The Artistic License is similar and also attempts to mitigate the fear of using code for commercial purposes.

4.4. Berkeley System Distribution License (BSD)/ Apache Software License/ MIT License/ NCSA License– The BSD license is basis for many other licenses, including Apache Software License/ MIT License/ NCSA License. It is mainly concerned that the copyright of the code be recognized as belonging with the creators and that this copyright be promulgated to applications built with the source code. The BSD license, like almost all OSS licenses, also specifies that the copyright holder is not liable for the consequences of using the source code.

4.5. OCLC Research Public License – The OCLC license ensures that modifications are reported back to OCLC if the intent is to redistribute the changes externally.

5. Open Source Software: Open source software is where the source code of programs is made freely available for anyone to change and distribute providing they abide by the accompanying licence. This differs from closed source or propriety software which may only be obtained by some form of payment, either by purchase or by “leasing”. The difference between open and closed source can be characterized by the word freedom: users of open source software have the freedom to alter the source code while users of closed source software do not.

5.1. Advantages of Open Source Software The benefits with Open Source Software are as follows:

Lower software costs: Open source solutions generally require no licensing fees. Expenditures can be for media, documentation, and support, if required.

Simplified license management: Obtain the software once and install it as many times and in as many locations as you need. There’s no need to count, track, or monitor for license compliance. It provides Collaborative, parallel development involving source code sharing and reuse.

Lower hardware costs: In general, Linux and open source solutions are elegantly compact and portable, and as a result require less hardware power to accomplish the same tasks as on conventional servers (Windows, Solaris) or workstations. So they are less expensive.

Scaling/consolidation potential: Open source applications and services can often scale considerably as they have multiple options for load balancing, clustering.

5.2.

Disadvantages of Open Source Software Possibility of slower results due to the rapid development environment leading to the absence of formal management structures. Open source software can tend to evolve more in line with developers' wishes than the needs of the end user. Strong user involvement and participation throughout a project become problematic as users tend to create bureaucracies which hamper development. Rapid releases and typically more iterations than commercial software creates more management problem. Version control systems are required to track multiple revisions.

6. Open Source Integrated Library Systems:

6.1. Koha—Koha software was originally build up and developed in New Zealand by the company called as Katipo Communications Limited. The Integrated Library Software Solution was first deployed in the year January, 2000 for Horowhenua Library Trust. Koha is a full featured open source library management system and it was initially developed by Harowhenua Library Trust, New Zealand in 2000. Now the project has grown as one of the popular Open Source Library management system by large group of volunteers from various parts of the world. Software consists of several modules supporting all the activities of a library: on-line catalog (OPAC), cataloging, authorities' management, circulation, user management, acquisitions, periodicals, reporting, and administration. It is translated in over 100 languages, and is implemented in more than 900 institutions around the world.

6.2. Evergreen—Evergreen is an open source Integrated Library System (ILS) which includes circulation and cataloguing features, OPAC, SIP2.0 support for interaction with management software and search/retrieval through Z39.50.

6.3. OpenBiblio—OpenBiblio is an open source Integrated Library System. The software is popular with small and rural libraries worldwide due to its simplicity, extensive language support, and good documentation. OpenBiblio is an easy to use, open source, automated library system written in PHP containing OPAC, circulation, cataloging, and staff administration functionality for the particular interest to small libraries with limited technical expertise and resources of less than 50,000 volumes.

6.4. NewGenLib (NGL)—NewGenLib version 1.0 was released in March 2005. On 9 January 2008, NewGenLib was declared free and open-source under GNU GPL.^[1] The latest version of NewGenLib is 3.1.1 released on 16 April 2015. NewGenLib is an outcome of collaboration between Verus and Kesavan Institute of Information and Knowledge management in Hyderabad, India.

6.5. SOPAC (Social Online Public Access Catalog)—SOPAC is a module for the Drupal CMS that provides true integration of library catalog system with the power of the Drupal content management system while allowing users to tag, rate, and review your holdings. User input is then incorporated into the discovery index so that SOPAC becomes a truly community-driven catalog system

7. Digital/Electronic Library Softwares:

7.1. Dinest—Dienst is a system for configuring a set of individual services running on distributed servers to cooperate in providing the services of a digital library. It has been written in PERL. It works more comfortably on Unix/Linux run web servers.

7.2. Dspace—DSpace is a digital library system to capture, store, index, preserve, and redistribute the intellectual output of a university's research faculty in digital formats. Dspace has been developed jointly by MIT Libraries and Hewlett-Packard (HP). It is now freely available to research institutions worldwide as an open source system.

7.3. Eprints—Eprints is generic archive software under development by the University of Southampton. It is intended to create a highly configurable webbased archive. Eprints primary goal is to be set up as an open archive for research papers, but it could be easily used for other things such as images, research data, audio archives - anything that can be stored digitally by making changes in configuration. It works on Linux O/s and it needs MySQL, Perl modules and Apache webserver.

7.4. Fedora—Fedora is an Open-Source digital repository management system based on the Flexible Extensible Digital Object and Repository Architecture (Fedora). The Fedora repository system is open source software licensed under the Mozilla Public License. It requires Sun Java Software Development Kit, v1.4. Optionally one can use MySql or Oracle 9i to create relational database. It works both on Windows and UNIX versions of software.

7.5. Greenstone—Greenstone is a suite of software for building and distributing digital library collections. It provides a new way of organizing information and publishing. It is available for both Windows and Linux O/S. It requires Perl software to build collections.

7.6. Invenio—Invenio software developed by, maintained by, and used at, the CERN Document Server. It allows to run electronic preprint or digital library server, online library catalogue or a document system on the web. It complies with the Open Archives Initiative metadata harvesting protocol (OAI-PMH) and uses MARC 21 as its underlying bibliographic standard. It is a free software issued under GNU-GPL license.

9. Conclusion—Open Source Softwares are dominating the infrastructure of Internet and Web services and present Libraries also. OSS has continued to grow and so come the open source applications in Libraries.

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**COLLECTION - DEVELOPMENT IN SANT MUKTABAI COLLEGE LIBRARY:
A STUDY**

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The Practice: The Special Features of Collection development: **Aim of the Practice:** The main aim is to develop academic library system and services by collection development in Sant Muktabai College Library. Good service in the library ultimately depends on its collection both in terms of number and quality. Every other operation is based and dependent on the holdings of the library, classification, cataloguing, reference work, ideal building and equipment coming next. **Context of the practice:** Aspects of Collection development.

Book Selection Procedure: The library has the advisory committee of Seven members in which, the principal carries responsibility as head and one is from the non-teaching staff and four members are there from the teaching staff to assist and discuss on the library issues coming before the committee. The remaining member is the librarian who implements the actions taken out by the committee members. After allocating the funds to various departments and general library, head of the department are requested to prepare the list of books to be procured for the department on the basis of the syllabus and curriculum. The heads of the departments consult with all faculty members at the time of preparing the book -list. The library has tools for preparing the book list through publishers' catalogue like, publisher monthly book sellers' list, India book house catalogue, book reviews etc. **Selection of Reference Books:** In order to promote the use of standard reference tools like Dictionaries and Encyclopedias in the individual subject, the library is also focusing on building good subject-reference sources of categories of all courses offered by our college.

Budgeting and Fund Allocation: The library budget for books and journals come from U.G.C. and students fees.

Effectiveness of the Practice: In the college, the library purchases multiple copies of the titles based on the students' strength and curriculum of the respective courses.

Book Evaluation: There are many methods to evaluate the books in which the users access in the library. According to the library statistics that is library books consultation register .book issue register, books due date labels, the statistics of unread and under used titles are collected.

Book Donation : Books are donated by the professors and authors and the allumni of the college.

Back Volumes: Bound periodicals are added to the library stock.

Non-Book Materials: The Collection of CDs from Books and from individual teachers is followed by the library staff in the library, e.g. the Cds on Encyclopaedias of Britanica, English Language. Computer science. English Speaking and various subjects are used in the library.

Opinion of the Visitors to the Library: Eminent scholars from the colleges and the university visit our college on the occasion of the educational activities. These scholars visit the library with our principal. They record their views in the record book on the management of the library. We follow their views and try to change the management of our library. Hence our library has been Well-equipped with the educational needs of the time.

Separate Reading Facility: We have made available the separate reading facility facility to our students. Boys and Girls have their own reading arrangements. **Computerised Library With Internet Facility:** Our principal has been the former Registrar of North Maharashtra University. Jalgaon, hence, he has Computerised the library with internet facility. The Internet facility is implemented for the benefit of the students. Xerox facility is also made available in the library. Still our issuing counter has been following the book issue register method.

Books on Religious Thoughts: Students have been the main factors in the society. To develop him religiously. Our library has a number of religious books. Our motto is not only to make him religious, but also to make him thoughtful to know the serious problems running in the society, because, to produce an ideal citizen to contribute to nation building has been the is and mission of the institution.

PROFESSIONAL ETHICS AND VALUES**Mr.Kulkarni Rahul Hanmant**, Librarian, Shri Shivaji Mahavidyalay Barshi Tal-Barshi, Dist-Solapur(MS)**Abstract**

In this paper We discuss the Ethics and values of Librarian. This is very noble profession. Service Provider to the community. There are many obstacles in this field. Behalf of this we provide good service to the users. In this field very Devotional Librarians are there. We have Seen the big role of S.R.Ranganathan to Indian Library. As like Ranganathan there is Melvil Dewey, neena Browne, C.A.Cutter and other Professionalist do their job honestly and gives directions to the upcoming generations. They are the Legendary of Library Profession. This paper discuss about which of the quality a profession should have in his duty.

Keywords : *Ethics, Values, Ethics of Librarianship, Duty to the Readers, Duty to the Books, Duty to the Profession*

Introduction: “Now that we have learned to fly in the air like birds and dive in the sea like fish. Only one thing remains to learn to live on earth like humans.” _ George Bernard Shaw.

The work ethics is derived from the Greek word ‘ethica’ or ‘ethos’. It means the customs or habits that are approved by a particular culture. The word, morals come from the Latin word ‘more’ which also means practices or habits which are acceptable in a particular society. Customs are not merely habitual ways of acting. They are in fact, ways approved by the group or community or society. As customs, morals, etc. vary from society to society and from culture to culture, values and ethical actions, too might change. Ethics systematically analyses the moral life of persons. This analysis is based on the standards of right or wrong, which in turn is based on the ethical assumption that a person is both free and responsible. Only a free person can be help responsible for his or her ethical action. Thus ethics deals with practical moral choices which persons make and the ideal goals and principles that determine those choices.

Values :- Parents and teachers should aim to inculcate discipline which will help their children and students when they enter different fields of work with their fellow beings with love. It will help them to lead a collective and harmonious life. It is the activities on value based education that teach the person the principle that personal integrity is more important than company manners. It is value based education that gives their life a concrete direction, meaning and profundity. The values shape their inner sense of what is right and what is wrong. Values are not laws but they are principles that show a person who he is. It is the light of values the youth should make the hard choices in life. When they make the right choice, they should act with integrity, honesty, courage, and generosity. To speak of ethics and values at academic institutions to science and other academic disciplines implies that they begin with human experiences. First of all, there is need for man to obtain virtues from values in such a way that institutions become an environment where social harmony and ethical maturity thrive. Librarianship is a noble and exalted profession. Service of mankind is its motto. It is not a business and those who entertain mercenary outlook and habits may not be fit persons for this emulated profession. In the West, the profession has been making wonderful progress.

✓ **Ethics of Librarianship :-** Ethics of Librarianship, an essential element of Library Profession, denotes the conduct and behavior of those who adopt the profession. A Library professional owes certain obligations to the library’s public and its books, the library professional organizations and to himself. The five Laws of Library Science are cardinal principles to be observed by a library professional in all his possible relations. Librarianship as a discipline is more than hundred years old. It has evolved through the years as one of the finest subjects of social sciences. Though started with certificate and diploma courses, librarianship in India are taught and researched at par with other subjects of social sciences. The content is taught with modern and pragmatic syllabi by retaining the old and traditional concept with new areas of research. The discipline starts with practicable beginning of classification and cataloguing, clubbing into knowledge organization and revealed its maturity with new areas of study and research. An application of information technology has helped to cross those traditional boundaries of discipline into enhancing the library services by applying Information and Communication Technologies (ICTs). For these purposes, the library professionals are trained with the basic principles of information technology so as other technocrats. To manage libraries and information centres as an organization, the managerial principle are taught. So the new activity, duty and responsibility they are here trained with, made them librarians and library managers. More number of activities and engagements of modern libraries have transformed their original positions by training, content and orientation. Hence the new role played by librarians is not only excellent with disciplinary nature of orientation and at the same time content made them practical and pragmatic also. Though not described here exhaustively, more numbers of interdisciplinary studies are imbibed into the syllabi and content of the librarianship course.

➤ **Duty to the Readers:-** A librarian is for the readers and the latter cannot do without the valuable and expert services of a qualified librarian. Their bond of friendship is unbreakable. A Librarian is called ‘the guide, the philosopher and the friend’ Of the uninitiated and the scholar alike. A librarian has an onus to prove himself worthy of this honour. He can do so by attaining proficiency in library principles and techniques so as to facilitate the readers to find out their requisite information and reading materials. It is the religious duty of a librarian to acquaint himself as much as he can do with the books and other kindred materials of his library so that he may guide the readers properly because only the enlightened person can enlighten other. An ignorant person being incapable of guiding himself, may misguide the readers. The Second Law of Library Science – ‘Every reader his / her book’- enjoins a heavy duty upon a librarian. This simple axiom has far – reaching implications. It does not merely mean that the reader is to be supplied with the books from the library he demands. It lays down that due

to the 'hide and seek' character of the books, the much required Reference Service is essential. Care is to be taken that the border line of self – education is not crossed and that the unwanted method of spoon-feeding is resorted to. In other words, though Reference Service is to be encouraged, yet it should not take the shape of spoon-feeding. Barring exceptional cases, readers are simply to be initiated into the techniques of finding out material for themselves from the books. If the books are not available in the library, the librarian should either purchase or acquire them on Inter-Library Loan or at least guide the readers as to wherefrom they can find out the requisite material. For that purpose, maintenance of OPAC and Lists at various levels is essential. Further, it depends upon the intelligence of the librarian as to how he guides the readers. The Fourth Law of Library Science – 'Save the time of the readers' – also enjoins a duty upon the librarian to save the time of the readers by taking resort to time-saving devices, so that their tempo and interest in reading are sustained.

➤ **Duty to the Books** :- Books the life blood of great thinkers of the past and present – are the essential constituents of a library. Without these a library cannot come into existence. A book may be compared to a human being. Like the latter, it has a soul and a body. Paper, binding and printing constitute its soul. A Librarian owes a duty to the book to keep its body clean like his own body and save it from destruction by its enemies i.e. insects and white –ants. He should repair it at the moment it is torn and also treat it with insecticides at periodical intervals. Besides, he has to take appropriate steps to save the book from its other enemies which include fire, water dust and human thieves etc. As regards his duty to the soul of the book, a librarian must try his best to make known its contents to the existing, prospective and potential readers, otherwise he will be cursed by the book for his negligence. The Third Law of Library Science viz. 'Every book its readers', is of an obligatory nature and a Librarian must use all publicity methods in order to bring each book in the limelight. He can do so by putting stack guides and using other methods such as issue of notices in the newspapers, issuing of hand bills, by arranging lectures and the use of topical sequences etc. In short, the duty of a librarian towards the book is two-fold i.e. the preservation of the book and putting it to maximum use. In other words, he has to fulfill the demands of both the First Law of Library Science viz. 'Books are for use (not for preservation)' and the Third Law viz. 'Every book its readers', at one and the same time. Moreover, in order to be true to his duties to the books he must bring them in close contact with the readers in an exciting manner. A librarian is called a match-maker of the beautiful bride – the book, and the anxious bride-groom – the reader.

➤ **Duty to the Profession** :- A Profession is calling, for admission to which, special training, education and character are required. This exalted profession, being a learned profession a learned profession, has public service as its ideal. To maintain this high ideal, a librarian should cultivate 'professional habits' and should shun the bad 'business habits'. A librarian should see that he should never do anything which mars the profession or which undermines its foundations. Every librarian should try to help his professional brethren in whatever small way he can do. He should try to inculcate fellow feeling amongst his fellow librarians so that the intellectual and material well-being of librarians is vouchsafed. In this way, he becomes instrumental in ensuring fuller education of the nation as a whole. Again, a librarian is a trustee for the prestige and the dignity of the profession. Those who hanker after paltry monetary giants are cankers in the profession and they should not be allowed to bloom. A librarian should never use disparaging words against his predecessors and other professional brethren in the presence of his readers because it will ultimately throw a reflection upon his own character and the readers will ultimately have a very poor impression about this noble profession.

➤ **Duties to the Staff** :- "Each member of the staff should be regarded by the librarian as a colleague and should be encouraged to realize that his work, however menial it may appear, is essential for the smooth working of the whole establishment." Further, in the assignment of work and hours there should be no marked leniency towards certain members, nor the shifting of unpopular tasks always to those who are the most willing to do them. Long service is not always a reason for favoured treatment nor a low salary an excuse for poor work. The library is also considered as a modern organization with increasingly variable nature with relation to servicing the people as client of the library. The library professional work in the library in the different capacities to serve the organization with the stipulated job descriptions and job analysis. Understanding people, the library professionals in the library have become a tedious job for library authorities, library managers and the chief librarian.

➤ **Duty to Himself** :- Duty of a librarian to himself means the acquaintance of a librarian with those books with which he is there to serve his clientele. He must know something of everything so that he may fulfill his duty to himself in a befitting manner. His conduct must be enviable and he must treat his clients with sympathy and love as his profession is like that of the medical profession. He heals the wounds of ignorance whereas the doctor heals bodily ulcers and ailments.

➤ **'Musts' for a librarian** :- A librarian to be a successful professional must keep burning the 'Seven Lamps of Conduct'.

➤ **Conclusion** :- Insincerity is professional apostasy and trickistry is professional immorality. Professional misconduct consists in the failure of a librarian to fulfill his duties as enumerated above. Anyone found guilty of such a misconduct should be dealt with sternly so as to set an example for others. This obligation can be and should be shared by the National Library Associations and the State Library Associations by laying down certain standards, both moral and professional, for judging the actions of librarians.

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PROFESSIONAL ETHICS IN LIBRARIANSHIP

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Abstract

The library and information science as a discipline is changing firstly. The advent of new technologies and their application to LIS work and services enabling the libraries to change in response to new demand of readers and society. However, the change in the profession is not the outcome of only impact of ICT but the change is gradual over a period of time. With the development of research in theory and practices, there is change in LIS profession. To understand the gradual change in the profession, it is essential to understand the history of emergence of libraries and the change that took place in LIS profession for its development.

Keywords: Sound Theory, Professional Ethics, social Ethics and code of conduct.

Introduction: The profession of librarianship has a long history. In tracing its history, growth and development, the study of libraries in the context of its historical setting and historical importance is essential. History of ancient Indian education makes clear the history of emergence and development of libraries in India. The field of ethics, also called moral philosophy, involves systematizing, defending and recommending concept of right and wrong behavior. Being ethical is also not the same as following the law. The law often incorporates ethical standards to which most citizens subscribe. But laws, like feeling, can deviate from what is ethical. Ethics refers to well based standards of right and wrong that prescribe what human ought to do, usually in terms of rights, obligation, benefits to society, and fairness. As mentioned above, feeling, laws and social norms can deviate from what is ethical. So it is necessary to constantly examine ones standards to ensure that they are reasonable and well-founded. Ethics also means, then the continuous efforts of studying our own moral beliefs and our moral conduct. In any society, most people accept standard that are, in fact, ethical. But standards of behavior in society can deviate from what is ethical. An entire society can become ethically corrupt.

Librarianship as a profession: Librarianship as a profession need special training intended to build up knowledge competencies, develop skills and favorable attitude towards learners. Like all other profession librarianship demands specialized knowledge and license. A profession professes to serve the society with a conscious understanding of efficiency; sound knowledge and expertise which are required for assuring highest quality service. Continuous competency ascendance through membership in professional bodies is necessary for librarians. It is the librarians who produce surgeons, engineers, lawyers, policy makers, statesmen, defense personal, managers and librarians too. That is why librarianship has been described as the noblest of all professions. Since librarianship as any other profession requires expression of mutual faith by librarians and students, it is the librarian responsibility to offer quality service. Every professional has to abide by the ethics or a code of conduct derived from a spectrum of values.

Librarians as Ethical Decision Makers: Since librarianship is the only profession where the morality of the clients/ stake holders is to be developed by librarians, all educational institutions are ethical communities. Through librarians have limited freedom to make decisions, they have to take responsibility for the decisions. Is it possible to prescribe a code of conduct exclusively for librarians? If code of conduct are prescribed there a few dangers, Librarians may follow only what they are instructed to do and will not cross the 'Laxman rekha' (imaginary boundary line) even if it is for good. A sense of responsibility may be abandoned. Letter of law may be observed but is spirit not.



Framework of Librarianship:

Characteristics of the profession: Sound Theory:- Librarianship for long was based on rules-of-thumb and practices were involved or improved on trial and error. Establishment of library association gave opportunities for professionals to meet and discuss matters of mutual interest work of documentation brought in scientists from diverse profession in to the library and documentation profession. This helped the profession to understand

the users better and to evolve new systems and services to meet their demands. The demands of users started changing fast. With the result there has been a great thrust on library, documentation and information professionals to understand users need better, understand the technology, adapt and refine them from time to time to provide pin pointed information.

Professional Ethics: A set moral principles and code of conduct is a necessary guide to professional behavior. The codes of ethics are Dedication, Devotion, Determination and Commitment of the profession.

Social Ethics: Understand the users need - Social obligations of the library - Social behavior.

- Equality before service - Moral responsibilities Task before the profession - Technical knowledge - Manipulative task. - Supervision Training.

Area of Specialization: In this profession specialist skills reflect the type of information unit: the functions of the documentary chain which it covers; and its subject fields. The major specialization are archival administration; library administration, information management, documentation service etc. particularly in the field of information and documentation. Another area of specialization is teaching and research in LIS. Lately with the development of large information systems and networks. Some of the retired professionals have offering consultancy service and liaison service.

Code of Ethics: Library and information profession is a service profession. Library and information professional should gather information. Organize in to easily accessible collections; provide mechanisms that help productive utilization of the same by all eligible clientele. Library and information professionals must familiarize themselves with all available information sources that are of interests of their clientele either on demand or in anticipation. They may be in the form of books, technical paper, and other non print records and even some times specialist in any filed of knowledge. Library and information professionals must be governed by the democratic principle of giving every user his/her opportunity to access to information resources and make special efforts to keep their interest growing towards further developments. Library and information professionals must keep service orientation in their professional work. Personal philosophies and attitudes should not interfere with those of the institutional organizations. Library and information professionals should aim at the development of their own professional organization and take pride in the ethos, activities and service. They should encourage younger generation of professional with their own exemplary services.

Conclusion: Library and information professionals should cultivate their field of knowledge in a professional way. They should contribute to the field by research, teaching and dissemination through literature. Hence, those who enter the library profession assume an obligation to maintain ethical standards of behavior in relation to the governing authority under which they work to the library constituency to the library as an institution and fellow workers on the staff, to other member of the library profession and to society in general.

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PROFESSIONAL ETHICS & VALUES

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Abstract

LIS Professional is a service oriented profession, where mission of the LIS Professional is to provide right information to the right user to right format at the right time. Thus there is need for inculcating ethical values among the LIS Professionals particularly in the present digital information landscape. Developing these ethical values in LIS Professional can be done in a number of ways like through organizing conferences delivering lectures etc. In this paper highlights the Professional Ethics, Ethical Principles for LIS Professionals, Ethical Principles for LIS Professionals other Services, Code of Ethics for LIS Professionals & Core Values for LIS Professionals.

Keywords- Ethics, Professional Ethics, Ethical Principles, Library & Information Science Professionals, LIS Professionals, Values for LIS Professionals. etc.

Introduction - Library & Information Centers are repositories for humanity's knowledge or information they are our past, our present & also our future. They are much more than storehouses for books & include many other forms of data. The knowledge or information available in libraries must be accessible to all peoples. Retrieval of particular types of information requires specialized knowledge & database searches that are beyond the capabilities of many users & particularly of undergraduates starting their University careers. LIS Professionals need to share that knowledge or information with users, instructing them on how to use electronic or digital information resources & the internet. So they can do research on their own while pointing out the limits and problems associated with electronic research.

1) Definition Professional Ethics for Librarianship- "According to IFLA" Professional ethics means "A collection of professional guidelines for Librarians & other library employees adopted by national library or Librarians associations or implemented by government agencies" "According to Navalani" "Professional ethics is the science of right conduct and character the science which treats of the nature and grounds of moral obligation the doctrine of man's duty in respect of himself and the right of others" **2) Professional Ethics-** 1) Professional means a person who has knowledge of some specific fields. 2) Professional ethics encompass the personal, organizational & corporate standards of behaviour expected of professionals. 3) Professional and those working in acknowledge professions, exercise specialist knowledge & skill. 4) Professional ethics is professionally accepted standards of personal & business behavior. 5) Professional ethical norms, value & principle that guide a profession & ethics of decisions made within the profession.

3) Ethical Principle for LIS Professionals. 1) LIS Professionals serve to all users equally in accordance with mandate & legal bases. 2) LIS Professionals provide users/clients access to holding & publicly accessible information resources. 3) LIS Professionals treat all clients with equal respect regardless of their origin race, age, social status, creed, gender or sexual orientation. 4) LIS Professionals observe the principles of barrier free accessibility. 5) LIS Professionals protect children and youth from contents unsuitable for them according to the young persons protection act & other legal regulations. 6) LIS Professionals perform for duties in a professional manner regardless of personal opinion & view.

4) Ethical Principles for LIS Professional Other Services- 1) LIS Professionals protect of cultural heritage according to the libraries collecting mandate. 2) LIS Professionals relationship with suppliers and other business partners is based on a high ethical standard. 3) LIS Professionals provide information on the internet as data & full-text within the legal limits to increase accessibility. 4) LIS Professionals recognise the rights of creators & copyright holders of copyright protected library & information material. 5) LIS Professionals apply our professional competence to preserve heritage holdings for future generations. 6) LIS Professionals treat our colleagues with fairness & respect and promote a culture of co-operation, responsible acting & mutual trust.

5) Code of Ethics for LIS Professional- According to IFLA Code of Ethics & for Librarians & other information workers are as follows - 1) Access to Information 2) Responsibilities towards individuals & society. 3) Privacy secrecy & transparency 4) Open access & intellectual property. 5) Neutrality, personal integrity & professional skills. 6) Colleague & employer relationship.

6) Core Values for LIS Professionals- 1) Acting right maintain good relationship between library & users. 2) Development of the profession. 3) To maintain library standard & commitment in providing knowledge for the development of society. 4) Ethical behavior promotes high superiority library services & fairness of access. 5) Ethical behavior is to avoid standards of the profession. 6) Moral behavior contribute to the development of the profession & represent the library in an honorable way.

7) Conclusion- Ethics & values for LIS Professionals includes, fairness, truthfulness, transparency, accountability & responsibility of these profession towards themselves, users organization / institution, peers and society as well. a role in protection clientele, librarians and enhancing the status of the profession.

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REENGINEERING OF ACADEMIC LIBRARIES: ISSUES AND CHALLENGES

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Abstract

As we can see the phenomenal changes in the library operations in the last two decades, academic libraries are in the transformation phase. LIS professionals are facing challenges towards the utilisation of library resources and services. It is not the imperfection of libraries and the professionals but it is because of the development of ICT tools as well as society. Therefore academic libraries need to adopt the ICT products and tools to make the library able to face challenge of Google. In this article, author reviews the issues and challenges of academic libraries in today's era. Also explains the need of reengineering of academic library services for change the nature of library services from traditional to modern way.

Keywords: Reengineering library, changing library services, challenges of academic library etc.

Introduction: Now days many thinkers, writers and researchers of library science field have studied the concepts of business process engineering and they have applied the concept to library and information services to achieve dramatic improvement in performance of academic library. The theory of 'Business Process Reengineering' (BPR) given by Michael Hammer and James Champy in the year 1993. Basically the theory proposed by the Michael Hammer and Champy to attain a dramatic change in the business world to achieve cost effectiveness, quality in the product, speed of the productivity etc. With the industrial revolution, many business or services industries have applied the reengineering techniques to achieve dramatic improvement in cost, quality, service, and speed to survive the business in this competitive world. Jotwani (2010) linking library to the business that "While business looks towards its customers, librarians look towards their users. Both face competition: the business community from within the industrial sector and libraries with other information providers such as computing centres, publishers, information brokers, and the broadcasting/cable industry"(Jotwani, 2010). Academic librarian must be capable to face the present as well as future challenges of Information Technology and its advancement. Capability in the sense of set of skills, which are required to handling ICT tools and its application to library work and services. In this digital era, no any traditional library can able to fulfil today's users need. Therefore, academic librarian should be ready to apply reengineering for their library by modification in the traditional process through ICT tools and techniques.

Definition of Reengineering: Michael Hammer and James Champy define (in their 1993 book 'Reengineering the Corporation') "Fundamental rethinking and radical redesign of business process to achieve dramatic improvements in critical measures of performance such as cost, service, and speed." Cambridge Dictionary defines reengineering is "the process of changing and improving the way a company works, the way a job is done, etc". Petrozoo and Stepper (1998) defines reengineering in their book 'Successful reengineering', "Reengineering is the concurrent redesign of processes, organizations, and their supporting information systems to achieve radical improvement in time, cost, quality, and customers" Encyclopaedia of Information Technology defines reengineering as "the examination and modification of a system to reconstitute it in a new form and the subsequent implementation of the new form".

Transformation of academic libraries: There are some factors affected on academic libraries for transformation as mentioned below: Application of Information Technology: Due to advancement of Information Technology (IT), all sectors have applied ICT tools for reduced manpower, cost, efforts and increased quality in the work as well as service. So, all of us using ICT tools and it's become major reason for diversity of user from the library. Open Educational Resources (OER) Movement: Now days, variety of educational information resources freely available to the users over the internet. According to UNESCO (2012) "Open Educational Resources are teaching, learning or research materials that are in the public domain or released with an intellectual property license that allows for free use, adaptation, and distribution." Google: This is a big issue for libraries that all things are available in the Google. It is easy to the user to find any information on the Google.

Challenges: Reengineering is the big challenge in front of academic library professionals. Reengineering of library is not a simply change in the library system but fundamentally and radically redesigning of the library system. While reengineering the library system, the librarians should have to follow the five laws of library science which are the fundamental theory for any library. The major changes required in the service component which is the major component of any library system.

Conclusion: To face the present as well as future challenges, LIS professionals need to change the way of work and procedure of libraries according to provide a boundary less services to the user. From the above discussion, it may understand that the traditional way of library services will no longer in the future. Now days, online educational portals are open such as ePGPathshala, SWAYAM, Easy Shiksha etc.

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ROLE OF LIBRARY AND INFORMATION SCIENCE PROFESSIONALS IN MODERN ERA

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Abstract

Change is one reality with which individuals, groups and organizations must constantly cope in order to survive. The needs for progressive changes in people's attitudes and behaviors are essential for global acceptance. Nevertheless for Library and Information Science (LIS) professionals, a change is often linked with modern information technologies and management issues. Over the past few decades, the nature of library environment and mode of service has changed drastically.

Keywords - Traditional, Multimodal, Digital

Introduction: With the development and application of information and communication technologies (ICTs), the library environment has shifted from the traditional library to hybrid library, then automated library and then digital library and virtual library and at present it is shifted to Library 2.0. With such changes, the structure and nature of library and side by side the LIS profession has also changed in a dynamic way. Now in the present situation the LIS professionals are playing all-round multimodal roles to satisfy the different requirements of the end users.

Recent Trends: Library is called as a storehouse of information. Due to impact of Internet and Communication Technology (ICT) libraries are acquiring different approaches to provide the best services. Hence, different types of libraries have born in society, such as:

Hybrid library: The hybrid library is a term used to describe libraries containing a mix of traditional library resources and the growing number of electronic resources. Hybrid libraries are mixes of printed books and magazines, as well as electronic materials such as audio books, electronic journals, e-books, etc. Hybrid libraries are the new norm in most public and academic libraries.

Automated library: Library where each and every activity, housekeeping operations are computerized.

Digital library: A library in which a significant proportion of the resources are available in machine-readable form (as opposed to print or microform), accessible by means of computers. The digital content may be locally held or accessed remotely via computer networks.

Virtual library: In virtual library the access point as well as the graphic records is in electronic/digital form and these Electronic/digital libraries are connected through various networks. It is a "library without walls", in which the collections do not exist on paper, microform, or other tangible form at a physical location but are electronically accessible in digital format via computer networks. Such libraries exist on a very limited scale. In most traditional print-based libraries in the United States, catalogs and periodical indexes are available online, and some periodicals and reference works may be available in electronic full-text. Some libraries and library systems call themselves "virtual" because they offer online services.

Towards New Paradigm: Now days the LIS professionals are engaged in different sectors such as content developer, Knowledge manager, cybrarian and so on. This is due to the change in the Info-world. The Information world is now undergoing through a transitional period. Now the world is shifting from a Library-centered to an information- centered society. Resources are shifting from paper-based documents to predominantly digital documents that are using search engines, online databases, data mining, etc. LIS professionals are facing three major changes, namely the transition from paper to electronic and multimedia resources; increasing demand for accountability; and new forms of work organization. To cope with the situation, it has become imperative for the LIS professionals to get continuous exposure to the new technologies, regular professional updating and greater control over the information resources. Presently, librarians are playing an integrated role beyond their traditional job. In a fast changing world there are new demands and influences on libraries and information centers. By using modern technologies all over the world libraries are now shifting their emphasis from traditional to multidimensional work force. Therefore, LIS professionals have to play versatile role in different areas of libraries and information centers to meet the expectations and needs of the present situation.

Knowledge Manager: Knowledge Management (KM) involves identification and analysis of available and required knowledge and the subsequent planning and control of actions to develop knowledge assets so as to fulfill organizational objectives. Librarian as a part of KM system can effectively participate in the process of knowledge creation which includes mechanisms for knowledge capture, exploitation and protection besides in required infrastructure creation by the virtue of capabilities gained as Information Managers of the organization. In future librarians would move from the background to the center of the organization. They would shed their traditional role as a part of support group, uninvolved in any critical functions, to a prominent position to jointly hold the reins of knowledge management with users and the technology experts. They would help steer and shape the knowledge policies, structures, processes, and systems that will nurture organizational learning (Rao and Babu, 2001).

Content Manager: The information science world has witnessed a major transformation in the content it has been dealing with. Digital and virtual libraries are a natural outcome of the movement of digitization and inter-

networking. Library and documentation centers have increasingly used the technologies of intranets, extranets and portals for specialized techniques of content management. This information has been put to distinct business advantages by using the techniques of data warehousing, data mining, taxonomies, ontology and industry-specific knowledge maps. Use of Info maps and knowledge mapping are additional competencies for creating visuals for knowledge maps, which makes search and retrieval much easier and enjoyable. Available visualization technologies need to be employed for this purpose. Facilitator Rapid growth of electronic documents and their availability in the web now creates exploration of information. Even so many printed versions of books, journals have shifted their platform to Internet, which includes freely available and paid publications. At the same time it is becoming very hard to locate necessary information within least possible time. In these circumstances, librarians are trying to acquire knowledge of different systems and software to manage the sea of information.

Consortia Manager: The LIS professional for Consortium operations is responsible for coordinating and overseeing consortium operations, including strategic planning, systems development and project management. Related responsibilities include facilitating communication among the participating libraries. In addition to these responsibilities, the Librarian for Consortium Operations acts as the consortium's representative with vendors for contracted products and services.

Advocate: LIS professionals act as lawyer when they deal with the issues relating to law such as copyright law, intellectual property right, etc. Librarian champion the cause of academic libraries through various advocacy programs to promote the library and resources. They can communicate news about the library through newsletters, websites and memos to parents and staff. Their job is to keep principals and teachers up to date on what is happening in the library and to promote library activities and special projects. Schools are learning communities encompassing students, teachers, administrators and parents. Librarians must communicate the mission, goals and objectives of the resource centre to the entire user community.

Researcher: LIS professionals have played a crucial role in research process. They are highly skilled in the research process and possess a unique knowledge of both the breadth and depth of information resources in various subject specialties. Their active participations in research teams are very much important to critical analysis. By facilitating access to nascent information in the way to finding it, Analyzing, synthesizing and packaging the LIS professionals would move to the beginning of the information production cycle, playing a more substantial organization should have an information professional who is responsible for the information gathering skills of the team (Rao and Babu, 2001).

Web designer: The usage rate of Internet is increasing at a galloping stride. The Internet can now be accessed almost anywhere by numerous means and thus allowing users to connect to the Internet not only from the library. The traditional skill of a librarian in locating, evaluating and organizing the information would be of immense use in the creation, development and content filling of a Web site for the organization and library. Website of an institution provides access point to external resources remotely, where Web pages specific to their disciplines is available. Frequently updating of an organization's Website has become regular phenomenon. Managing organization's own information on the Website includes details of course information, directories, statutes, annual reports, etc., The activities of the librarian while creating a web page is to deliver information about the library and its services like hours of service, location of services, details of library staff, library policies, an interface to the library Online Public Access Catalog (OPAC), etc.

Challenges of LIS Professionals : There is always a debate on the roles of libraries especially in the modern era. The frequently asked questions are: i. Are Libraries "inefficient, limited, and obsolete"?

ii. Is there a need for Libraries and Librarians in the electronic age? We have already discussed the various activities of LIS professionals in the light of present situation. But it should be kept in mind that professional and social acceptances of the profession depend upon the skills, attitudes and behaviors of the professionals. Due to the changes in the working environment of libraries the LIS professionals are facing challenges day by day.

Conclusion: Presumably the spirit of LIS professional should be elevated if he can better review his shady past and analyze more completely and objectively his present problems. Library and information professional communities are being affected by a range of ICT developments and find their roles changing worldwide. A librarian with diverse talents and training, and who is flexible, will be able to meet the challenges of future library scene.

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OPEN SOURCE SOFTWARE AND LIBRARIES

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Abstract

Open source software is not something to be afraid of its software that you can modify fix and to and distribute to other. Many organization and individuals have developed open source software are which are freely used and freely distribute of others digital libraries. The paper describes some open source software used for automation digitalisation and web publishing. Library professional do not think seriously about the advantages of open source software for automation and hence reluctant to use it. They do not have the enterprise to support open source software. Ideas for funding and suggestion for open source software to use in library.

Keywords- open source software / information technology /free software.

Introduction: - Open source software is computer software whose source code is available under a licence that – Permit users to study change and Improve the software and to redistribute it in modified or unmodified form. It is the most prominent example of open source development and often compared to user generated content. For many libraries, organizing their book and other media can be daunting task, especially as the Library grows with more material. Year ago we had crude card catalogue system that kept thing organized, but were difficult to maintain. With today's computing technology organizing our libraries has never been easier or more efficient. Gone is the card catalogue and in some libraries, it much easier to locate a book through and internet connection and picking it up upon your arrival, rather than wasting the time scouring the aisles looking for your next read. Now just because the world has been blessed with wonderful software solution that make everything easier to do, doesn't mean that every library in the universe is using these solution. Open source is a software development model as well as software distribution model open source software is a program in which source code is open for use and alteration by the public and any one can see change and distribute it provided they abide by the accompanying license. Thus open source software is not only free also provide freedom to modify the software.

What is open source software:- Open source software is software the provide access to the source code meaning that users are free to see, how the product is made. Additionally users have the right to modify the product change the code to their liking experiment with different version and give away or resell the new product with the guarantee that they must also provide their source code and so on modifying the product and redistribution are the two main components of open source software. If you value fair use of information and intellectual freedom, open source software is called free software is right for you and your library open source software proponents believe that this is not completely method as superior to proprietary software. If a price of software is. Right for you and your library. Open source software proponents believe that this is not completely realistic and prefer promoting collaboration method as superior to proprietary software. If a price of software is called free software.

Definition of open source software :-Proprietary – The software costs money and the source code is restricted/ you cannot modify , fix, add to take away, or change the code. In any form.

Open source – The software is most likely free and the source code is completely open you can modify fix add to take away, and change the code any you wish.

Advantage of open source software:- **6.1 Lower software costs:** - open source solution generally require no licensing fees. The logical extension is no maintenance fees. The only expenditure are the media documentation and support if required.**6.2 Simplified license management;** - Obtain the software open and once and install it as many time and in as many location as you need. There's no need to count, track or monitor for licence compliance.**6.3 Lower hardware cost :-** In general linux and open source solution are elegantly compact and portable and as a result require less hard were power to accomplish the same tasks as on conventional servers or workstation. The result is you can get by with less expensive or older hardware.**6.4 Support :-** support is available for open source often superior to proprietary solution first open source support is freely available and accessible through the online community via the internet . And second many tech companies are now supporting open source with free online and multiple levels of paid support.**6.5 Unified Management :-** Specific open source technologic such as CIM and web Based enterprise mangment provide the capability to integrate or consolidate server. Service application and workstation mangment for powerful administration. **6.6 Quality software:-** Evidence and research indicate that open source software is good stuff. The peer review process and community standard plus the fact that source code is out there for the world to see tend to drive excellence in design and efficiency in coding.

Open source software for libraries :-7.1 KOHA :- Koha is the first open source integrated library system and support all module of library application Koha has support for Z 239.50 server, multilingual support supports library standards such as MARC 21 , UNIMARC, OAL-PMH and ISO2709 as well as support several next generation OPAC features, Koha community has been providing excellent support through its making lists and IRC room. Software has detailed online documentation manual and these are several power point presentation available on various modules of koha on internet. Many commercial vendors provide support for koha.

7.2 Greenstone:- The greenstone is suite of software for building managing and distributing digital library collection its provide the new way of organizing information and publishing it on the internet or on CD ROM. Greenstones is provided by the Newzealand digital library project university of waikat and developed distributed in collaboration with the UNESCO . It is open source multilingual software.**D Space** :- D space is ground braking digital institutional repository that capture stores, indexes preserves and redistributes the intellectual output of a university's research faculty in digital formats. It manages and distributes digital items , made up of digital files and allows for the creation indexing and searching of associated metadata to locate and retrieve the items.**E prints** :- Eprints is an open source software package for building open access repositories that are compliant with the open archives intantive protocol for metadata Harvesting It shares many of the features commonly seen in document mangment systems but is primarily used for institutional repositories 'and scientific journal. E prints has been developed at the University of Southampton school of electronic and computer science and released under a GPL license.**New genlib**- New genlib is an integrated library automati on and networking solution developed by versa solati on pvt LTD and the kesavan institute of information and knowledge management of India. In March 2005 Newgenlib version 1.0 was released and virsion 2.0 and 2.1 have come ad later on 9th jan. 2008 new wenlib has been declared open sourec software under GNU Licence by the Versus solution pvt LID Hydrabad India **Wordpres** – wordprees started out as a quick free open year ago a web it is a pees community has is Ploded with thoasehd of users and programmers creatthg custom them and Plugins to Comploded change the was the soft ware looks and operates.

Conclusion:- The way and system of developing software is change rapidly with new technologies and new opportunities. libraries in developing and tradition countries require affordable accessible update software that can be adopted to meet local requirement. There are mare open source Software like Avanti Emilda firefly ganesha jromla etc. which are used to create a resourceful library on lower cost with greater accessibility. Thus open source software is a born for long term preservation of Scholarly work and to face the challenges posed by commercial Software in the merket an opportunity to modernize

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THE INFORMATION GATEWAY SEARCH ENGINE

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Abstract

The emergence of internet has revolutionized developments in all spheres of human activities all over the world. It has opened up new opportunities for the information professionals, writers, publisher, scientists, students and common users to meet the growing challenges that are being faced by them under the fast changing scenario. A search engine is gateway of information where the information is located on internet. A search engine is an information retrieval system. Search engine plays a vital role in searching a specific piece of information over the huge amount of information.

Keywords:- Gateway, search engine, internet, information, web

Introduction:- Now days, the world is witnessing a new kind of revolution information revolution. Information and communication technology provides the means for collecting, storing, processing, analyzing, transmitting and receiving the information. The emergence of internet has revolutionized developments in all spheres of human activities all over the world. It has opened up new opportunities for the information professionals, writers, publisher, scientists, students and common users to meet the growing challenges that are being faced by them under the fast changing scenario. Therefore the use of internet has taken rapid stride for collecting data and information and the use of search engine prove to be the most significant gateway for gathering information. Internet has emerged as powerful medium for storage and retrieval of information on the web, so the information is growing rapidly. In internet, information are spread out of millions of pages available, in spite of hyper links, it causes difficulties to user in search for any their areas. To solve the problem of retrieving any particular information on the web, search engine is a gateway of that information and plays a vital role. A search engine is a wonderful tool that is found on the internet. A search engine is an information retrieval system. Search engine is program that will look through the vast amount of information on the internet and gives us the list of websites where we can find out what we are looking for. A search engines provides an interface between the users and databases. There are only a few major search engines that are extremely popular, but there are hundreds of others that aren't generally used. Search engine is an interactive tool helps users to locating information available on internet and plays a vital role in searching a specific piece of information over the huge amount of information.

Role of Search Engine:- A search engine is an information retrieval system plays very important role. The usefulness of search engine depends on the relevance of the result set it gives back, while there may be millions of web pages that include a particular word or phrase, some pages may be more relevant, popular or authoritative than others. Most search engine employ methods to rank the result first.

The gateway of information world To retrieve relevant information from internet To help in finding information, products and various resources on the web To know the location of resources To use internet as ready reference source To use internet as biggest online digital librar A search engine is wonderful tool that is found on the internet. It uses the Boolean technique to combine terms and provide relevant results, with links to informational websites.

Types of Search Engine:-Search engine is classified into following categories- Simple search engine :- Google, Hotbot Subject search engine :- Scrius, Mednets Academic search engine :- Google Scholar, I Seek, Ojose Meta search engine :- Mamma, MetaCrawler Media search engine :- Pixsy, Retrievr Social search engine :- Wink, I Search Hybrid search engine :- Yahoo

Conclusion:- A search engine is gateway of information where the information is located on internet. The internet puts the concept "any time, anywhere". Search engine plays a vital role in searching a specific piece of information over the huge amount of information.

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USE OF GREY LITERATURE BY THE LIS DISCIPLINERESEARCHERS IN NORTH MAHARASHTRAUNIVERSITY LIBRARY: A CASE STUDY

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Abstract

This study was undertaken to find out the use of grey literature by the Library and Information Science (LIS) discipline researchers in North Maharashtra University Library (NMUL). The Survey conducted by well-structured questionnaires. The study demonstrates and elaborates the various aspects of grey literature, strategies for enhancing the use of grey literature were formulated to guide the study. The sample consisted of 22 Library and Information Science (LIS) discipline researchers from North Maharashtra University, Jalgaon (NMU)

Keyword: *Grey Literature, Strategies, Library and Information Science (LIS), North Maharashtra University Library (NMUL)*

INTRODUCTION: Universities are relied on for education, training and manpower development and research for socio-economic development of any nation. For Universities to meet up with the onerous responsibility, they need to provide strong literature support to the teaching, learning, research and community development activities. The unit of the university responsible for the provision, management and dissemination of information to support the effective and expeditious attainment of the objectives of the university is its library. It is pertinent to state that the increase in the volume of literature in the library collection has been occurring at an exponential rate in this information age century. Nevertheless, many University Libraries globally are beset with dearth of information resources especially in the professions and local content. This is due to the fact that in the field of librarianship and information science generally, there has been an outcry for literatures in quest of people utilitarian. While relief has come to some of the libraries through computerization and internet connectivity, there is still the pressing need to more effectively manage Grey Literature for higher education and research as they are often not accessible on the web. Studies on access and usage of grey literature have attracted wide attention from many parts of the world. Literature on its originality, relevance in the development of science and in solving societal problems, especially from the developed countries is immense. In the developing world, it has started to gain prominence, especially in higher learning institutions and research establishments. In the course of its evolution and historical development, the term “Grey Literature” has opted many terminologies in its meaning, which are used interchangeably with it.

REVIEW OF LITERATURE: The exhaustive and unequivocal definition of the nature and types of material qualified to be defined or described as grey literature could probably form the basis of understanding it. However, there is no certain means of developing a universally- accepted definition or description of grey literature. Grey literature is a term that is probably not widely understood outside the world of librarians in the natural sciences and social sciences. Even within this circle, there are varying degrees of agreement and consensus on what constitutes grey literature (Titlett&Newbold, 2006). Scholars such as McKinney (2005), Der Heij (1985), Aina (2005) and Smith (1996) Wood (1982) have analysed the literature tracing the development of definitions as well as a general description of the term “grey literature”.

ABOUT NORTH MAHARASHTRA UNIVERSITY LIBRARY: North Maharashtra University Library established in the year 1991-92. The North Maharashtra University Library (NMUL) has a total collection of more than One lakh books, subscribes to 5000+E-journal titles. It consists 3793 Ph.D theses and 6000+ back volumes of periodicals.

SCOPE OF THE STUDY: The present study is limited to Research students of Library and Information Science (LIS) discipline in North Maharashtra University Library, Jalgaon.

OBJECTIVES OF THE STUDY It specifically focused on the following objectives: To find the Gray Literature usage by the LIS researchers in NMU Library. To find out the purpose of using the Gray Literature by the LIS researchers in NMU Library. To find out the use pattern of Gray Literature by the LIS researchers in NMU Library.

METHODOLOGY: Present study has used survey method. This method plays a significant role in research as can be seen from the statement. “The survey method is one of the most effective and sensitive instruments of research survey research can produce much needed knowledge” (Kasyap, 1969). Data collection: - To know the needs of students covered, a structured questionnaire was designed and factual questions, opinion questions were asked. The researcher has distributed 26 questionnaires to research Scholars 22 questionnaires duly filled returned by students. The time period studied was December 2017.

DATA ANALYSIS The collected data were organized and tabulated by using statistical methods, tables and percentages.

Table: - 1. Frequency of Visit University library

S. No	Time	No. of Respondents	Percentage
1	Daily	3	13.64
2	3-4 times in a week	5	22.73
3	Once in a week	12	54.55
4	No Response	2	9.09
Total		22	100.00

Table 1 shows that 12(54.55%) of the Respondents visit the library once in a week, followed by 05 (22.73%) respondents visit the library 3-4 times in a week, 03 (13.64%) respondents visit the library daily, 02(9.09%) of the respondents have not responded to the question.

Table: - 2. Purpose of Grey LiteratureUse

S. No	Purpose	No. of Respondents	Percentage
1	Teaching/Study	2	9.09
2	Research Work	16	72.73
3	Publication needs	3	13.64
4	No Response	1	4.55
Total		22	100.00

Table 2 shows that 16 (72.73%) of the respondents use grey literature for their Research work, followed by 03 (13.64%) used grey literature for publication needs, 02 (9.09%) of the respondents used grey literature for teaching and study, 01 (4.55%) not responded. Hence, it can be inferred that a majority of the Respondents use the grey literature for their research work.

Table: - 3. Use / Access of Grey Literature

S. No	Use / Access of GL	No. of Respondents	Percentage
1	Most Frequently	1	4.55
2	Frequently	2	9.09
3	Moderately	13	59.09
4	Occasionally	6	27.27
5	No Response	0	0.00
Total		22	100.00

Table 3 shows that 13 (59.09%) of the respondents access the grey literature moderately, followed by 06 (27.27%) access the grey literature occasionally, 02 (9.09%) of the respondents access the grey literature frequently, 01 (4.55%) most frequently access the grey literature. Hence, it can be inferred that a majority of the Respondents access the grey literature moderately.

Table: - 4. Satisfaction of Accessing Grey Literature

S. No	Level	No. of Respondents	Percentage
1	Highly satisfied	2	9.09
2	Satisfied	16	72.73
3	Average	3	13.64
4	Not satisfied	1	4.55
Total		22	100.00

Table 4 shows that 16 (72.73%) of the respondents satisfied for accessinggrey literature, followed by 03 (13.64%) of the respondents average for accessinggrey literature, 02 (9.09%) of the respondents highly satisfied and 01 (4.55%) of the respondents not satisfied. Hence, it can be inferred that a majority of the Respondents satisfied accessinggrey literature.

Table: - 5. Difficulties of Accessing Grey Literature

S. No	Difficulties	No. of Respondents	Percentage
1	Sources are classified under different subjects	3	13.64
2	No systematic arrangement for grey literature	6	27.27
3	No Difficulties for Accessing Grey Literature	13	59.09
Total		22	100.00

Table 5 shows 13 (59.09%) of the respondents have no difficulties for accessing grey literature, followed by 06 (27.27%) respondents have difficulty in no systematic arrangement for grey literature and followed by 03 (13.64%) respondents difficulty in sources are classified under different subjects.

Table: - 6. GL collection is Up-to-date and Recent collection.

S. No	Rating	No. of Respondents	Percentage
1	Excellent	3	13.64
2	Good	14	63.64
3	Fair	5	22.73
Total		22	100.00

Table No.6 shows that 14 respondents 63.64% of the total sample rating that the grey literature collection is good in the library. While another 05 respondents (22.73%) rating that the grey literature collection is fair for them. 03 respondents (13.64%) rating that grey literature collection is excellent in the library.

Table: - 7. GL collection is Adequate and comprehensive collection.

S. No	Rating	No. of Respondents	Percentage
1	Excellent	3	13.64
2	Good	15	68.18
3	Fair	4	18.18
Total		22	100.00

Table No.7 shows that 15 respondents 68.18% of the total sample rating that the grey literature collection is good adequate and comprehensive collection in the library. While another 04 respondents (18.18%) rating that the grey literature collection is fair adequate and comprehensive collection for them. 03 respondents (13.64%) rating that grey literature collection is too excellent adequate and comprehensive collection in the library.

FINDINGS OF THE STUDY On the basis of responses received from respondents on the topic of "Use of Grey Literature by the LIS Discipline Researchers in North Maharashtra University Library" the following important findings can be noted: The study reveals that majority of researcher's purpose of using grey literature for their research work needs. A majority of the respondents accessing the grey literature moderately. A majority of respondents did not face any problems while they were using or accessing grey literature in the university library. It was found that a maximum number of users were satisfied with the accessing grey literature in the university library.

CONCLUSION: This study gives a snapshot of the use of grey literature by the LIS Discipline Researchers in North Maharashtra University Library. It is clear that most of the researchers accessing grey literature for their research work needs. 40.91% of the researchers expressed problems while accessing grey literature in the university library. The infrastructure of grey literature stack section needs to be developed for better arrangement of grey literature collection. The study also indicates that most of users were satisfied with the using the grey literature.

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WAY AND WAVES OF TECHNOLOGY IN LIBRARY: A FUTURISTIC SCENARIO

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Abstract

Library is not simply a storehouse of the book. Library has changed itself with the changing era. The library adopts the technology & internet for serving the information to their patron. Hence it survives firmly in this digital era. Some advance apps and software we will see in the nearest future in library. Library mobile app, book delivery drone, one click digital app, 3D Printing, Augmented Reality app, Online Book Exhibition software, Library bookmark appset through this apps library will be able to deliver the advance services and remote access. Any library can develop their library apps .through this app patron can access the OPAC, services and so on. Book delivery drone can supply the book at patron's home after getting the request. Book exhibition is the regular feature of library. Library can organized online book exhibition through the software. Book search in stack is very difficult and time consuming process but through the library bookmark app you can easily scan the particular book in rack.

Keywords: Bookmark, Augmented, Virtual, Drone, Breed, Exhibition, Explosion, Futuristic, Digital, Printing.

Introduction: The library is a part of a complex and dynamic educational, recreational, and informational infrastructure. Today library is not limited only for book lending .It is creative space not for individual but for masses. Library can become the first destination to apply the emerging technology. Before few decades I acquired the information in paper form which is available in library. But now the form of information is drastically changed. Digital conversion of information is started. Online reading resources are tremendously increased. CDs, DVDs and hard disc have become the big storage device. We all are eager to know how will be our future's libraries. I am trying to explain of futuristic scenario of library.

Library and Technology: Library is sifting gear according to time. Library has to go forward with technology in this digital era. Through that it will cross the border of time, place, and person. It is essential for save the existence of library hence it becomes the library cum IT Hubs. Nowadays information explosion occur every fraction of second. This fast growing information access, process, repackage, dissemination and retrieval are become the function of library. For this library has to go together with technology to fulfill their patron's information needs.

Futures of the Library: Some innovative ideas, app and equipment we will see in library in near future.

1. Library Mobile Apps: Right now mobile apps are current trend. Mobile is so handy device for people. Masses are spending more and more time within app. So why not attach with users in a way they enjoy? Through the mobile app can enhance the library services outside their physical borders and assist the interaction with patrons. The app offers for Library catalogue, OPAC, transaction details, book reserve facility, download e-book, library guides, library virtual tour etc. Some library mobile Apps are Odilo App, Overdrive App, Zinio Digital Magazines App, Freegal App, Mango Mobile, Library Edition, Gale Database App etc.

e.g. Mobile App of Alexandria Library:

Download the free Alexandria Library Mobile App .It is use for online catalog, account access, scan barcode, event listing and so on. The app is compatible with Android, iPhone and iPod Touch devices and can be downloaded from the Apple App Store or Google Play for free.

Many Libraries are using library mobile apps in the world .Some apps are mentioned below.

Academic Library Apps

Institution	Name of app	Date loaded to App Store	Brief content range summary
San Diego State University Library	SDSU Library	July 16 2012	Search for books check library hours floor plans of library call number summary view new book titles email a librarian
Karolinska Institutet University Library	KIB Mobile	Apr 09 2011	Opening hours today Facebook content display Chat included (unavailable 15.33 Fri Feb 22) Internet phone Email window RSS News feed Bus timetable and when next bus leaves Information generally – opening hours, courses, library contact, feedback form, rules, service summary, maps of area Catalogue search and Loan renewal List of mobile databases and direct links to them Group study room availability calendar (note to book you have to use the library web page, this is just display

Cornell University	library cu-library	Sep 08 2011	Featured mobile database Map of library on campus Opening Hours summary of all branches today Built in email, texting and questionpoint instant messages, just list of phone numbers search the library catalogue manage your library account
University of Cambridge	UCAM Library Search	Aug 30 2011	Catalogue search but added features is directs you from location to google map to find which of the 31 included libraries you need
Curtin University Library	Curtin University Library	Mar 30 2011	Catalogue search Account management Built in barcode scanner for barcodes and QR codes Opening Hours today Library locations and google maps Database listing including links through to databases (complete listing possibly) Link to Libguides collection New Books display Exam papers linkage Room Bookings Computer availability display Library news Contact Us (just lists) with option to get this included in the device Contacts listing
University of Warwick	Libmap	Dec 02 2013	A new edition of their app which originated with floorplans but is now more wide-ranging

Library Mobile Apps Technology applying in India:

IITI Mobile Library App:IIT Indore Central Library has developed its own library app. All information regarding library it provides through this app.The patron can search the OPAC, send the request of renewal and reserve the book without visit to the library. Any digital collection he/she can access anywhere on their mobile.

IITGN Library Mobile App:IIT Gandhinagar developed its own library apps.It's main objective of the institute to become a world class institution in Engineering, Sciences and Humanities & Social Sciences. Hence it prepared the Library Mobile App for convenient for its patrons and delivered the library services through this app.

2. Book delivery drone: To get the book from a library, you have to go and find it. The future will be belongs to unmanned flying machines in many sectors like Amazon drones. Libraries could deliver the books to users.Book delivery drone is not even the close future. It is already happening. Australian start-up Flirtey has teamed up with a book rental service Zookal to create the first in the world .textbook delivery system.The system is using hexacopters, drones with six rotors, to deliver ordered textbooks. Now, the good thing is that the drone can get you by the location of your smartphone through GPS, so there is no need to provide a fixed address.Just imagine. You are sitting at your home, in the middle of writing an article; you want to get another book. Stay where you are, and use the app to issue a book. The drone will come within a moment. Issue the book to the patron and scan the smart B.T.cardand get backanother book which they want to return to library.

2. One Click Digital App: This is easy to use application to download and transfer audiobooks from OneClickdigital. An audiobook download service being presented to InfoSoup library card holders. OneClickdigital provides access to about 6000 audiobook titles published by Recorded Books.

2. 3 D Printers:3D printing is a form of additive manufacturing technology where a three dimensional object is created by laying down successive layers of material.3D printers have reached a lower price point,it is much easier for people to get access to them. Many academic libraries offer this service. Its deployment is substantial across different disciplines and popular amid students.3 D printing service is attractive for other patrons. Children adore crafting their own toys and adults are easily amazed by the exciting power of technology. So make it available for everyone and everywhere.3 D printing become the emerging technology for library.There are 250 libraries in the US that offer 3D printers to patrons, according to *OITP Perspectives*, a publication by the American Library Association (ALA).

3 D Printers Desktop Software: SketchUp: SketchUp, which was made by Google but sold to Trimble, is a great 3D modeling program with a quick learning curve and a lot of documentation. Blender: Blender is tremendously powerful, open-source, specialized 3D production software that allows for formation of 3D models, applications, and video games. Autodesk 123D: Autodesk 123D is a suite of hobbyist CAD and 3D modelling tools, parallel in scope to SketchUp and based on Autodesk Inventor. Autodesk Meshmixer: Mesh Mixer is a 3D processing software that allows for editing and refining 3D models , and creating new and attractive designs. TinkerCAD: A free, web-based application to create 3D models for printing. This app is very quick to learn, with quick tutorials and lessons on how to use it. It can generate quick shapes and geometry, insert letters, numbers and symbols into your model, and can import from other 3D files. It requires a free account with Autodesk.

Users of 3 D Printing Library Users: National Institute of Health Library (NIH): US based NIH Library is an open stacks biomedical research library. The NIH Library provides services in 3D printing, bibliometrics, bioinformatics, custom information solutions etc

Hudson Library and Historical Society: The Hudson Library and Historical Society uses a MakerBot Replicator 2 to print 3D models.

3. Library bookmark apps: Piotr mentions an interesting device from Chinese design company Toout that acts as a regular bookmark and it facilitates the user's activity related to finding books. We want to mention features of this kind of device. This device offers directions to the users regarding the book. The Patron wants to find or keep track of their lending activity. Search the location of books inside the library is still a struggle for many users. Bookmark app can become the solution of this problem.

3. Self-Service printing, copying and Scanning Solutions:

Libraries can come in handy for people who don't want to keep a printer at home any longer. Some softwares are coming forward and it was built in collaboration with the majority of Danish Libraries. Patrons can walk into the library and print and pay directly from phones, laptops or the library PCs without setting up an account.

4. Augmented reality app: AR apps run the gamut, from interactive map overlays and virtual showrooms to huge multiplayer skirmishes, each piece of software hones in on smartphone GPS and camera functionality to make a more immersive experience. Augmented reality app is implemented from medicine to gaming. How it will escape from the field of library. Piotr mentions librARI a concept of an image-based augmented reality application, created by an Indian developer. librARI allows users to search for books with AR interaction. The entire concept of the app is based on localizing the books on the physical space and discovering. Many Augmented reality apps are available in the market related to library, e.g. Vuforia, EasyAR, Wikitude, ARToolKit, Kudan, Xzing, Maxst,

5. Online Book Exhibition: Nowadays libraries are digitizing their collections in order to preserve original documents and make them accessible to masses over networks. Online exhibition is the best solution to all the problems faced by the physical exhibition in terms of free information access, public awareness and visit to the library. It is an amazing way of disseminating information in digital form including exhibiting products, books, educating visitors on any topic. The information will be delivered through the internet and accessed by the users through the internet.

Online Exhibition Developing Tool: Some software is available for creating the online exhibition. A new breed of open-source and free software tools has recently emerged making it possible to catalog and manage digital collections and create robust narratives and layouts for exhibition online.

1. Omeka: <http://omeka.org/> Omeka is a software tool that enables you to create dynamic online exhibits that showcase collections of digital images, text, and other multi-media formats in one seamless site. Omeka is developed by the Roy Rozenweig Center for History and New Media at George Mason University. Omeka is a free & open source web publishing software for online digital archives. Its main focus and strength is producing websites and online exhibitions.

2. Collective Access: <http://collectiveaccess.org> Collective Access is a free, open source cataloging tool and web-based application for museums, archives and digital collections. Its main focus/strength is on cataloging and metadata. You can create very robust cataloging records, create relationships between items, create profiles of creators and subjects of items and link them to objects, etc.

3. CollectionSpace: <http://www.collectionspace.org> CollectionSpace is a free, open-source collections management application for museums, libraries, historical societies, and other organizations with special collections. The application is administered by Museum of the Moving Image, but it's a joint partner with the division of Information Services and Technology at the University of California, Berkeley and the Centre for Applied Research in Educational Technologies at the University of Cambridge.

4. Open Exhibits: <http://openexhibits.org> Open Exhibits is a multitouch and multi-user tool kit that permits you to create custom interactive book exhibits. The strength of this application has less to do with cataloging collections of digital assets, but developing online and interactive exhibits with digital objects. The multi-touch piece comes into play with the ability to specify that certain types of user behaviors will result in various outcomes, e.g. if a user drags a certain section of an image, the entire image will move and readjust along with the movement.

Conclusion: Library is moving ahead and ahead with technology. How will be our library in the future? Just we trying to introduce emerging trends and innovative technology which will be implemented in library too. Library mobile app can enhance the library services outside their physical borders and assist the interaction with patrons. It can give the whole information about library on your mobile. With this one click digital app can use for download recorded books. 3D printer, Library bookmark app, augmented reality app, online book exhibition software all these things we will see in nearest future in library and it will become really helpful to improve the library services and fulfill the information needs through their desired way.

Suggestion: The staff should be well technically trained. The fund should remain adequate for the library. The Institution should be ready to embrace the changes and challenges. The library should follow the doctrine of library science to fulfill the patron's needs.

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ONLINE COMPUTER LIBRARY CENTER (OCLC) FIRSTSEARCH SERVICES AT A GLANCE

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Abstract

First Search is an online service that gives library and education professionals access to a rich collection of reference databases. FirstSearch offers electronic access to dozens of databases and more than 10 million full text and full image articles. With FirstSearch, materials in your library collection can be identified in search results, facilitating interlibrary loan and helping to connect your users with the information they need.

Keyword: FirstSearch, OCLC, WorldCat,

Introduction: FirstSearch provides access to a core collection of reference databases. The FirstSearch Base Package includes WorldCat as well as other databases such as CAMIO, Electronic Books and OAIster. Users of WorldCat.org and WorldCat Local can access these FirstSearch databases through a user-friendly single-search box. FirstSearch is an online reference search tool that delivers quality content from WorldCat and other quality, respected databases. Since its introduction in 1991, FirstSearch has helped library users identify and locate resources in library collections. More recently, OCLC programs and services have made it considerably easier to enhance the visibility of library collections to much broader audiences, specifically those who begin their searches on the Web through popular search engines, popular bookseller sites, and Web sites that display the WorldCat search box. By maintaining a subscription to the WorldCat database on FirstSearch and contributing library holdings information to WorldCat, it enhances the visibility of library holdings to Web users through WorldCat on the Web. Information seekers who begin searching on selected search engines like Yahoo! Search and Google, as well as bookseller sites like Amazon.com, ABAA and others, can link to library holdings through "Find in a Library" entries they uncover in search results. The WorldCat search box available from WorldCat.org for free download to public and personal Web sites leads searchers to a public view of all WorldCat holdings and links to items in library online catalogs.

The benefits of FirstSearch include: Highlights your library's collection within search results **Saves money and time** when borrowing from other libraries **Leverages your investment** in electronic and physical collections with linking capabilities

The salient features of FirstSearch include: Access to more than 258 million records via WorldCat Library ownership information in WorldCat linked to most FirstSearch databases Intuitive Web interface is designed for new and expert users Control of local customization options, including full text and interlibrary loan at the database level Links the library's Web-based catalog. Choice of seven interface languages: English, French, Spanish, Japanese, Korean, and Chinese (traditional and simplified) WorldCat record display in Chinese, Japanese, Korean and Arabic vernacular for items cataloged in those languages Library staff can perform ILL requests from within FirstSearch interface using the staff resource sharing view FirstSearch helps libraries connect users to the information they need, whether it's available in library's collection or in the collections of other libraries around the world. WorldCat anchors FirstSearch with its millions of online records built from the bibliographic and ownership information of contributing libraries. Users can connect to the materials in library and in other libraries both print and electronic from WorldCat records and article citations in other FirstSearch databases. WorldCat records in FirstSearch provide the fastest access to library ownership information. When subscribed to the WorldCat database on FirstSearch, the library's resources become visible in Web sites of popular search engines and other partner Web sites. This means that the users would find the resources to provide for them from sites they visit regularly. Seamlessly linking users to articles, electronic books and journals, digitized special collections and more, FirstSearch provides an affordable way to give users access to the world's information. FirstSearch helps libraries connect users to the information they need, whether it's available in your library's collection or in the collections of other libraries around the world. WorldCat anchors FirstSearch with its millions of online records built from the bibliographic and ownership information of contributing libraries. Your users can connect to the materials in your library and in other libraries both print and electronic from WorldCat records and article citations in other FirstSearch databases. WorldCat records in FirstSearch provide the fastest access to library ownership information. FirstSearch offers flexible search options and built-in assistance to point library users to what they need quickly and easily. It helps users identify items (both print and electronic) available in library and in other libraries. FirstSearch users have a choice of eight interface languages: Arabic, Chinese (traditional and simplified), English, French, Japanese, Korean and Spanish. Users can also search and display WorldCat records in seven non-Latin scripts: Arabic, Chinese, Cyrillic, Greek, Hebrew, Japanese and Korean. FirstSearch's linking features fully integrate both collections and other services. Outbound links: From within FirstSearch, users can link to library's online catalog or OpenURL resolver, other libraries' Z39.50 catalogs and subscription services such as JSTOR archives. Setting up OPAC links in FirstSearch automatically enables links to catalog from the WorldCat Web interface, exposing collection to users on the Web. Inbound links: If subscribed to other information services like EBSCOhost, booksinprint.com, InfoTrac or ProQuest, users can link from these to library ownership information in WorldCat as well as fulfillment options that include WorldCat Resource Sharing and document delivery from CISTI and

Infotrieve. Library users can initiate full OCLC resource sharing requests directly in FirstSearch, saving time and improving workflow. While in the FirstSearch staff view, staff can enter shipping and billing information, lender strings, borrowing notes and other details.

Greater visibility for the collections: Since its introduction in 1991, FirstSearch has helped library users identify and locate resources in library collections. More recently, OCLC programs and services have made it considerably easier to enhance the visibility of library collections to much broader audiences, specifically those who begin their searches on the Web through popular search engines, popular bookseller sites, and Web sites that display the WorldCat search box. By maintaining a subscription to the WorldCat database on FirstSearch and contributing library holdings information to WorldCat, it enhances the visibility of library holdings to Web users through WorldCat on the Web. Information seekers who begin searching on selected search engines like Yahoo! Search and Google, as well as bookseller sites like Amazon.com, ABAA and others, can link to library holdings through "Find in a Library" entries they uncover in search results. The WorldCat search box available from WorldCat.org for free download to public and personal Web sites leads searchers to a public view of all WorldCat holdings and links to items in library online catalogs.

Conclusions: FirstSearch has been a favorite tool for many librarians and researchers since 1991, its precision searching capabilities and reach display are valued and appreciated. Based on member feedback, currently reviewing functionally and experience to inform development of a new and expanded WorldCat search experience. Library users and staff use FirstSearch refined search capabilities to identify materials need and find out where they are available.

OCLC Research is one of the world's leading centers devoted to exploration, innovation, and community building on behalf of libraries, archives, and museums. OCLC Research is dedicated to helping libraries, archives and museums more effectively serve users of information, information systems, and cultural heritage collections.

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GREENSTONE OPEN SOURCES LIBRARY MANAGEMENT SOFTWARE FOR DIGITAL LIBRARY

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Abstract

This paper aims to discuss the concept of "Greenstone Open Source Software and its tools use in library and Information science. Currently all over the India librarians are using the various open sources software for different purposes such as library digitization, automation, Institutional repository, content management. This paper high lights major open source library software advantage and disadvantages as well as also describe difference between open sources software and other types of software. It also presents brief information about the Greenstone Open Sources Software.

Keywords Open Sources Software, Greenstone, LibraryAutomation, Library Management Software.

Introduction: Open source software (OSS) is both a philosophy and a process. It is a philosophy describing the intended use of software and methods of distribution. OSS is often times equated with GNU software as well as described as free software, but the term 'free' should be more equated with the Latin word 'liberat' meaning to liberate, and not necessarily gratis. In the words of Richard Stallman, the founder of the GNU software project we should think of 'free' as in 'fee in speech' not as in 'free beer'.

Objectives of the study The main objectives of the study were to: Identify the ILLMS and DL software solutions that are popular among the Indian libraries Study the advantages and barriers to OSS implementation in India To discuss about the Greenstone OSS.

Literature Review: Analysing the advantages of OSS for libraries, Morgan (2002), emphasized on the various opportunities offered by OSS, including possibility to take control of library services and collection, lowering the barriers of learning process and giving back to the community at large, by contributing to the OSS development. According to Frumkin (2002), OSS would help in empowering libraries, through knowledge and understanding, by adopting and participating in development of OSS solutions. Corrado (2005) found that OSS could benefit libraries through lower initial and ongoing cost, eliminate vendor lock in and provide for greater flexibility.

Methodology: This is secondary research analysis, desk research has been conducted and analysis is logical in nature. Secondary data is collected through various research articles, newspapers and websites.

Open source software: The term "Open Source" was introduced during the foundation of the Open Source Initiative in 1998. At that time, it was only a different expression for what people of the free software Foundation were using since the mid-80. But free does not mean that the software is given away for free of cost. Open Source Licenses allows an easy way of accessing the sources. Open Source is a software development model as well as a software distribution model. In this model the source code of programme is made freely available with the software itself so that anyone can see, make changes and distribute it provided they abide by the accompanying license. In this way, Open Source is similar to peer review, which is used to strengthen the progress of scholarly communication.

Benefits of Open Source Software This software enables exorbitant saving in the following areas: Saving on the exorbitant costs incurred in procuring the commercial packages; Savings on payment of annual maintenance costs; Economical upgrading costs incurred by commercial Suppliers.

Limitations of Open Source Software: Without Internet facility one can't use and update the new version of the available software. The trade off with open source software is that since the software in many cases is not distributed as binary files, one has to compile the software by using the respective languages. Rapid advances in technology have significantly changed how our society views information, and this shift has led to a drastic evolution in the nature of how libraries operate and how they provide services to their patrons.

Open Source Software for Library: Software plays an important role in the process of library automation and information management in libraries and information centers. Library and Information centers need software for housekeeping jobs like circulation, acquisition, cataloguing, serial control, etc. Also it needs software for digitization of Institution. Open Source Software for libraries are available in all fields including integrated library management software.

Greenstone Digital Library (GSDL) Software: Greenstone is a suite of software for building and distributing digital library collections. It provides a new way of organizing information and publishing it on the Internet or on CD-ROM. Greenstone is produced by the New Zealand Digital Library Project at the University of Waikato, and developed and distributed in cooperation with UNESCO and the Human Info NGO. It is open-source, multilingual software, issued under the terms of the GNU General Public License.

Special Features of Greenstone: Accessible via web browser: Collections are accessed through a standard web browser and combine easy- to use browsing with search facilities. **Full Text and Field Search:** The User can search the full text of the documents, or choose between indexes built from of the document. **Flexible browsing facilities :** The user can browse lists of authors, lists of titles, lists of dates, classification structures, and so on Different collections may offer different browsing interfaces are available. **Create access structures**

automatically :TheGreenstonesoftware creates information collections that are very easy to maintain. All searching and browsing structures are built directly from the documents themselves. **Make use of available metadata** : Metadata , which is descriptive information such as author, title, date, keywords, and so on, may be associated with each documents, or with individual sections within documents. **Plug-in extends system's capabilities**: In order to accommodate different kinds of source document, the software or organized in such a way that "plug-in" can be written for new document types .**Customization**: The Greenstone allows customization of presentation of collection of presentation of collection that are based on extensible stylesheet language transformation and other agents that govern the definite function of Digital library.**Administrative function provided**: An administrative function enables specified users to authorize new user to build collections, protect documents so that they can only be accessed by registered user on presentation of a password, examine the composition of all collections, and so on .**Platforms**: Greenstone runs on all popular operation systems: all windows versions, Linux, Mac-even the iPod.

Required Software: To create the digital collection(s) using GSDL some other associated software are required. The GSDL can be downloaded (free) from www.greenstone.org and www.sourceforge.net. Greenstone CD-ROMs hve also been published by the United Nations and other humanitarian agencies for distribution in developing countries. Following are the associated software:

Java Runtime Environment Version 1.4 Image Magic software Web Browser **GSDL Installation**: Regarding installation of GSDL it is very essential to install the Java Runtime Environment before installation of GSDL.Local Library: It is default setup. Web Library: It is recommended for those who wanting to serve Greenstone on the web. It requires a separate web server like Apache nad Microsoft PWS / IIS.Source Code: Only the source code will be installed and binary executables will not be installed. Custom: This setup allows installing any or all of the features provided by above three setup types.

GSDL Interface: GSDL has two separate interactive interfaces –User Interface and Librarian Interface .End users access the digital library collections through the user Interface, which operates within a web server.

Metadata Formats:GSDL has two separate interactive – User Interface and Librarian Interface. End user access the digital library collections ,enrich it by adding metadata, design the searching and browsing facilities and build and serve the collection to the end users.**Metadata Formats**: GSDL has four predefined sets, such as Dublin core (DC), RFC 1807, New Zealand Government Locator Service (NZGLS),and Australian Government Locator Service (AGLS).New metadata sets can also can also be defined using Greenstone's Metadata Sets Editor (MSE).

Interoperability: GSDL can harvest documents over OAI-PMH and include them in a collection. Any collection can be exported to METS and the Greenstone can ingest documents in METS form. Any collection can be exported to Dspace ready for Dspace's batch import program, and any Dspace collection can be imported into Greenstone.

Picture of Greenstone Librarian Interface Collection Search and Browse: Collection in GSDL can be searched and browsed by using the User Interface. i.e. Greenstone Digital Library. The library is browsed by web browser .Following window show the Home page of the New Zealand Digital Library:

Picture of GSDL Search: For searching Full Text Search, Metadata Search, and Boolean Search can be applied and full text / full audio- video can be browse accordingly .In the following we have entered to the world Environmental Library of New Zealand Digital Library.

Conclusion: The Digital Library Management softwares (DLMS) present an easy to use, customizable architecture to create online digital libraries. With these institutions/organizations can disseminate their research work, manuscripts, or any other digital media for preservations and world over dissemination of digital items.

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IMPORTANCE OF INFORMATION LITERACY IN ACADEMIC LIBRARIES

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Abstract

Today in this information age information is an important resources for any organization's Library & Information Centres. Unlike traditional library resources like early clay tablets to printed books, now information is available in many formats like DVD's Digital resources etc. Thanks to the impact of Information Communication Technology in library. Library users should know how to make use of available information resources like E-resources or databases and this is possible only with effective information literacy programs.

Keywords: Information Literacy, Libraries, e-resources, Databases

Introduction: Today information is an important part for any organizations. Today there is rapid increase in amount of information published on daily basis. As amount of available data grows, problem of managing the information is very difficult and users are confused what to use which leads to information overload. To identify, collect, retrieve, analyse and effective use of retrieved information require skills users and this is known as Information literacy skills. Information plays an important role in any sector of knowledge, without information no one can acquire knowledge and that is why generating qualitative knowledge and information everyone has to use qualitative information resources. The main role of library is providing required information to users. For users, it is necessary to understand required information for carrying out any work related to their profession. For gathering right information users and information society should know purpose of collecting information and awareness of information resources. Among various literacy programs information literacy plays an important role. Information literacy is nothing but knowing important of information, where it is available, in which format is available? How to acquire it and after acquisition how to analyse and synthesize information for effective use. Understanding needs of users and how they manage with the information explosion is need of the hour. Library and Information Centers are basically known as qualitative information providers. It is based on the users need, librarians try to support information needs of the users for various purposes. Librarians are no doubt information literates but users especially students are not aware of information retrieval skills. Hence they fail to retrieve proper information to succeed in their projects. In the information explosion and ICT era there is a need to understand quality of retrieving information and this can be possible only after proper Information literacy training. Information and decision are always interlinked. People are able to make correct decisions only when they have access to relevant and correct information. In the same way organizations or business are able to make correct or effective decision when they have access to correct and cost effective information. Information is very important for decision making. Users should know the skills of retrieving and making effective use of information. To overcome this college libraries educates and training their users or employees to become information literate and are able to recognise needed information, able to find analyse and effectively use the information for their needs. The teaching of information literacy skill called Information Literacy Program. In college libraries usually information literacy programs consists of detailed training on how to make use of the subscribed e-resources/databases.

Information Literacy: Information literacy is a set of qualities required to recognize when information is needed and have the capability to find, assess, and use efficiently the information for their decision making.

Definitions of Information Literacy: National Forum Information Literacy of United Nations defines, "The capability to know when there is a need for information to be able to recognize, find, evaluate, and efficiently use that information for the solution". Chartered Institute of Library & Information Professionals (CILIP) defines, Information Literacy as, "Information Literacy is knowing when and why you need information, where to find it, and how to evaluate, use and interconnect it in a moral manner". SCOUNL (The Society of College, National and University Libraries) defines, Information Literacy as "Information literate person will show an awareness of how they collect, use, manage, produce and generate information and data in a moral manner and will have the information skills to do so effectively". JISC (Joint Information Services Committee) defines, Information Literacy as "the ability to recognize, assess, retrieve, evaluate, adapt, organize and communicate information". The American Librarian Association's (ALA) (1989) Presidential Committee on Information Literacy report Information Literacy is "A set of capabilities demanding individuals to identify when information is required and have the talent to locate and use effectively the needed information." In other words, Information Literacy is a required skills, which facilitates the user to identify his/her information requirement. In addition, it also allows to find, assess and use the required information efficiently. Shapiro and Hughes (1996) defines, "Information literacy should in fact be considered generally as a new liberal art that ranges from knowing how to use computers and access information to critical reflection on the nature of information itself, its technical infrastructure, and its social cultural and even philosophical context and as essential to the mental framework of the educated information age citizen as the trivium of basic liberal arts(grammar, logic and rhetoric) was to the educated person in medieval society". According to Barefoots (2006) Information Literacy is "One should be information literate to resolve difficulties related to information and to become information literate one should learn technology skillset which includes how to find and use the information for their problems and effective and efficient decision making". Bruce and Candy defines, "Information literacy is the

ability to locate, evaluate, manage and use information from a range of sources for problem-solving, decision-making and research” Association of College and Research Libraries defines, “Information literacy is the basis for lifelong learning. For all disciplines it is common, to all learning environments, and to all levels of education. It makes user or learners to master content and extend their investigations, become more self-directed, and assume greater control over their own learning”. President Committee on Information Literacy defines, “information literacy as a bunch of skills, which require user to: “identify when information is required and have the capability to locate, evaluate, and use efficiently the desired information”.

Library & Information Literacy: The 21st Century is known as Information Age because of uncontrolled growth of information sources and outputs. Which make it very difficult to students to learn everything they need to know. Here Information Literacy plays a vital role in teaching critical skills to become experts or lifelong learners. In 1989 American Library Association Presidential Committee on Information Literacy says, “Ultimately, information literate people are those who have learned how to learn. “They know how to learn because they know how knowledge is organized, how to find information, and how to use information in such a way that others can learn from them”. “They are people prepared for lifelong learning, because they can always find the information needed for any task or decision at hand.” Information Literacy gives a platform for lifelong learning which is common in all disciplines, all level of educations and all learning environments which improve searching skills of users and make them lifelong learners.

Role of Library and Librarians in effective Information literacy program:

Librarians plays very important role in effective execution of Information Literacy Program at institutions. Listed below are necessary for implementation of effective Information Literacy Program.

Conclusion: To conclude Information Literacy is a need of the hour. Authority bodies should think of incorporating information literacy in all levels of education, starting from school level. Information literacy should be part of library. Budding librarians should be trained properly on delivery skills because they have to handle the sessions.

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LIBRARY AUTOMATION SOFTWARE PACKAGES USED IN ACADEMIC LIBRARIES OF JALGAON CITY: A COMPARATIVE STUDY

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Abstract

The information technologies have changed the role of the libraries to develop the library automation software packages, access to information and retrieval has become more convenient and efficient. There are hundreds of different Library automation packages available for library system but the Jalgaon city Arts/com./sci. colleges are use to the specific software in this paper author focus on the all library software packages and study.

Keywords: Library software, academic library.

Introduction: Library is an indispensable organization of educated and civilized society. The Increased growth, use and value of information generated the concept of information Society or information oriented society "Libraries may not create civilization; but a Civilization cannot exist without them." In other words libraries are treated as the temple of learning where users can find out relevant information from the collection and services to satisfy the thrust of knowledge. But in present era the library has been defined as an organization which identifies selection, collection, management, process and dissemination at the right time to the right person. Now libraries are perceived as places where information is retrieved through sources like electronic catalog listings, full-text periodicals and Internet access. (Hutchings, 1969). The automation is economically feasible and technologically required in modern libraries to cope up with the requirements of new knowledge, the enormous increase in the collection of materials, problems of their acquisition, storage, processing, dissemination and transmission of information (Bhardwaj & Shukla, 2000).

Objectives of the proposed research The broader objective of the study is to analyze and evaluate the present states of library software in the Jalgaon city libraries. To find out the salient features available in different software used in those libraries. To prepare a comparative study of different library management software packages. To provide a basic idea for selecting a suitable library automation software package.

Scope and Limitation: There are 11 affiliated colleges in Jalgaon city. But present study limited to Arts, Commerce. Science affiliated college libraries in Jalgaon city. (NMU-2017)

Methodology: The present study is done using a survey, through a well designed questionnaire and observation. Primary and secondary data has been collected. Qualitative and quantitative research has been applied as the research design for this study.

The steps in the methodology include: Data collection, Data Analysis, Interpretation.

Literature Review: In his article "An introduction to the open source software issue" traces the issue on Open Source Software (OSS). He described features and utilization of open source software and what is happening with OSS applications in universities and other libraries in the western world like USA, Canada, Newland etc. According to this article, OSS allows programmers to alter the software and redistribute it, with the requirement that they make these changes available to other developers. Muir (2005). Discusses in article "LIBSYS: A solution for library automation and networking" about the future developments of LIBSYS software and has given some 30 points to be considered while selecting the software such as simplicity in use, user base, regional applicability, networking capabilities and local support. Only three software's have been taken into consideration for the comparative analysis.

They are as follows: 1. Library Manager (Lib Man) 2. Software for University Library (SOUL) 3. Soft Lib The study deals with evaluation of library software used by seven academic libraries as followings:

Table No.1: Name of the College/Institute Abbreviation Address

Sr. No.	Name of College	Software	Address
1	KCES'S M. J. College Jalgaon	SOUL	Jalgaon
2	Nutan Maratha College-Jalgaon	SOUL	Jalgaon
3	G. D. Bendale Mahila College-Jalgaon	LIB-MAN	Jalgaon
4	Adv. Sitaram Baheti Arts, Com., Sci. College	SOUL	Jalgaon
5	DNCVP Arts, Com., Sci. College-Jalgaon	LIB-MAN	Jalgaon
6	East Khandesh Education Soc. R.R. Arts, Com., Sci. College Jalgaon	NO S/W	Jalgaon
7	GHR Education G. H. Raisoni College -Jalgaon	SOFT-LIB	Jalgaon

1 Back up devices used Any library going for automation has to use some back-up device to take the backup of the database. In most of the databases back-up is taken at a regular interval so that if by chance some problems arise to the server and due to which the data in the database is lost then one can use the back-up taken. In order to see the awareness of the librarians towards the data it was asked to provide information regarding the

back-up device used and the responses received were tabulated in the table no. 2 and pictorial presentation in the pie-chart figure no. 2.

Table No 2: Number of Backup Devices

Backup Device	No. of Libraries	Percent (%)
Zip Drive	0	0
C.D./DVD Rom	5	71.42
Hard Disk	6	85.71
Pen drive	3	42.85
Not use Back Device	1	14.28
Note: Because of multiple choice options the percentage is exceeded to more than 100%		

Figure no. 2: Number of Backup Devices

From the table no. 2 and the figure no. 2 it is observed that, all college libraries are not use Zip Drive and some back-up device to take the backup of the databases and 05 (71.42%) libraries are using CD-ROM/DVD Rom for taking back-up in the library, while 6 (85.71 %) college libraries are use Hard Disk and 03 (42.85%) are use the Pen drive and 01 (14.28%) not using any back-up device. It is good to see that majority of the libraries are aware of the importance of the library database and are taking back-up on some device.

2 Library Application Software: Library application software is the most important element in library automation. The success of library automation depends on the selection of right software and its correct implementation. Many commercial library software's like LIBSYS, LIB MANAGER, SOUL, CDS/ISIS, LIB MAN, SLIM, SOFTLIB, etc. are available in the market. Each and every software has its own unique features and limitations. The College libraries were asked to furnish the information regarding the library software used in the library and the responses received were tabulated in the table no. 3 and pictorial presentation has been made using figure no. 3

Table No. 3: Different Types of library Software Used

Library Software's	Number of libraries	Percent (%)
SOUL	3	42.85
LIB MAN	2	28.57
SOFT LIB	1	14.28
No Library Software	1	14.28
Total	7	100

Figure No. 3: Number of libraries

From the table no. 3 and figure no. 3 it is revealed that, out of 07 college libraries gone for library automation, 2 (28.57%) college libraries are using LIB MAN software, where as 03 (42.85%) libraries are using SOUL, where as 1 (14.28%) libraries using SOFT LIB and 1 (14.28%) library have not yet purchased any library application software. From the analysis it is interesting to know that 02 (28.57%) college libraries are using LIB MAN software developed by the Master-Soft ERP Solution Pvt. Ltd. Nagpur. It is obvious because the LIB MAN provides multiple services in ERP system for the College Office and Library Management Automation System Software which is considered as most user Friendly software for Education Institutions. He has provided to the Student Admission & Fees Collection, Student Administration, Financial Accounting, Payroll & Leave System, Library Management System (LIB-MAN), M-OPAC for Android Mobile (for library data searching), WEBSITE, Bio-Matrix-X990-Finger Print + RFID Card Reader, Old Student C Generator, Inventory (Stores), Short Messages Services, Inward Outward, Service Book & Establishment system all those system are provided to Master-Soft ERP Solution System. The second most popular software is know that 3(42.85) college libraries are using SOUL software developed by INFLIBNET. It is obvious because the INFLIBNET is distributing the software at a low prices to the college libraries as compared to the other software as well as INFLIBNET is giving all the technical assistance i.e. maintenance of the software to the university libraries whenever they are in need.

3.Opinion of Library Staff regarding Library Software used: Library staff should be happy with the software used in the library. The happiness depends on the user friendly characteristic and the facilities provided by the software. If the library software is user friendly then the staff can enjoy working with the software. It was asked to the college libraries having library software whether they are happy with the software used in the library and the responses received have been tabulated in the table. 4

Table No. 4: Satisfaction with the software used

Happy with the software used	Number of Colleges	Percent (%)
No	2	28.57
Yes	4	57.15
No Library Software	1	14.28
Total	7	100.00

Figure no. 4.:Satisfaction with the software used

From the table no. 4.it can be observed that, the staff of 4 (57.15%) college libraries is happy with the library software used, where as staff of 2 (28.57%) college library Not happy.

Conclusion: Major conclusion is that the Ninety Eight percent college libraries having library software are using readymade software packages.3 (42.85%) college librarians preferred SOUL software because its cost is low as compared to other library software and it is developed specifically for the university libraries by INFLIBNET.Most of the Library staff & Librarian of 4 (57.15%) is happy with the library software used.All college libraries are back-up device to take the backup of the databases 05 (71.42%) libraries are using CD-ROM/DVD Rom for taking back-up in the library, while 6 (85.71 %) college libraries are use Hard Disk and 03 (42.85%) are use the Pen drive and 01 (14.28%) not using any back-up device.It is good to see that majority of the libraries are aware of the importance of the library database and are taking back-up on some device.

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ANALYSIS OF MATHEMATICS JOURNALS IN DOAJ

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Abstract

This study aims to examine the growth of open access journals across the world with reference to mathematics journals. There are 217 mathematics journals are listed in Directory of Open Access Journals (DOAJ). Countries from third world are more contributed in this list of mathematics journals. Especially, Indonesia has most number of journals in DOAJ.

Keywords: DOAJ, Open Access, Mathematics

Introduction: Nowadays, computers are within the reach of common people across the world and internet has become a tool or a mean to access the information. In such scenario, Open Access Movement is as an implication of a new era where knowledge is availed to everyone and everywhere. In this study, the mathematics journals are taken as a sample to see the scope for open access. In addition, open access gives authors larger audiences than that of subscription-based journals, as well as increases their visibility and impact of work.

Objectives: This study aims to contribute with the limited information on various aspects of Open Access journals in the subject of mathematics from the stream of science. Present study is done with following objectives: To determine the topographical circulation of Open Access mathematics journals. To determine the growth of Open Access journals over the years.

Methodology: The data is collected from open access journals and content of journals is taken from the Directory of Open Access Journals (DOAJ) during 1st January to 14th January 2018 for present study. The open access journals on mathematics were selected and analyzed using descriptions on their content pages. That description was collected in a MS-Excel file and accordingly data is examined in this paper.

Scope and Limitations: The present study is restricted to open access journals of mathematics which specified under science stream in Directory of Open Access Journals which were available during above mentioned period. The study includes journals having full text articles, while abstracts are excluded.

Analysis: Analysis of this study, so far as possible, is made more exhaustive by including the various aspects with the hope that it can serve multi-dimensional interests of the research scholars. Keeping the structural arrangement of data in view, it has been analyzed as follows. **Topographical circulation of chemistry journals on DOAJ**

In Table No.1 shows the countrywide journals distribution of Mathematics journals,

	Country	No. of Journals
1	Australia	2
2	Belgium	1
3	Brazil	10
4	Bulgaria	1
5	China	1
6	Colombia	4
7	Costa Rica	1
8	Croatia	3
9	Czech Republic	2
10	Egypt	33
11	Finland	1
12	France	2
13	Germany	11
14	Greece	1
15	Hungary	1
16	India	2
17	Indonesia	38
18	Iran	12
19	Italy	4
20	Netherlands	1
21	Pakistan	1
22	Poland	20

23	Romania	8
24	Russian Federation	4
25	Saudi Arabia	1
26	Serbia	3
27	Slovenia	1
28	South Africa	1
29	Spain	4
30	Switzerland	6
31	Turkey	7
32	Ukraine	5
33	United Kingdom	12
34	United States	8
35	Venezuela	1
36	Not Specified	4
Total		217

According to Table 1, Indonesia is contributed 38 journals (18%). It is the largest number of open access journals in DOAJ. It is followed by Egypt and Poland. Egypt contributed 33 journals (15%) while Poland's contribution is 20 journals (9%). Then Iran, United Kingdom has 6% shares each (12 journals). India contributes 2 journals in DOAJ for mathematics.

Growth of Open Access journals over the years

The growth of open access is shown in Table 2.

Sr. No.	Start Year	No. of Journals	%
1	Up to 1990	8	4
2	1991- 2000	20	9
3	2001- 2005	18	8
4	2006- 2007	14	6
5	2008- 2009	18	8
6	2010- 2011	24	11
7	2012- 2013	60	28
8	2014- 2015	32	15
9	2016- 2017	23	11
Total		217	100

Table 1 Growth of Mathematics Journals over the years

As we can see in table 2, that it is boom to publish journals in open access environment after 2000. Before this, only 28 journals are in open access, but from 2001 there is rapid growth in open access publication in mathematics. From 2010 onwards, the growth of mathematics journals are tremendous. It is also observed that in 2012- 2013, 60 journals (28%) are added to open access platform.

Fig.1 Year wise Journals added to DOAJ While up to 2008- 2009 only a few number of journals are added to DOAJ in mathematics. From 2010 it is a bang to register the journals in Directory of Open Access Journals. It is sustained every year. 31 journals were included in 2012- 2013. In 2016-2017 highest numbers (52) are included in this directory. It is followed by 2014-2015 when 32 journals are included. There is slight declined in the year 2013-2014 when only 10 journals are register in DOAJ.

The most popular language of Open Access e-journals

The most popular language of Open Access e-journals is shown in Table No. 3,

Languages	No. of DOAJ Journals	% (of 217)
Only English	148	68
Others languages	38	18
English with other languages	28	13
Not Specified	3	1
Total	217	100

Table 2 Languages of open access journals. English is the commonly used language to write down a research article and to get published in open access environment. There are 148 journals out of 217 (68%) in English. 38 journals (18%) are published in regional languages of their respective country. There are 28 journals (13%) which publish research articles in English along with their local/ regional languages. It shows English language is well understood all over the world.

The favorite publishers: There are favorite publishers involved in open access movement, are shown in Table 4,

Sr. No.	Publisher	Country	No. of Journals
1	OJS	Germany	71
2	Hindawi Publishing Corporation	Egypt	31
3	De Gruyter Online	Poland	20
4	SpringerLink	Germany	9
5	www.sciencedirect.com	Netherlands	5
6	EBSCO	Russian Federation	4
7	MDPI AG	Switzerland	4
8	SpringerOpen	United Kingdom	4
9	sinaweb	Iran	3
10	Digital Commons	United States	2

Table 3 Favorite publishers in Open Access Movement There is OJS, Germany having the most number of mathematics journals (71 Journals) in DOAJ. It is followed by Hindawi Publishing Corporation, Egypt (31) and De Gruyter Online, Poland (20) journals respectively. SpringerLink from Germany is the publisher who contributes 9 journals in DOAJ. There are three publishers which contribute four journals each and twenty-seven publishers contribute one journal each in subject related to mathematics in DOAJ.

The popular journals

Table 5 shows articles in each journal, popular journal of to publish in open access.

Sr. No.	Title	Country	No. of Articles
1	Mathematical Problems in Engineering	Egypt	12608
2	Abstract and Applied Analysis	Egypt	5656
3	International Journal of Mathematics and Mathematical Sciences	Egypt	5595
4	Electronic Journal of Differential Equations	United States	3941
5	Journal of Applied Mathematics	Egypt	3255
6	Discrete Dynamics in Nature and Society	Egypt	2462
7	Journal of Inequalities and Applications	United Kingdom	2462
8	Electronic Proceedings in Theoretical Computer Science	Australia	1929
9	Electronic Journal of Qualitative Theory of Differential Equations	Hungary	1168
10	Le Matematiche	Italy	926
11	Journal of Applied Mathematics and Stochastic Analysis	NA	905
12	Symmetry, Integrability and Geometry: Methods and Applications	Ukraine	864
13	Advances in Difference Equations	Switzerland	854
14	Symmetry	Switzerland	753
15	Pakistan Journal of Statistics and Operation Research	Pakistan	655

Table 4 Most Articles in a Journal: 61,392 articles are found on the platform of DOAJ for subject of mathematics from 167 journals. As Table 5 depicts journal namely *Mathematical Problems in Engineering* of Egypt have 12608 articles.

Table 6 shows that publisher charge fees for article processing or not,

Article Processing Charges (APCs)	No of Journals
Yes	70
No	140
NA (Information not available on DOAJ)	7
Total	217

Table 5 Information of Articles Processing Charges

As per Table 6, 70 journals (32%) charge the authors/ their institutions for article processing fees, while 140 (65%) journals processes articles freely in their journals and 7 journals (3%) do not provide any information regarding publication charges on journals' content pages on DOAJ.

Conclusion: Open access tries to remove restrictions that exist on access to scholarly information and knowledge. It gives more power to the researchers for searching, downloading and reading the scholarly materials and making use of related literature of his/her interest.

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ROLE OF LIBRARY IN CURRENT TRENDS SERVICES**Prof.Sujata A Nikam, K.N. B.Arts college, Navalnagar,Dhule****Abstract**

The library services are transitioning from local traditional collection to global resources provided via the most advanced networking technologies. This article briefly explains the role of Librarian in promoting the Best services, take inputs from users of the library for improving the efficiency of library services.

Introduction: The Library Services are transitioning from local torsional Collections to global resources provided via the most advanced networking technologies. Information Technology is considered to be an enabler of quality. Libraries and Librarians. The nature the Technology is changing efficiency an effectiveness to economic progress Librarians are traditionally associated inf. With the advent of the internet, Now it is Possible to retrieve information independently from the library without walls or the virtual library. Libraries all types are challenged to provide greater information access and improved levels of services, while coping with the pace of technological change and ever-increasing budget pressure. As a result there is a need to discuss the new dimensions in library management. In recent times the words, "Information & Revaluation" coupled with the third popular term "Globalization" have brought a Sea-Change in our lives fueling the belief that we are Living in a world of one, ever freer, modern & universal culture he with an increasingly & beneficially unified political system", This has been furthered strengthened by the juggernauts of information technology consisting of computer laser beams, optical fibers & Cyber wave in the present millennium. This transition of the society from an economy based primarily on manufacturing to one that is predominantly based Information & the application of information & communication technologies (ICT) has profound implications shaking the very foundations of traditional Librarianship. The large college may use many more the small college may select certain media and place its emphasis upon these. As the library grows in size and resources. An increasing proportion of its most Substantial publicity emanates directly from its own publication in booklist, bulletins, annual reports, and brochures for special occasions.

Library services: The following are some of the services usually provided by the library to its readers the, 1 Bibliographic services 2 Indexing and abstracting services 3 Current Awareness services 4 Inter library lone services 5 Indexing and abstracting services 6 Reprographic services 7 News paper clipping services 8 Translation services 9 Selective Dissemination of Information services 10 Microfilming

Objective –It Cooperates with other libraries in strengthening the total resources in the region of which the college is part : and It provides study materials needed by extension and correspondence students in colleges where such instruction is offered. Through a clear interpretation of these Function's and the activities which are performed in carrying them out. It participates in such program of post-college education for alumni as are sponsored by the College; It provides technical and specialized study materials needed to keep the faculty abreast of their fields. It encourages users to use books independently and attempts to develop in user's sound habits of reading. It provides as far as possible, research materials needed by members of the faculty. It provides Study and reference materials required for Supplementing classroom instruction. In fact, Library interpretation in most colleges is often a very haphazard affair. This is only natural since a great deal of publicity must of necessity depend on the opportunity to prepare a news article make a talk, or arrange on exhibit, on the other hand if the results are to serve a useful purpose there should, be a clearly defied programmer of interpretation and one person to guide and plan its development. The more systematic and definitely pointed the inter predation plan is the more effective it well be and more easily managed. The activities which are performed in carrying them out the administration faculty, students and others concer with the we fare of the college should be thoroughly informed as to that the library is and what it does. The success of the college library is and what it does. The success of the college library in carrying out its functions is dependent upon the confidence & respect of those it serves. Progress can be made known. The main objective of library interstation. A simple but effective organization will utilize the skills and Co-operation of all members of the staff because above all other persons they are the active agent's of interpretation. In the small College Library, the librarian will direct the work and plan the organization largely utilizing student help for carrying out the routines. In the large college Library. The work of planning and directing publicity may we be delegated as a part-time activity to a member of the staff working under the direct supervision of the Librarian. The annual report handbooks the college catalogue, book bulletins booklist, local and student newspapers, bulletin boards and posters exhibits and book displays and the radio. Progressive college libraries are trying to use most of these various types of publicity media. The college catalogue and annual reports have always. Been used though not always recognized as an avenues of interpretation. Their knowledge of the aims and methods of the library rest their. The Librarian without the support and cooperation of the college president. A majority of libations are direct responsible to the president. The librarian is not separated from, but rather is brought into vital relationship to the educational program "In few colleges the Liberation is directly responsible to the dean, but in all colleges he has close relationships with the business manager and his assistants. These relationships to the dean, but in all colleges he has close relationships with the business manager and his assistants. These relationships vary in different collages but in

general involve the placement of library orders, the payment of bills, the checking of library balances, the determination of insurance inventories, the employment of the clerical staff and the review of the budget. He will not object to the Librarian's taking a strong stand on library needs and support, other important administrative relationships include those with the dean of men and the dean of women in matters of student cooperation and discipline, the personnel officer in the employment of student help and with other officers in such matters as student counseling.

• **Administrative Board or Advisory Council** – Generally in most colleges there is an administrative board or advisory council which act as the committee of the faculty of serves in an advise capacity to the college, president. The Library of all departments on the Campus, can least afford to be self contained. This is unfortunate since this is one of the important committees on which the librarian might serve, both for his contribution and the increased effectiveness of the library's service which would result. His function of such a board would be to keep library services abreast of new developments.

The Faculty – The librarian can do little to coordinate library services with instruction. Without adequate to library support, college instruction is handicapped and faculty research is blocked library. The improvement of library service should there fore be to a far greater extent than is present the case, a matter of faculty library cooperation. In most colleges where the librarian is member of the faculty with professional rank. To relegate the Librarians to the status of an administrative assistant or a clerk is equivalent to dwarfing much of the driving force which contributes to the librarian is more likely to be a liaison instructor bet classroom and library rather than mere clerk handing out books. Although it is unfortunate in faculty committees it is true that the library has other opportunities to establish close relationship with the faculty. These cooperative relationships are all important in developing a genuinely educational type of library service, and they afford an opportunity to stress the joint responsibility of the library staff and faculty.

• **LIBRARIE TO PROVIDE EXPANDED SERVICES TO USERS:** Libraries can better serve their user by embracing the growing capabilities of mobile technology. They can promote and expand their websites and online public access catalogues by providing mobile access to e-books, journals video, audio books & multimedia content.

• **MOBILE LIBRARY SERVICES** – Library's can provide a wide array of mobile services to interested users mobile online public Access catalogs (OPACS) Libraries are providing access to their OPACS via mobile optimized websites. The new york public Library Mobile Beta Site Supports a mobile OPAC and allows users to browse library locations and hours.

• **Mobile Application** – Some libraries have developed mobile application for smart phones.

• **Mobile Collections** – Content providers are partnering with libraries to deliver audio books, e-books, audio language courses streaming music, films, images, other multimedia that can be used on mobile devices. The overdrive service is supported on numerous mobile devices.

Conclusion – The improved delivery of Service would Satisfy the customer. Satisfied customers would act like propagating agents for the library Services.

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ROLE OF LIBRARY READING ROOMS IN THE ERA OF INFORMATION COMMUNICATION TECHNOLOGY: WITH SPECIAL REFERENCE TO ACADEMIC LIBRARIES

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Abstracts

Twenty first century is the century of information communication technology. Uses of ICT are done by all the societies for solving their needs and problems. ICT also helps in academic and research sectors respectively. After the invention of ICT the format of library resources is also changed and it's available in E form that means electronic form. Hence libraries must have to use ICT in its day to day activities and services. Reading room facility is very important part of any kind of academic libraries but after adopting ICT by academic libraries the role of reading room is also changed. Now libraries reading room facilities are also survive digital services. This paper studied about role of libraries reading room in the era of ICT? Also explains the role and services of library reading rooms in the era of ICT.

Keyword: library reading rooms, traditional reading rooms, digital reading rooms, role and services of reading rooms.

Introduction: development of societies is depends on the educational system and quality of that society. For developing good quality educational environment it's very important to adopt new technology and trends. Libraries also plays very crucial role in to the development of educational quality and standards. Libraries are also using ICT for increasing the quality of library services and facilities and it is also the need of time. Because now a day users of library like students, researchers, teachers and others give preference to ICT based learning and reading resources they are not interested to visit personally in to the library and read books and non books material in to the reading room and spent his time. Library users are rapidly turns towards the e-resources hence it's very important for libraries to develop collection of e-resources. ICT has also creates many questions for traditional reading room like need of traditional reading rooms in the era of ICT? Role of traditional reading room? And services of traditional reading room? All these questions are covered in this article. UGC and AICTE are monitoring the activities of higher education academic institutions by NAAC and NBA committees. UGC and AICTE are also makes some guidelines and provisions regarding with library reading rooms like carpet area of library reading rooms, seating capacity of reading rooms, resources available in reading rooms and timing of reading rooms etc. that shows the importance of the library reading rooms in academic sector.

Library Reading Rooms: It's a place provided by libraries to the users for referring books and non books materials within the premises of libraries. The maintenance and supervision of these rooms are done by libraries in short such type of reading rooms are operated by libraries in academic sectors. In academic sector reading rooms are generally used by students, teachers, researchers and other staff of institutions. Libraries decide some rules and regulations for users while they are using reading room facilities. Reading room provides reading resources to the users as per their request like books, periodicals, manuscripts, maps, project reports, Ph. d thesis. Synopsis and etc. reading room has its fix times and periodicity users can use reading room facilities between that timing and period. After introduce ICT in libraries reading rooms are becomes in two types one is traditional reading room and another is digital reading rooms. Traditional reading room and another is digital reading rooms are both reading rooms but its work and types are different from each other. The difference between traditional reading room and another is digital reading rooms as per below

Introduction of traditional reading room and another is digital reading rooms:

Traditional Reading Rooms: This type of reading room provides reading materials to the users in physical form. It is old and traditional concept of library reading room in academic sectors. In to the traditional reading room seating arrangements are also available for users and also human resources are also available in to this reading room for fulfilling demands of users regarding books and non books materials. The person appointed in traditional room it's also supervise and monitor all relevant activities and the responsibility of maintenance and security of library resources and furniture is also on its soldier. Traditional reading rooms are running on the basis of specific timing and period and that will be decided by institutions or management bodies. In some institution traditional reading rooms are working maximum ten hours and in some institutions it will be work twenty four hours. In such conditions library required some additional human resources for managing and continuing the reading room activity. Mostly the users of these reading rooms are students, teachers, and researchers. Those people which are not aware about digital learning and reading culture that kind of people also used this kind of reading rooms facility

Advantages of traditional reading rooms: 1) Availability of reading resources in physical form. 2) No needs of any gadgets or instruments for accessing available resources. 3) Photocopy of resources is possible and permissible. 4) Satisfaction of handling physical resources. 5) All resources are available easily which is not available in E- form. 6) Financial affordable by libraries. 7) Availability of such kind of reading rooms mostly in all academics libraries. 8) Possibility of access rare documents and resources likes

Disadvantages of traditional reading rooms:-1) Different Resources are not available quickly .2) Collective use of resources is not possible.3) Photocopy not possible if resources are very loose and rare .4) Risk of Damage like. fungi's, tears, lost and missing of resources.

5) Expenses required for maintenance like. Paste Control, Binding, Space, Cupboards, Racks and etc. 6) Availability of multiple copies is not possible.7) Needs of extra human resources

Digital Reading Rooms: Such kind of reading rooms provides digital content or e-content to the users, which available in totally in electronic form. For providing such kind of facilities library need to create separate setup in to the library or library premises for its computers, networks, internet connectivity and also good kind of furniture and electronic peripherals. Users of such reading rooms are access totally e-resources which were provided by library through its own server or digital repositories or through internet. For maintaining activity of digital reading room library has to appoint employee from the faculty of computer science or who having good knowledge of ICT and its applications. There is no actual or physically demand of books or non books material from the users hence no need to make available working staff in digital reading room. Recruit employee can maintain all the resources through the server and provide them to the users as well as library can also provide that resources through library portal, library websites, digital repositories and through the online databases. Digital rooms also provides Cds/dvds roms access facilities, new youth and the person who are interested and aware about ICT and its application are mostly using such kind of facilities. Digital reading room facilities is need of times and it's become very popular among the youngsters

Advantages of Digital Reading Rooms or Electronic Reading Rooms;- 1 (Provides Different types of e-resources within minutes .2 (Possibility of resource sharing or collective use of resources .3 (allowed print and emails facilities .4(No possibility of physical damage or loss of resources like physical resources .5 (Less maintenance cost. No need of extra furniture like Cupboards, Racks etc. 6) No need of extra space required for number of resources stored at just one computer. 7 (Provides storage and download facilities .8 (Possibility of information communication through internet or emails. 9 (Provides latest updates and knowledge regarding with current affairs, research and innovations .10 (No need to purchase number of copies of single books or non books material. 11 (Provides information rapidly .

Disadvantages of Digital Reading Rooms or Electronic Reading Rooms;- 1) Availability of resources is only online.2) Need extra devices for resource handlings.3) No satisfactions of physical handling. 4) No possibility to provide those resources which are not available in digital form. 5) Not affordable for small institutions and libraries. 6) Low possibility to got all resources 7) If, any technical problem occurs then access of resources is not possible.

Role of Traditional and Digital libraries:-

Sr.no	Type & Roles	Traditional Reading Rooms	Digital Reading Rooms
1	Structure	Separate space or rooms required within the library premises. UGC / AICTE are provides some guideline for spacing as per courses offered by institutions. Example as per AICTE norms 400 sq.mtr area required for reading room / 50 sq. mtr extra for each 60 students of second batch. For architecture college 150 sq.mtr area required	Separate space or rooms required within the library premises. No specific provisions for required space.
2	Administration and Maintenance	Through the Libraries / Librarian	Through the Libraries / Librarian
3	Furniture	Table and Banches, lights, fans, cupboards, racks etc.	Special tables and chairs (For Computers and peripheral setup) lights, fans etc.
4	Resources	Books, Periodicals, Maps, Project Reports, Dictionaries, Encyclopedia, Thesaurus, Thesis and Dissertations Manuscripts, News Papers, GR's, Circulars, etc.	E-books, E-Journals, E-Project Reports, ETD (Electronic Thesis and Dissertations) Audio & Video content, Cd/Dvd's, Magnetic tapes, Online Databases,
5	Role of reading rooms	Provides Books and non books material as per readers demand. Maintaining of Books and non books materials. Maintain the record of all issue return transactions. Maintain the entry register of daily visitors and users. Also provide demand register to users for new demands. Security of furniture and other devices.	Provides online databases, maintaining and managing e-content, maintenance of server, provides user ID and Password to the users. Update server collections regularly, protect server from virus and other damage. Keeping record of daily visitors and users. Provides details of new arrivals. Care and security of furniture and

		Provides details of new arrivals.	other peripheral devices and instruments.
ε	Devices and Gadgets required	Computers, library Management Software's, LAN cables, Modems telephone etc.	Computers, Internet Connection, Modem, Wi-fi Modem, LAN cables, Headphones, CD Drives etc.
ϋ	Role of Human Resources	Issue-Return activity of books and non books materials. Security of of books and non books materials as well as furniture's. Fulfill the demands of users. Create list of those resources which are not available in reading room but most demanded by users. Provides details about new collections.	Provide E-resources, server maintenance and up gradation. Security of gadgets and devices, create library web-sites and portals, create user ID and Password, subscription and renewal of membership. Assist users if any problem and interruption occurs. etc
Ϙ	Educational Eligibility of Human Resources	Any Educated person outside form institution or Regular library Employee. A person from library and information science is more suitable.Natures of work part time or full time are both applicable.	A person from LIS which having ICT Knowledge or A Person From Computer Science. Natures of work part time or full time are both applicable. Good knowledge of E-resources
ϙ	Additional Service and facilities	Current Awareness services:- Provides details of new arrival books and non books materials, Selective Dissemination of Information (SDI): Provide specific demands to the specific user on demand or request of users. Reprography services: According to Copyright rules and regulations this facility will be provided. Fax: This facility is also provided by some institutions	Current Awareness services:- Provides details of new arrival books and non books materials also attached or link that resources to the server or websites.. Selective Dissemination of Information (SDI): Provide specific demands to the specific user on demand or request of users. Print Facility: According to Copyright rules and regulations this facility will be provided. E-mail Facility: on the request of users or directly available through internet for sharing or exchange of information this facility will be provided.
Ϛ	Seating Capacity	As per the guideline of UGC and AICTE (Different for each courses and depends on number of students)	As per the guideline of UGC and AICTE Minimum ten computers connections required.
ϛ	Holidays	As per the rules of University, Government and Institutional Policy	As per the rules of University, Government and Institutional Policy
Ϝ	Time	As per the guideline of UGC and AICTE minimum ten hours. At some places its open 24 hours and throughout the year.	As per library timing but at some places its open 24 hours and throughout the year. (No specific guidelines about timing)

Sr. No	Type of Institute	Area required for Library & Reading Room (Sq.M)	Reading Room Seating Capacity
1	Engineering College (Degree)	620	15% of Total Intake
2	Polytechnic College (Degree)	300	15% of Total Intake
3	Architecture / Town Planning Institute	150	15% of Total Intake
4	Institute offering Degree / Diploma in Hotel Management etc.	150	15% of Total Intake
5	Institute offering Degree / Diploma in Management & MCA	150	15% of Total Intake

Table No. 1 AICTE space requirement for Library & Reading Room in Sq.mtr

Conclusion: - Reading rooms is the undivided part of the library and in to the all academic sector it's very useful for library readers and users. Reading rooms plays very important role to fulfill the need and requirements of knowledge and information of users and readers. After using ICT in libraries reading room are divided in to two parts hence now a day library reading rooms are available in two types traditional and digital.

Large institution can provide both reading rooms in their libraries. UGC and AICTE are also draw guidelines for library reading rooms in to the academic sector. Through both type of reading rooms library can bring new and old generations together. Due to ICT the role and type of academic libraries reading room is very change and it's become very dynamic also. Digital reading room enables libraries to resources sharing and collective use of resources. UGC and AICTE also give pressure for developing e-resources in to the libraries and for accessing those resources digital learning room must be required in to the academic libraries. It's also promoted to research and academic work. Libraries digital repository is also accessible by digital learning room. Digital learning room is also help to increased the goodwill of institutions and also useful for UGC and AICTE accreditation.

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SHODHGANGA - ETDs REPOSITORY: AN ANALYTICAL STUDY OF THE DEEMED UNIVERSITIES IN MAHARASHTRA

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Abstract

INFLIBNET (Shodhganga) one of the important source of information is theses which is submitted by Ph. D. research scholar with the guidance of supervisor in Universities for awarded of Ph. D. degree. As per UGC notification 2009 and 2016 the research scholars are directed to submit their e-version of theses and dissertations in Shodhganga through Universities maintained by the INFLIBNET center. Those are available for the academic community as well as research scholars in open access. This paper clearly project with relevant statistical of Shodhganga repository project in India which provides the basic concept of ETDs different steps and latest position. A specific discussion about the analytical study among the Deemed to be Universities of Maharashtra is incorporated here. It also analyses and finds the present status and ETDs contribution of Universities of Maharashtra in Shodhganga. A total 1912 ETDs have been selected for the study from the retrieved data.

Keywords: ETDs; UGC; INFLIBNET; Shodhganga; Deemed University; Maharashtra .

Introduction: Every year, the Ministry of HRD is aware of the status of education, where it is compared to the world. It shows comparative study of higher education research, global rankings of Indian institutions, employment generated by it etc. According to a recent survey, Uttar Pradesh is the state with the highest number of colleges and Maharashtra has the second highest number. But considering the number of students, Maharashtra is at number one. After every year, 80% of the students get admission after graduation, but only 0.4% of them appear to be registered for the purpose. There are 789 universities, (37,204 colleges and 11,443 stand-alone institutions) in India (as per the latest statistics from the UGC website). Out of which 45 universities recognized by UGC in Maharashtra. Out of which, only 01 is Central University; 03 are National Universities; 20 are State Universities and 21 are Deemed to be Universities.

INFLIBNET (Shodhganga) one of the important source of information is theses which is submitted by Ph. D. research scholar with the guidance of supervisor in Universities for awarded of Ph. D. degree. In India, every year near about 12000 Ph. D. theses and dissertations are produced that create new ideas and knowledge. As per UGC notification 2009 and 2016 (Minimum standard and procedure for award of M.Phil. & Ph. D. degree) the research scholars are directed to submit their e-version of theses and dissertations in Shodhganga through Universities maintained by the INFLIBNET center. Those are available for the academic community as well as research scholars in open access. Shodhganga is a digital repository of e-theses and e-dissertations, accessibility to all institutions and universities, is assigned to the INFLIBNET Centre. There are 177177 theses and dissertations in the search Shodhganga repository, out of which 1912 theses are from Deemed to be Universities of Maharashtra. ETD is the study and research of the applications of artificial intelligence and information technology on the web with the intension to create the new generation of products, services and frame work. It is a new direction for scientific research and development. With the advent of web, many repositories came in to existence. Important among them are institutional repository and ETD repository.

This paper clearly project with relevant statistical of Shodhganga repository project in India which provides the basic concept of ETD different steps and latest position. A specific discussion about the comparative study among the Deemed to be Universities of Maharashtra is incorporated here. It also analyses and finds the present status and ETDs contribution of Universities of Maharashtra in Shodhganga.

Electronic Theses and Dissertations (ETDs): We are in digital era, where all information may be available in digital version and easy to access in necessary information. Due to technological advancement, open source initiative and emerging new paradigm on intellectual property right has encourage e-theses and dissertations (ETDs). Open access provides free, immediate, permant online access to the full text of research article for any one, web-side. Open access repository means a reservoir where e-version of research output are preserved in long-term basis and available it to access online through internet freely.

Shodhganga: 'Shodhganga' stands for the reservoir of intellectual product in Indian subcontinent and stored as digital repository with the control of INFLIBNET Centre. Shodhganga is a repository of e-theses and e-dissertations. As per UGC notification 2009 and 2016 (Minimum standard and procedure for award of M.Phil. & Ph. D. degree) the research scholars are directed to submit their e-version of theses and dissertations in Shodhganga through Universities maintained by the INFLIBNET center. Those are available for the academic community as well as research scholar in open access.

Aims & Objectives: The primary objective of this study is to assist the user is locating the existence of or identifying a ETD which may be of interest to him and to peruse the quantitative and analytical study of ETD in Universities of Maharashtra. The specific objectives are: 1. To show the basic concept of ETDs – Shodhganga. 2. To represent the latest position of Shodhganga. 3. To find out what has already been submitted the ETD and allows to keep well information up to date. 4. To find out the present status of the deemed to be Universities in Maharashtra. 4. To find out ETD submitted on Universities in Maharashtra on University wise 5. To find out ETD submitted the top to bottom ranking of 10 Universities. 6. To understand the contribution by individual

universities, research In Maharashtra states towards ETD 7. To incorporate a comparative study among the universities of Maharashtra about their Contribution in respect of ETDs to Shodhganga.

Research Methodology As the study was intended to examine ETDs, the data required for the study was extracted from data sources namely INFLIBNET(Shodhganga) web site. The data for the study were gathered from the Ph.D. & M. Phil. Thesis & Dissertation accepted by in Deemed Universities of Maharashtra. The ETD was analysed thoroughly in terms of the year of Thesis & Dissertation, Subject area,covered of the researchers that present the ETDs.

Data Analysis and Interpretation There are as many doctoral degrees awarded so far in the some subject domain. The authors have made an attempt to consolidate all the doctoral by various deemed universities in Maharashtra . The data were analyzed and presented under 3 heads viz.university-wise, subject wise and top 10 ranking of ETD universities of Maharashtra.

• A total 1912 ETDs have been selected for the study from the retrieved data

Contribution of ETDs by the Deemed to be Universities in Maharashtra to Shodhganga :

The Higher Education in Maharashtra is going on progress of a particular level of output in our digital era. For eminent teaching staff and better position in administrative - set - up, the Universities of Maharashtra play a vital role in the field of Higher Education across the country. There are 45 Universities recognize by UGC in Maharashtra. Out of which 21 are Deemed to be Universities.

Table 1. List of the Deemed University in Maharashtra

Sr. No.	Name of the University (URL)	Year of Establishment	Total Thesis Upload
1	Bharati Vidyapeeth , Pune (http://bharativedyapeeth.edu)	1996	210
2	Central Institute of Fisheries Education Fisheries University ,Mumbai (http://www.cife.edu.in)	1989	00
3	DattaMeghe Institute of Medical Sciences, Nagpur (http://www.dmimsu.edu.in)	2005	16
4	Deccan College Postgraduate & Research Institute , Pune (http://www.dcpune.ac.in)	1821	44
5	Dr. D.Y. Patil Vidyapeeth, Navi Mumbai (http://www.dypatil.edu)	2002	02
6	Dr. D.Y. Patil Vidyapeeth, Pune (http://www.dpu.edu.in)	2003	35
7	Dr. D.Y. Patil University, Kolhapur (http://dypatilunikop.org)	2005	32
8	Gokhale Institute of Politics & Economics , Pune http://www.gipe.ac.in	1930	04
9	Homi Bhabha National Institute , Mumbai (http://www.hbni.ac.in)	2005	342
10	Indira Gandhi Institute of Development Research, Mumbai (http://www.igidr.ac.in)	1987	00
11	Institute of Armament Technology, Pune (https://www.diat.ac.in)	1952	00
12	Institute of Chemical Technology , Mumbai (http://www.ictmumbai.edu.in)	2009	37
13	International Institute for Population Sciences, Mumbai (http://iipsindia.org)	1956	76
14	Krishna Institute of Medical Sciences, Satara (http://www.kimskarad.in)	1984	01
15	MGM Institute of Health Sciences , Navi Mumbai (http://www.mgmuhs.com)	1982	00
16	Narsee Monjee Institute of Management Studies, Mumbai (http://www.nmims.edu)	1981	91
17	Pravara Institute of Medical Sciences , Ahmednagar (http://www.pravara.com)	1972	05
18	SYMBIOSIS - International University, Pune (https://www.siu.edu.in)	2002	149
19	Tata Institute of Fundamental Research, Mumbai (http://www.tifr.res.in)	1945	00
20	Tata Institute of Social Sciences, Mumbai (http://www.tiss.edu)	1936	310
21	Tilak Maharashtra Vidyapeeth, Pune (http://www.tmv.edu.in)	1987	558

Total	1912
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From table 1, it is found that there are 21 affiliated Deemed University in Maharashtra. But only 16 Universities have been contributed their Ph. D. theses in Shodhganga repository project recently.

A COMPARATIVE VIEW

Table 2. Ranking of ETDs in Deemed Universities in Maharashtra

Sr. No.	Name of University	Total Thesis Upload
1	Tilak Maharashtra Vidyapeeth, Pune	558
2	HomiBhabha National Institute , Mumbai	342
3	Tata Institute of Social Sciences, Mumbai	310
4	BharatiVidyapeeth , Pune	210
5	SYMBIOSIS - International University, Pune	149
6	NarseeMonjee Institute of Management Studies, Mumbai	91
7	International Institute for Population Sciences, Mumbai	76
8	Deccan College Postgraduate & Research Institute , Pune	44
9	Institute of Chemical Technology , Mumbai	37
10	Dr. D.Y. PatilVidyapeeth, Pune	35
11	Dr. D.Y. Patil University, Kolhapur	32
12	DattaMeghe Institute of Medical Sciences, Wardha	16
13	Pravara Institute of Medical Sciences , Ahmednagar	05
14	Gokhale Institute of Politics & Economics , Pune	04
15	Dr. D.Y. PatilVidyapeethNavi Mumbai	02
16	Krishna Institute of Medical Sciences, Satara	01
17	Central Institute of Fisheries Education Fisheries University , Mumbai	00
18	Indira Gandhi Institute of Development Research, Mumbai	00
19	Institute of Armament Technology, Pune	00
20	MGM Institute of Health Sciences , Navi Mumbai	00
21	Tata Institute of Fundamental Research, Mumbai	00
Total		1912

From table 2, it is cleared that the University of Tilak Maharashtra Vidyapeeth, Pune is in the highest position, HomiBhabha National Institute , Mumbai is ranked as second position and third rank is Tata Institute of Social Sciences, Mumbai in Shodhganga among the contributing Deemed University in Maharashtra. 16 Universities have been contributed their theses and dissertations in Shodhganga repository project very recently. 5 universities do not have any contribution.

Table 3. Top 10 ranking of ETDs in Deemed Universities in Maharashtra

Sr. No.	Name of University	Total Thesis Upload
1	Tilak Maharashtra Vidyapeeth, Pune	558
2	HomiBhabha National Institute , Mumbai	342
3	Tata Institute of Social Sciences, Mumbai	310
4	BharatiVidyapeeth , Pune	210
5	SYMBIOSIS - International University, Pune	149
6	NarseeMonjee Institute of Management Studies, Mumbai	91
7	International Institute for Population Sciences, Mumbai	76
8	Deccan College Postgraduate & Research Institute , Pune	44
9	Institute of Chemical Technology , Mumbai	37
10	Dr. D.Y. PatilVidyapeeth, Pune	35

From Table 3, depicts the university-wise ETDs output in the form of Ph. D. theses. Among the top 10 Universities, considering the number of ETDs, Tilak Maharashtra Vidyapeeth , Pune stands first with 558 theses. Next to HomiBhabha National Institute , Mumbai 342 theses occupies the second place. Tata Institute of Social Sciences, Mumbai with 310 theses occupies the third place. BharatiVidyapeeth, Pune with 210 theses occupies the fourth place. SYMBIOSIS - International University, Pune with 149 theses occupies the fifth place. NarseeMonjee Institute of Management Studies, Mumbai with 91 theses occupies the sixth place. International Institute for Population Sciences, Mumbai with 76 theses occupies the seventh place. Deccan College Postgraduate & Research Institute , Pune with 44 theses occupies the eighth place. Institute of Chemical

Technology , Mumbai 37 theses occupies the Ninth place. Dr. D.Y. Patil Vidyapeeth, Pune 35 theses occupies the tenth place.

Subject Wise Contribution of ETDs to Shodhganga

Table 4. Bharati Vidyapeeth, Pune

<i>Sr. No.</i>	<i>Name of Department</i>	<i>Number of Theses Contribution</i>
1	Management	51
2	Science	43
3	Commerce	25
4	Pharmaceutical Sciences	24
5	Ayurveda	17
6	Engineering and Technology	14
7	Law	09
8	Nursing	07
9	Medical Sciences	04
10	Homeopathic	02
11	Hospital Administration	02
12	Mechanical Engineering	02
13	Production Engineering	02
14	Computer Science	02
15	English	01
16	Library and Information Science	01
17	Pharmacology	01
18	Social Work	01
19	Economics	01
20	Mechanical Engineering	01
Total		210

The table 4, show the present contribution status is respect of ETDs of the University of Bharati Vidyapeeth , Pune. There are 20 department that contributed their research work in Shodhganga till December 2017. Department of Management is in the highest position.

Table 5. Dr. D.Y. Patil University, Kolhapur

<i>Sr. No.</i>	<i>Name of Department</i>	<i>Number of Theses Contribution</i>
1	Microbiology	7
2	Interdisciplinary Studies	6
3	Management	6
4	Biochemistry	5
5	Medicine	3
6	Physiotherapy	3
7	Chemistry	1
8	Physics	1
Total		32

The table 5, show the present contribution status is respect of ETDs of the University of Dr. D.Y. Patil , Kolhapur. There are 8 department that contributed their research work in Shodhganga till December 2017. Department of Microbiology is in the highest position.

Table 6. Datta Meghe Institute of Medical Sciences, Wardha

<i>Sr. No.</i>	<i>Name of Department</i>	<i>Number of Theses Contribution</i>
1	Biochemistry	14
2	Medicine	02
Total		16

The table 6, show the present contribution status is respect of ETDs of the deemed University of Datta Meghe Institute of Medical Sciences, Wardha. There are 2 department that contributed their research work in Shodhganga till December 2017. Department of Biochemistry is in the highest position.

Table 7. Deccan College Postgraduate & Research Institute , Pune

<i>Sr. No.</i>	<i>Name of Department</i>	<i>Number of Theses Contribution</i>
1	AIHC and Archaeology	34
2	Sanskrit and Lexicography	08
3	Linguistics	02
Total		44

The table 7, show the present contribution status is respect of ETDs of the University of Deccan College Postgraduate & Research Institute , Pune. There are 3 department that contributed their research work in Shodhganga till December 2017. Department of AIHC and Archaeology is in the highest position.

Table 8. Dr. D.Y. PatilVidyapeeth, Pune

<i>Sr. No.</i>	<i>Name of Department</i>	<i>Number of Theses Contribution</i>
1	Global Business	14
2	Pharmacology	05
3	Biotechnology and Bioinformatics	05
4	Human Resource Management	05
5	Interdisciplinary Research	02
6	Anatomy	01
7	Nursing	01
8	Radiology	01
9	Allied Medical Sciences	01
Total		35

The table 8, show the present contribution status is respect of ETDs of the University of Dr. D.Y. PatilVidyapeeth, Pune. There are 9 department that contributed their research work in Shodhganga till December 2017. Department of Global Business is in the highest position.

Table 9. Gokhale Institute of Politics & Economics, Pune

<i>Sr. No.</i>	<i>Name of Department</i>	<i>Number of Theses Contribution</i>
1	Economics	2
2	Population Studies	2
Total		4

The table 9, show the present contribution status is respect of ETDs of the University of Gokhale Institute of Politics & Economics, Pune. There are 2 department that contributed their research work in Shodhganga till December 2017. Department of Economics and Population Studies is in the equal position.

Table 10. HomiBhabha National Institute , Mumbai

<i>Sr. No.</i>	<i>Name of Department</i>	<i>Number of Theses Contribution</i>
1	Physical Sciences	162
2	Chemical Sciences	78
3	Engineering Sciences	41
4	Life Sciences	33
5	Mathematical Sciences	26
6	Health Sciences	02
Total		342

The table 10, show the present contribution status is respect of ETDs of the University of HomiBhabha National Institute , Mumbai. There are 6 department that contributed their research work in Shodhganga till December 2017. Department of Physical Sciences is in the highest position.

Table 11. Institute of chemical technology Mumbai

<i>Sr. No.</i>	<i>Name of Department</i>	<i>Number of Theses Contribution</i>
1	ChemicalEngineering	13
2	Chemical Sciences	11
3	Pharmaceutical Sciences and Technology	08
4	Engineering and Technology	02
5	Polymer and Surface Engineering	02
6	Fibres and Textile Processing Technology	01
Total		37

The table 11, show the present contribution status is respect of ETDs of the University of . Institute of chemical technology Mumbai There are 6 department that contributed their research work in Shodhganga till December 2017. Department of ChemicalEngineering is in the highest position.

Table 12. International Institute for Population Sciences, Mumbai

<i>Sr. No.</i>	<i>Name of Department</i>	<i>Number of Theses Contribution</i>
1	Mathematical Demography & Statistics	21
2	Department of Public Health and Mortality Studies	13
3	Development Studies	11
4	Migration & Urban Studies	11
5	Fertility Studies	10
6	Population Policies and Programmes	09
7	Extra Mural Studies and Distance Education	01
Total		76

The table 12, show the present contribution status is respect of ETDs of the University of International Institute for Population Sciences, Mumbai There are 7 department that contributed their research work in Shodhganga till December 2017. Department of Mathematical Demography & Statistics is in the highest position.

Table 13. Krishna Institute of Medical Sciences Karad, Satara

<i>Sr. No.</i>	<i>Name of Department</i>	<i>Number of Theses Contribution</i>
1	Pediatrics	1
Total		1

The table 13, show the present contribution status is respect of ETDs of the University of Krishna Institute of Medical Sciences Karad, Satara. There are 1 department that contributed their research work in Shodhganga till December 2017. Only one department of Pediatrics is contribution.

Table 14. MGM Institute of Health Sciences, Navi Mumbai

<i>Sr. No.</i>	<i>Name of Department</i>	<i>Number of Theses Contribution</i>
1	Health Management Studies	1
Total		1

The table 14, show the present contribution status is respect of ETDs of the University of . MGM Institute of Health Sciences, Navi Mumbai. There are 1 department that contributed their research work in Shodhganga till December 2017. Only one department of Health Management Studies is contribution.

Table 15. Narsee Monjee Institute of Management Studies, Mumbai.

<i>Sr. No.</i>	<i>Name of Department</i>	<i>Number of Theses Contribution</i>
1	Technology Management	24
2	Pharmacy	19
3	Biological Sciences	13
4	Computer Engineering	11
5	Electronic & Telecommunication Engineering	08
6	Chemical Sciences	05
7	Human Resource	04
8	Electronic Engineering	03
9	Information & Technology	02
10	Finance	01
11	Marketing	01
Total		91

The table 15, show the present contribution status is respect of ETDs of the University of Narsee Monjee Institute of Management Studies, Mumbai. There are 11 department that contributed their research work in Shodhganga till December 2017. Department of Technology Management is in the highest position.

Table 16. Dr. D.Y. Patil Vidyapeeth Vidya Nagar, Navi Mumbai.

<i>Sr. No.</i>	<i>Name of Department</i>	<i>Number of Theses Contribution</i>
1	Microbiology	1
2	Physiology	1
Total		2

The table 16, show the present contribution status is respect of ETDs of the University of Dr. D.Y. Patil Vidyapeeth, Navi Mumbai. There are 2 department that contributed their research work in Shodhganga till December 2017. Department of Economics and Population Studies is in the equal position.

Table 17. Pravara Institute of Medical Sciences, Ahmednagar

<i>Sr. No.</i>	<i>Name of Department</i>	<i>Number of Theses Contribution</i>
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1	Anatomy	2
2	Physiotherapy	1
3	Pharmacology	1
4	Forensic Medicine and Toxicology	1
Total		5

The table 17, show the present contribution status is respect of ETDs of the University of Pravara Institute of Medical Sciences, Ahmednagar. There are 4 department that contributed their research work in Shodhganga till December 2017. Department of Anatomy is in the highest position.

Table 18. SYMBIOSIS - International University, Pune.

<i>Sr. No.</i>	<i>Name of Department</i>	<i>Number of Theses Contribution</i>
1	Management	85
2	Computer Studies	18
3	Law	18
4	Engineering	17
5	Humanities and Social Sciences	07
6	Health and Biomedical Sciences	04
Total		149

The table 18, show the present contribution status is respect of ETDs of the University of SYMBIOSIS - International University, Pune. There are 6 department that contributed their research work in Shodhganga till December 2017. Department of Management is in the highest position.

Table 19. Tata Institute of Social Sciences, Mumbai

<i>Sr. No.</i>	<i>Name of Department</i>	<i>Number of Theses Contribution</i>
1	Social Sciences	137
2	Social Work	104
3	Management & Labour Studies	32
4	Health Systems Studies	10
5	Media and Cultural Studies	06
6	Study of Social Exclusion and Inclusive Policies	03
7	Development Studies	03
8	Library & Information Management Studies	02
9	Lifelong Learning	02
10	Social Entrepreneurship	02
11	Studies in Sociology of Education	02
12	Law Rights and Constitutional Governance	02
13	Rural Development	02
14	Human Ecology	01
15	Education	01
16	Research Methodology	01
Total		310

The table 19, show the present contribution status is respect of ETDs of the University of Tata Institute of Social Sciences, Mumbai. There are 16 department that contributed their research work in Shodhganga till December 2017. Department of Social Sciences is in the highest position.

Table 20. Tilak Maharashtra Vidyapeeth, Pune.

<i>Sr. No.</i>	<i>Name of Department</i>	<i>Number of Theses Contribution</i>
1	Management	123
2	History	81
3	Economics	70
4	Geography	47
5	Ayurveda	46
6	Snaskrit and Indological Studies	33
7	Sociology	31
8	Library & Information Science	24
9	Political Science	20
10	Marathi	12

11	Social Sciences	12
12	English	11
13	Hindi	11
14	Education	08
15	Journalism	08
16	Philosophy	05
17	Social Work	05
18	Modern Sciences and Professional Skills	04
19	Indology	03
20	Biotechnology	02
21	Mass Media	01
22	Social Sciences	01
Total		558

The table 20, show the present contribution status is respect of ETDs of the University of Tilak Maharashtra Vidyapeeth, Pune.

Finding There are 789 universities in India. But only 310 Universities are contributing their research work in Shodhganga and only 357 Universities have signed in Memorandum of Understanding till December 2017.

Recommendation ETDs is a new concept in our digital era. So, simple method is to be used to encourage towards ETDs. A proper training programme will be organised for both research scholars and faculties which will encourage the researchers to submit their research works in Shodhganga. **Conclusion:** The present study is mainly on Statistical database creation of ETDs submitted to deemed to be Universities in Maharashtra. All ETDs on bibliographical data collected from INFLIBNET (shodhganga) website and will be analyzed and statistical table, it will be shown according to university wise and chronological type. The concept of ETDs in digital era. Most of the researchers are unknown about the ETDs system.

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USAGES OF LIBRARY SERVICES BY GRADUATE STUDENTS IMPACT ON THEIR AWARENESS OF INFORMATION COMMUNICATION & TECHNOLOGY

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Abstract

In the present study studied that the usages of library services by graduate students impact on their awareness of ICT. This study use for normative survey method the study conducted in Akola district respect to rural and urban sector. Total 06 colleges have been selected in this study Awareness of ICT for respective students tool have been self constructed and standardized. The main finding of this study indicated that, those students use for library facility regularly these students awareness of ICT is effective compare to sometime regularly and Un- regularly use of library services of the students and those students use of library services un-regularly it's awareness of ICT is low compare to sometime regularly use library services for those students.

INTRODUCTION: Libraries have transformed into digital libraries for books, journals and magazines they have changed in e-books, e-journals, and e-magazines. They increased the global dissemination of information. Electronic resources for e-journals; e-books, e-databases, web resources, e-serials etc. are easily accessible in remote areas. Opined that electronic resources solve storage problems and control the flood of information, that is, print sources is being digitized. The rapid growth of new technologies has changed the information and communication process and reduced the cost of communication for individuals. Electronic information resources can be defined as the electronic representation of information which can be accessed via electronic system and computer network. They further buttress that electronic information sources can be seen as the most recent development in ICT and that they are available in various forms like e-books, digital libraries, online journal magazine, e-learning tutors and online test. Because of the effective presentation with multimedia tools, these E-resources have become the source of information. Awareness is knowledge about something that understanding of the situation at the present time based on information or experience. It can also be seen as knowledge of the situation fact, consciousness, recognition, realization, grasp and Acknowledgement concern about and well – informed interest in the particular situation. Opined that student's level of access, usage and awareness of electronic information resources at the college, India is not high and that the major problem however identified in their study is lack of information retrieval skills for exploiting electronic resources, thus making the level of usage of resources of students very low. Ajuwon (2003) study on ICTs he found that the students studied could not use a computer, and that the use of the database was poor, due to lack of awareness, lack of access to computers, insufficient training and high cost of provision of electronic information resources subscription. Awareness and use of electronic information resources subscription.

OBJECTIVE OF THE STUDY :1. To Study the usages of library services by Graduate Students.2. To Study the Awareness of ICT in Graduate Students.3. To Study the usages of library services of graduate students it's impact on their Awareness of ICT

HYPOTHESIS OF THE STUDY :1. There is no significant difference between the usages of library services of Graduate students Students respect to their faculty.2. There is no significant difference between the Awareness of ICT of Graduate students respect to their faculty.3. There is no significant impact of usages of library services of graduate students on their Awareness of ICT

LIMITATION OF THE STUDY :In the present study studied in Akola district only the graduate level studying students in Art, Commerce and science educational stream have been selected on the time of visit of library. Only aided college library services has been selected other non-aided college library services has not been selected in the present study. In the present study. In the district of Akola Rural and urban graduate colleges 06 library has been selected from the way of purposive sampling technique. Anaylsis and Interpretation of data based on frequency, percentages, mean, Anova & 't' test.

RESULTS & DISCUSSION :Table- 1. Usages of library services of graduate Student respect to their faculty.

Use of Library	Rural			Urban			Total
	Art	Comm	Sci	Art	Comm	Sci	
Regular	13 (30.23%)	16 (28.07%)	15 (23.44%)	16 (29.09%)	19 (27.94%)	20 (25.64%)	99 (27.12%)
Some Time Regular	16 (37.20%)	23 (40.35%)	34 (53.13%)	22 (40.00%)	27 (39.71%)	38 (48.72%)	160 (43.84%)
Un- Regular	14 (32.56%)	18 (31.58%)	15 (23.44%)	17 (30.91%)	22 (32.35%)	20 (25.64%)	106 (29.04%)
Total	43 (100%)	57 (100%)	64 (100%)	55 (100%)	68 (100%)	78 (100%)	365 (100%)

From the above table shown that, Rural Art colleges students maximum 37.20 % students use library services some time regular and minimum 30.23% students use library services regularly. Rural Commerce colleges students maximum 40.35 % student use library services some time regularly and minimum 28.07% students use library services regularly. Rural Science Colleges students maximum 53.13% students use library services some

time regularly and minimum 23.44% students use library services regularly and Un-regularly. Urban Art's colleges students maximum 40.00% students use library services some time regularly and minimum 29.09% students use library services regularly. Urban Commerce colleges students maximum 39.71% students use library services some time regularly and minimum 27.94% students use library services regularly. Urban Science colleges students maximum 48.72% students use library services some time regularly and minimum 25.64% students use library services regularly and Un-regular. All students maximum 43.84% students use library services some time regularly and minimum 27.12% students use library services regularly.

Table 2 : Awareness of Information communication & technology of graduate students respect to their faculty.

Rural	M	SD	Urban	M	SD	Df	't'	Sig
Art's	80,209	5.396	Art's	83,800	4,498	96	3.512	Sig
Commerce	78,807	4,889	Commerce	81,470	4,685	123	3,092	Sig
Science	80,312	5,045	Science	82,730	5,054	140	2,839	Sig
Total	79,762	5,103	Total	82,597	4,846	363	5,399	Sig

From the above table shown that, Rural & Urban Art Colleges students Awareness of ICT is 80,209 and 83,800 respective these mean score compare and calculated for 't' value is 3.512 this 't' value is significant at 0.01 level of significant. It's means that, the Urban Art Colleges students Awareness of ICT is effective compare to Rural Art's Colleges students. Rural & Urban Commerce colleges students Awareness of ICT is 78,807 and 81,470 respective these mean score compare and calculated for 't' value is 3,092 this 't' value is significant at 0.01 level of significant. It's means that, the Urban Commerce Colleges students Awareness of ICT is effective compare to Rural commerce colleges students. Rural & Urban Science colleges students Awareness of ICT is 80,312 and 82,730 respective these mean score compare and calculated for 't' value is 2,839 this 't' value is significant at 0.01 level of significant it's means that, the Urban science Colleges students Awareness of ICT is effective compare to Rural science colleges students

Table 3 Usages of library services of Graduate students on their Awareness of information communication & Technology.							
Group	Source of variance Facilities	Sum of Squares	Df	Mean Square	F Ratio	Sig	
Rural Students	Between Group	437.165	2	218.583	9.240	Sig	
	Within Group	3808.560	161	23.656			
	Total	4245.726	163				
Urban Student	Between Groups	516.532	2	258.266	12.228	Sig	
	Within Group	4181.826	198	21.120			
	Total	4698.358	200				
Total Students	Between Groups	946.217	2	473.109	19.632	Sig	
	Within Group	8723.635	362	24.098			
	Total	9669.852	364				

From Above Table Shown that, the significantly impact of use of library services of rural and urban students on their awareness of information communication & technology.

Conclusions 1. Use of library services of graduate colleges students respective maximum 43.84 % students use of library services some time regularly and minimum 27.12% students use library service Regularly and 29.04% students use library services un-regularly.2.

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TO STUDY THE USER'S EXPECTATION & PERCEPTION ABOUT THE SERVICES QUALITY OF DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE, DR. B. R. AMBEDKAR, MARATHWADA UNIVERSITY, AURANGABAD

Dr. Manisha Sagar Dandgawhal, Malini Kishor Sanghvi College of Com & Eco Librarian, Vileparle – W, Mumbai - 400049.

Abstract

Users survey was conducted by using questionnaire which based on four variable Collection, Staff, Services and Infrastructure to rate the service level expectations (how important is this item to you) and perceptions (level of satisfaction with this item) of the Department of Library and Information Science, Dr. B. R. Ambedkar, Marathwada University, Aurangabad. An overall aspect of service quality was checked by using gap analysis and it was also tried to find out an attribute with widest gap and narrowest gap by students, faculties and research scholars.

Keywords: Service Quality, User Satisfaction, Gap Analysis, Department of library and information science

1.1 Introduction: The libraries have transformed drastically from storehouse for books and journals were meant for preservation to the powerhouse of knowledge and information since the middle of the 20th century. This revolution is just possible because of the information and communication technology. The very existences of libraries are dependable on users' satisfaction. Users are getting satisfied when the library is able to rise to his or her expectation or meet the actual needs. A quality service is said to be one, which satisfy the users' expectation resulting a good experience. Throughout the history, libraries were mainly concerned with collection development, servicing and processing. Gradually the social and economic charges have prompted the libraries to develop services. The staffs have a vital role in the satisfaction of users. The library being a service organization, its prime objective is to provide the right documents, information and service to its users. The primary objective of academic libraries and librarians are to satisfying users' needs. Everyday year, new students come to the university with different needs and expectations. Furthermore, new technologies, database, and more innovative systems for accessing information, have made the library more complicated and challenging for librarians and users alike. The plenty of new resources available and the difficulty in being started to evaluate these resources also create problems for users. The inability to easily identify the specific use of a library's services because of the new technologies, and the difficulty to access information sources can contributed to user dissatisfaction among academic library users. There are various methods, tools and techniques to measure, control and improve the quality of library services.

1.2 Review of Literature: In present study an attempt is made to review the related literature in the area of library services, customer satisfactions measurement, service quality assessment based on SERVQUAL, SERVPERF, and LibQUALTM etc. To obtain the in-depth knowledge, which forms the sound base of investigating into the research problem, the related literature is reviewed under the following heads:

1.2.1 By Using SERVQUAL instruments : Rasul G and Sahu A K (2011) evaluated the status of Information Technology and service quality at IIMT Library, users' perspective, Nimsomboon and Nagata (2003) examined the service quality of Thammasat University Library from users' perspective. They identified the service quality dimensions related to 'affect of service –organizational', 'collection', 'access', and 'affect of service-personal' with reference to affect customers' evaluation of service quality by factor analysis method, as like to this Heron and Ellen (1996), Landrum and Prybutok (2009), Hassanzadeh M, Sharifabadi S and Derakhshan M(2010), Somaratna S and Peiris C. (2011) & Landrum, Prybutok, Zhang and Peak ,Melo and Sampaio (2002), Chou T and Chen Y (2012) Coleman V, Xiao Y, Bair L and Chollett B (1997) many studies were carried out by using SERVQUAL Methods to find out the service qualities in particular academic libraries and also by using LibQUAL/ LibQUALTM method Thompson and Cook (2002), King M (2009) Thompson B, Kyillidou M and Cook C (2002), Shi X and Levy S (2005),The library and information Service Center of SIIT (2008), Cook Colleen, Health Fred and Thompson Bruce (2001), Blixrud J C (2002),Shedlock J & Walton L (2004) had used SERVEQUAL method to examine the service quality of the respective Libraries. Past literature, indicates that the researches in the field of library and information science used modified SERVQUAL as an alternative instrument for assessing library service quality. According to Cullen a modified SERVQUAL model was introduced in academic libraries by Hernon and Altman. They used the data collected from surveys and focus groups to refine the SERVQUAL model in order to develop a robust survey instrument for use specifically in library and information services. They have included a service quality checklist designed to evaluate dozens of aspects of service quality in libraries, with suggestions on how they might best be monitored.

1.2.2 By Gap Theory: service quality is evaluated of library services from a customer perspective and required the steps such as measuring the level of discrepancy between expectation, wants of library customers and perception of what the library actually provides, identifying situations in which the customers expects more than they believe they receive, and taking action that decreases or eliminates such gap. On the basis of gap theory Heron P (2001), Babalhavaeji F., Moghaddam A. Aqili S and Shakooii(2009), Rehman S U & Hadi W M E (2012),Manjunatha (2007), Tan Pey Lin and Foo Schubert (1999) and etc these papers used of modified 22 items SERQUAL instrument to measure the service quality of a library and data analyzed, the expectation-service Gap Grid and identified service shortfalls of the library. The review of literature reveals that most of the

research and professional literature that formed the foundation for this study and these studies based on academic quality library services survey in a particular state. All the reviewed literature is based on Size and quality of information Library services, by Using SERVQUAL instruments, LibQUAL/ LibQUAL⁺TM, Library Quality assessment, Gap Theory or Library service & Customer Satisfaction every studies was related to library and its users it would like to find out better and better options to improve the quality services and more and more users satisfaction. In addition, this chapter established the conceptual framework for this study.

1.3 Objectives of the Study: The objectives of the study of Department of library and information science from the Dr. B.R. Ambedkar, Marathwada University, Aurangabad is as the followings To study the overall service quality with reference to Collection, Staff, Service & Infrastructure To find gap between group users expectation and perception

1.4 Study Design and Methodology

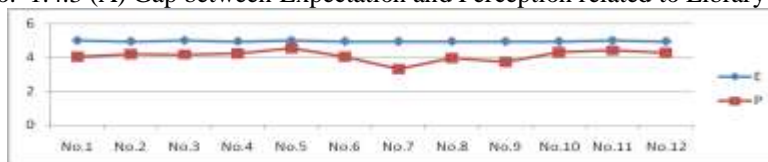
1.4.1 Population and Sampling method: The sample in this study have four groups of users’ i.e. graduate, post graduate, research scholars and faculty of Department of Library and Information Science, Dr. B. R. Ambedkar, Marathwada University, Aurangabad. Collect students name list prepared from the administration office. Sample for each selected groups are students by Computer Random Method and faculty members’ by complete Survey Method. Thus Non Probability Convenience Random Sample was adopted.

1.4.2 Data Collection and Data Analysis: The first hand data collected from the records of the selected institution through university websites i.e. HOD of library & information sciences name and contact members of selected sample university. Depending upon the size of population and time the selected sample groups were ask to complete the instrument. The instrument was divided into two sections. The first section was asked about background information and the second section was based on four variable Collection, Staff, Services and Infrastructure was asked users to rate the service levels Expectation (how important is this item to you) and perceptions (level of satisfaction with this item) which was indicated on a five point scale. Excel programme prepared by statistical expert and feed the data by the researcher.

1.4.3 Analysis and Data Interpretation 1.4.3 (A) Data analysis report on Expectation and Perception related to Library collection Table no. 1.4.1 (A) Gap between Expectation and Perception related to Library collection

Statement	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8	No.9	No.10	No.11	No.12
E	5	4.95	5	4.95	5	4.95	4.95	4.95	4.95	4.95	5.00	4.95
P	4.03	4.19	4.16	4.22	4.54	4.03	3.30	3.95	3.73	4.30	4.41	4.27
E-P	0.97	0.76	0.84	0.73	0.46	0.92	1.65	1	1.22	0.65	0.59	0.68

Graph no. 1.4.3 (A) Gap between Expectation and Perception related to Library collection

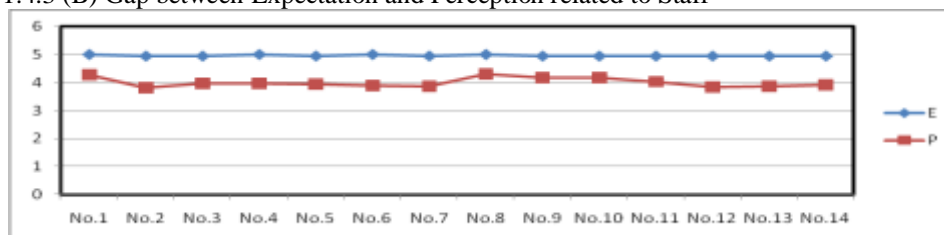


It shows that expectation and perception gap regarding collection is higher at Statement No.7 i.e The library acquires CDs, VCDs and other digital materials, which can be borrowed by me and lowest on statement no. 5 Library has collection of classification schedules, encyclopedias, online-offline reference sources, etc.

2 Staff: Table no. 1.4.3 (B) Gap between Expectation and Perception related to Staff

Statement	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8	No.9	No.10	No.11	No.12	No.13	No.14
E	5	4.95	4.95	5	4.95	5	4.95	5	4.95	4.95	4.95	4.95	4.95	4.95
P	4.27	3.81	3.97	3.97	3.95	3.89	3.86	4.30	4.16	4.16	4.03	3.84	3.86	3.92
E-P	0.73	1.14	0.97	1.03	1	1.11	1.08	0.70	0.78	0.78	0.92	1.11	1.08	1.03

Graph no. 1.4.3 (B) Gap between Expectation and Perception related to Staff

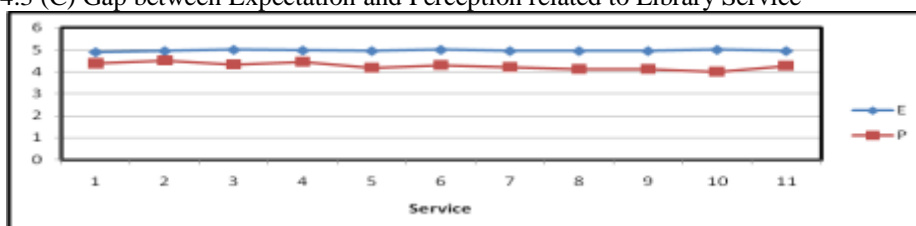


It indicates that expectation and perception gap regarding staff is higher at statement no. 5 i.e the library staffs provides a tailored service to locate a document when users want and gap lower at statement no. 1 i.e. The library staff is well efficient with the equipment they use in the library.

Table no. 1.4.3 (C) Gap between Expectation and Perception related to Library Service

Statement	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8	No.9	No.10	No.11
E	4.89	4.95	5	4.97	4.95	5	4.95	4.95	4.95	5	4.95
P	4.38	4.51	4.324	4.46	4.19	4.297	4.22	4.11	4.11	4	4.27
E-P	0.51	0.43	0.676	0.51	0.76	0.703	0.73	0.84	0.84	1	0.68

Table no. 1.4.3 (C) Gap between Expectation and Perception related to Library Service

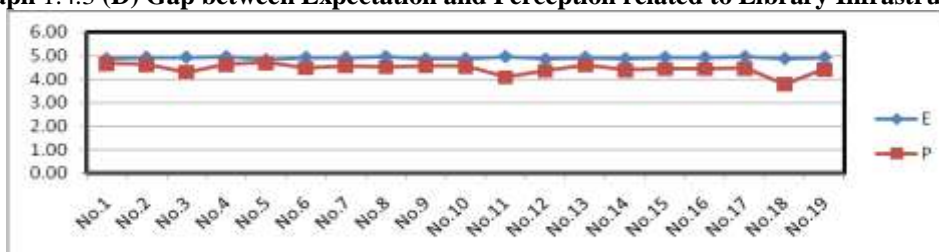


It indicates that expectation and perception gap regarding service is higher at statement no. 10 Higher authorities are available in case of difficulties and grievances. And lowest gap is at statement no.2 The library maintains updated list of articles from journals, magazines and newspapers for use.

Table no. 1.4.3 (D) Gap between Expectation and Perception related to Library Infrastructure

S	No .1	No .2	No .3	No .4	No .5	No .6	No .7	No .8	No .9	No. 10	No. 11	No. 12	No. 13	No. 14	No. 15	No. 16	No. 17	No. 18	No. 19
E	4.8	4.9	4.9	4.9	4.8	4.9	4.9	4.9	4.8	4.8	4.9	4.8	4.9	4.8	4.9	4.9	4.9	4.8	4.9
P	4.6	4.6	4.3	4.6	4.7	4.4	4.5	4.5	4.5	4.5	4.0	4.3	4.5	4.3	4.4	4.4	4.4	3.7	4.4
E - P	0.2	0.3	0.6	0.3	0.1	0.4	0.3	0.4	0.3	0.3	0.8	0.5	0.3	0.5	0.5	0.5	0.5	1.1	0.5

Graph 1.4.3 (D) Gap between Expectation and Perception related to Library Infrastructure



It indicates that expectation and perception gap regarding service is higher at statement no.18 Suggestion box and complaint register are readily available in the library and lowest gap is at statement no. 5 Library has computer terminals with internet facility for the users to access the digital resources.

1.4.3 (E) Gap between Expectation and Perception to overall service quality

Table-1.4.3 (E) Gap between Expectation and Perception to overall service quality

	Collection		Staff		Services		Infrastructure	
	E	P	E	P	E	P	E	P
Mean	4.96	4.09	4.96	4.00	4.96	4.31	4.93	4.45
SD	0.03	0.33	0.03	0.16	0.03	0.25	0.04	0.22
Skew	0.81	-1.27	1.07	0.79	-0.28	1.36	-0.72	-1.85
Maximum	5.00	4.54	5.00	4.30	5.00	4.89	4.97	4.70
Minimum	4.95	3.30	4.95	3.81	4.89	4.00	4.84	3.78

	Collection	Staff	Services	Infrastructure
Mean	0.87	0.96	0.65	0.48
SD	-0.30	-0.14	-0.21	-0.18
Skew	2.08	0.28	-1.64	1.13

Max	0.46	0.70	0.11	0.27
Minimum	1.65	1.14	0.89	1.05

The table of mean gap score shows that overall service quality gap is declining from staff (0.96), collection (0.87), Services (0.65) and Infrastructure (0.48).

1.4.3 (F) List of Attributes with Widest Gap by students, faculties and Research Scholars

1.4.3 (F) The five service quality factors with highest gap score by students

St. No.	Dimensions	Sentence	E	P	E-P
7	Coll.	The library acquires CDs, VCDs and other digital materials, which can be borrowed by me.	5	3.18	1.82
9	Coll.	Library possesses documents of stated / central government publications.	5	3.41	1.59
18	Infra	Suggestion box and complaint register are readily available in the library.	5	3.77	1.23
12	Staff	Library staff members should be enthusiastic and capable.	5	3.82	1.18
2	Staff	The library staff provides a tailored service to locate a document when users want.	5	3.86	1.14

The five service quality factors with highest score mean difference by students is 1.82 Statement no. 7 & 1.59 for statement no. 9 for collection, 1.23 for statement no. 18 aspect of infrastructure, 1.18 for statement no. 12 and 1.14 for statement no. 2 related to staff.

7 List of Attributes with Widest Gap by faculty and Staff

7 The five service quality factors with highest gap score

St. No.	Dimensions	Sentence	E	P	E-P
7	Staff	The library has knowledgeable staff to assist user.	5	3.13	1.73
7	Coll.	The library acquires CDs, VCDs and other digital materials, which can be borrowed by me.	5	3.47	1.4
6	Staff	The library staff is approachable, welcoming and courteous.	5	3.80	1.2
13	Staff	Library staff helps the users to find and supply the required books.	5	3.67	1.2
14	Staff	Library staff encourages the users to come back and ask for more assistance.	5	3.67	1.2

The five service quality factors with highest score mean difference by faculty and research scholar is 1.73 Statement no. 7, 1.2 same for Statements no. 6, 13 and 14 about the staff and 1.4 for statement no. 7 regarding collection.

1.4.3 (G) The five service quality factors with lowest score between expectation and perception mean difference by students

The five service quality factors with lowest gap score

St. No.	Dimensions	Sentence	E	P	E-P
2	Infra	Library software is user friendly.	5	4.82	0.18
1	Infra	Library equipments are kept in good working condition.	5	4.77	0.23
4	Ser	New arrivals are prominently displayed in the library.	5	4.68	0.32
13	Infra	Library area is calm and silent for study.	5	4.68	0.32
14	Infra	Library has good indicators and shelf guides for easy location.	5	4.64	0.36

The five service quality factors with low mean gap score by students is 0.18 statement no. 2 , 0.23 statement no.1, 0.32 for statement no.13 and 0.36 for statement no.14 for Infrastructure and 0.32 is for service attribute for statement no.4.

1.4.3 (I) The five service quality factors with lowest score between expectation and perception mean difference by faculty and research scholar

St. No.	Dimensions	Sentence	E	P	E-P
5	Infra	Library has computer terminals with internet facility for the users to access the digital resources.	5	4.93	0.07
6	Infra	Library provides computers with printers for pay and use.	5	4.67	0.2
4	Infra	Library is convenient and accessible.	5	4.73	0.2

5	Coll.	Library has collection of classification schedules, encyclopaedias, online-offline reference sources, etc.	5	4.67	0.33
2	Ser	The library maintains updated list of articles from journals, magazines and newspapers for use.	5	4.47	0.4

The five service quality factors with low score mean difference by faculty and research scholar is 0.07 at statement no. 5 for Infrastructure, 0.2 same score difference for statement no. 6 & statement no. 4 for Infrastructure, 0.33 statement no. 5 for Collection and 0.4 for statement no. 2 for Services.

Suggestions Libraries should pay special attention on the provision of good collection, staff and services in their reference sections. New ICT based services should be introduced by the library. University library should consider the features of users' friendliness and helpfulness while designing online or electronic services for their usage. Dept. of LIS should pay special attention on training the future library professionals by giving the library science students the practical or case studies, assignments of long and short range questions and electronic reference services

Conclusion: Service providers, no matter their profession, need to know that the definition of quality is a subjective matter. They have to find out the users' expectation and perception, where are the gaps, focus on that gaps and to try to fill these gaps to satisfy the users, need.

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STUDY OF THE MODERN SITUATION OF INDIAN PUBLIC LIBRARIES

Shivangkumar Bhaskarbhai Maheta, *Research Scholar, M.S. University Vadodra*

Abstract

The modern situation of Indian public libraries has been regarded through a few as follows: the public library System in India is condemned to stay peripheral to the actual facts desires of the loads; that it's miles in a depressed state, and serves as little greater than a warehouse of recreational analysing substances, a majority of which are in nearby languages. This Assignment shows feasible remedies on the way to rework the state of affairs, and info new technological trends which might be already showing the capacity to alternate public libraries in rural India for the better.

Keyword: Public Library, India, Digital literacy, Public Library System, Services

INTRODUCTION: The Public Library is regarded in the people's institution. It is local gateway to knowledge that provides basic condition for life learning and facilitates cultural development of the individual and social groups. The public library provides services to all irrespective of age, sex, cast, religion, education, and social studies, generally all users get the material relevant to their needs and requirements in the public library. UNESCO, in its Public Library Manifesto has described public libraries its "democratic institution for education, culture and information (UNESCO Public Library Manifesto, 1972). The Manifesto further states that "the public library should be established under clear mandate of law... it should be maintained wholly from the public funds and no direct charge should be made to any one for its services." UNESCO, public library 1994 emphasized the role of public library as the local centre of culture and information centre. It states that knowledge is an important resource and public library is not only a cultural institution but also an essential welfare through the minds of people. The discontinuous and erratic rather than evolutionary nature of social change; the juxtaposition of various images of social, economic and political life and the Transformation of images like Disney world, TV sports and Web pages into the realities with which we deal. It is believed that information and knowledge are distinguishing features of this modern society and the main driver of this change is the growing use of information and communication technologies. Education and training are perceived to be the key elements in the process of change and central in the development of knowledge-based economies. However, transformation in society requires a new approach to education. Several reports have pointed to the 'new learning reality' and the need for 'rethinking the whole learning enterprise' if countries were to succeed in the global knowledge-based society. Therefore, along with all other sectors of society.

1. Economic: India's community of public libraries will work with the authority's agenda to construct India's monetary revival and future balance, turning in records, gaining knowledge of, talents and creativity thru a nationwide team of records professionals, guiding access to excessive excellent information, ideas and understanding.

2. Social: India's public libraries will build man or woman self-worth, network wellbeing, network concord, identity and self-assurance by guiding get right of entry to, bodily and digital, to public, network and government facts and with the aid of being the local and digital network assembly vicinity for all.

3. Cultural: Public libraries in India may be critical retailers for cultural development and a focus for cultural identity inside the network, keeping and selling country wide and local subculture, offering possibilities for innovative development and the collective cultural revel in

PROBLEMS OF PUBLIC LIBRARY SERVICES IN INDIA A number of problems have been identified in practical functioning and modernization of public library services in the area. The followings are the prime problems identified in practical smooth functioning and modernization of the public library services in the area:

A. Poor Funding: Public libraries are facing the severe funding problem since long back. Most of the public libraries are not given importance by the Government in funding for smooth functioning and modernization of such libraries. Due to the lack of proper and adequate funding policy the development and modernization of public libraries are not satisfactory.

B. Infrastructure: Infrastructural facilities for the smooth functioning of public libraries are not up to the mark in Public library) areas. Infrastructural facilities like buildings, furniture, IT accessories etc. are not sufficient and some of the public libraries do not have minimum infrastructural facilities to run the libraries. The Authorities concerns are not interested in creating infrastructural facilities for the development of public libraries. It is most interesting to mention that most the public libraries in Public library areas do not have their own building and are being run in the rented buildings as show off.

C. Collection and Staff: Collection is one of the most important components of the library activity which can be termed as heart of the library. Public Libraries of public libraries areas have very less collection of different reading materials for which these libraries are not in the position to serve the real needs of the common people.

D. Communication: The entire communication system in public libraries area is not in a good condition. Communication systems like Mobile, OFC, Wire, road, rail etc. are not so much developed which are the main obstacle in modernizing the public library services. Urban areas are improving in the communication systems but the most of the rural areas are still in the negligible condition. Most of the districts of public libraries areas are not well connected with OFC and High speed mobile networks for which networking and modernization of public library services with present day needs of the people is still not in the reality.

E. Disturbed Law and Order Situation: Public libraries area has been experiencing severe law and order situation since long time back. Due to heavy influence of insurgency and frequently bandhcalled by the different groups creates obstacles

in various developmental activities including library services. **F. Power (Electricity):** There is always power deficit in North East India and most of the rural villages do not have electricity facility which is also one of the most important problems in providing smooth service of public libraries to the common people. Even some of the public libraries are running without the electricity facility. Library area is also not exception in this case. **G. Indifferent attitude of the people:** There is lack of understanding regarding the importance of library services among the common people. That is why the indifferent attitude of the common people has also become a major problem in extending public library services to the common people. The common people still do not understand the importance of the library services and ignorant about it. Common people

THE LEGAL AND FINANCIAL FRAMEWORK Public libraries are a community agency providing access at local level to a range of knowledge and information for the benefit of the individual and Society as a whole. That allows you to preserve the extent of service required to fulfil their functions public libraries have to be supported by means of rules and sustained funding.

A. The public library and government: There are many different models of the relationship between public libraries and government. Equally, the laws that govern their activities and funding arrangements are varied and complex. In different countries, provinces, regions, states or municipalities are, either in whole or in part, responsible for library services.

Sr No	YEAR	STATE	Sr No	YEAR	STATE
1	1948	Tamilnadu	11	2001	Odisha
2	1960	Andhra Pradesh	12	2000	Gujarat
3	1965	Karnataka	13	2005	Uttaranchal
4	1967	Maharashtra	14	2006	Rajasthan
5	1979	West Bengal	15	2006	Uttar Pradesh
6	1988	Manipur	16	2007	Lakshadweep
7	1989	Haryana	17	2008	Bihar
8	1989	Kerala	18	2009	Chattisgarh
9	1993	Mizoram	19	2009	Arunachal Pradesh
10	1993	Goa			

B. National information policies: In order to make the most effective use of available library and information resources, and take full advantage of the opportunities offered by the development of electronic information sources, many countries are developing national information policies. Public libraries should be a key element in such policies and public librarians should ensure they are fully involved in their development.

C. Public library legislation: It is observed that out of 29 States and 6 Union Territory Administrations, only 19 states, as tabulated below, have so far passed library legislation, enabling the concerned State Government to provide a public library system.

(Since independence of India the following States have passed Public Libraries Act)

D. Funding: Ok tiers of investment are important to the fulfilment of a public library in fulfilling its roles. Without appropriate tiers of funding over the long-term it's miles impossible to develop regulations for service provision and make the best use of to be had resources. This can be visible in variety of examples: a new library building without adequate funds to hold it, collections of latest books with no money for his or her alternative and laptop structures without funds to maintain and update them. Investment is needed not best when a public library is established, however ought to additionally be sustained on a confident and regular basis.

ISSUES OF PUBLIC LIBRARIES: The public libraries have identified their role to satisfy statistics desires of all kinds of humans within the society. The government on the country and countrywide level has taken tasks to make public libraries as crucial source of facts' for human's formal walks of lifestyles. The national venture on libraries setup with the useful resource of ministry of subculture has supplied recommendations for development of libraries and information centres to make public libraries prepared with statistics

New e-book and scholarly communication scenarios; More in depth use and delivering of digital resources; Serving more and more heterogeneous scholar population; Persevering with high demand from students for classic resources; New modes of look at, such as ICT-primarily based and distance Learning, with which libraries have had little involvement in the Past; Ever-reducing tiers of Human Resource, especially in staffing, most critical to giant pressures on individual group of workers and an intense task to control. Developing a guide for students to apply or for resource evaluation, Presenting Class sessions, Growing stand-by myself guides, Creating a course Web site giving students a guided tour for searching the Web, Developing an assignment where students work on a search strategy appropriate to a problem statement,

DIGITAL INCLUSION AND THE VALUE OF PUBLIC LIBRARIES Digital inclusion is a beneficial framework thru which one can understand the importance of making sure people have get entry to digital

technology as well as the approach to discover ways to use them. Digital inclusion incorporates rules and movements that mitigate the significant, interrelated issues of the digital divide and digital literacy.

Digital divide implies the Gap—whether based totally in socioeconomic fame, training, geography, age, ability, language, or other factors—between individuals for whom Internet access is readily available and those for whom it is not. Indeed, even those with basic, dialup Internet access are losing ground as Internet and computer technologies continue to advance, using increasing bandwidth and demanding high-speed (“broadband”) Internet access. Digital literacy encompasses the skills and abilities necessary for access once the technology is available, including understanding the language and component hardware and software required to successfully navigate the technology. Digital inclusion is policies developed to close the digital divide and promote digital literacy

CONCLUSION: Public libraries are often talked about as the possible solution to information poverty as they are in apposition to provide free access to the Internet for their communities. Public libraries in India should use new Information and communication technologies to create online world, which will further transform our lives. This article has pointed out “ Providing access to information has traditionally been about buildings, based around institutions offering services to onsite users. Tomorrow’s libraries will not simply be a matter of installing rows of computers with Internet access: our users will increasingly expect to be able to access material from where they live and work.

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A BASIC USABILITY EVALUATION OFE-RESOURCE AVAILABLE IN ST. VINCENT COMMERCE COLLEGE LEARNING RESOURCES CENTRE

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Introduction: In the recent decades, usability studies have received significant attention in the field of Library and Information Science. Usability consists of multiple constructs from various perspectives, such as effectiveness, efficiency, subjective pleasure, memorability, and others, focusing largely on interface design (Jeng, 2006). The majority of research on usability studies either yields system design principles or intends to improve the design of an existing system. The International Organization for Standardization (ISO) defines usability as “the extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use.”

The purpose of this study: The purpose of this study was to collect and examine statistical and survey data in an effort to determine whether two electronic resources made available by St. Vincent College of Commerce, are actually being used by the target population for whom they were acquired. The second goal was to significantly advance understanding of how selected online database products collect and report usage statistics, how usable students find existing electronic resources, and whether usage levels justify the costs of renewing online resource subscriptions.

Problem Statement: As electronic resources become an increasingly essential component of online learning environments, researchers and educators find themselves grappling with ways to measure the availability, usage and usability of digital library components, such as full text database products. The importance of obtaining accurate usage data relates to the increasing need for institutions to justify the use of public funds to obtain and maintain online resources.

Literature Review: Researchers identified different attributes of usability from various disciplines. For example, in his early study, Booth (1989) suggested four aspects of usability, namely, usefulness, effectiveness, learnability, and attitude. Shakel (1991) identified four usability evaluation criteria focusing on how users accomplish their tasks in using a system, learnability, flexibility, effectiveness, and user attitude. **A study conducted by Mounissamy and Rani (2005)** clearly represent that “theUsage and usability of electronic journals by research scholars and faculty members of National Institute of Technology, Tiruchirappalli. The study reveals that 67 percent of researchers and 33 percent of faculty members regularly access and use the electronic journals for varied purposes”.

Objectives:-The first goal was to determine whether target population for whom full-text databases were acquired is actually using electronic resources made available by the St. Vincent College of Commerce Library. To identify any problems or barriers encountered during use of selected electronic resources, representative members of the target population participated in a usability study that examined two online databases.

EBSCO host andJSTOR Databases Usability Evaluation:

Please complete the following tasks, and then answer the questions about **EBSCO host and JSTOR Databases**.1. Search for articles about Management accounting. Select one recent article, and then list the information below:2. What is the title of the article? 3. Who is the author?

Now answer the following questions to the best of your ability. Rate your agreement with each of the five questions listed, using the scale from Strongly Agree to Strongly Disagree.

I can quickly find what I want on this Web site It is difficult to move around on this Web site. If you found the site difficult to move around on, please tell us why: This Web site is easy to use If you found this site difficult to use, please tell us why This Web site needs more instructions What additional instructions would you recommend? This Web site is too slow. Do you have any additional comments you would like to share

User Satisfaction Questionnaire for EBSCO host:How would you rate your level of satisfaction when using **EBSCO host**?How well does **EBSCO host** prompt you, so you always know what the application expects you to do next and what your options are? How well does **EBSCO host** allow you to bypass irrelevant steps and get efficiently to the field, function or page that you want? How well does **EBSCO host** facilitate learning about it and using it with minimal assistance? How well does **EBSCO host** help you perform your research assignments more efficiently and effectively?

User Satisfaction Questionnaire for JSTOR Database website: How would you rate your level of satisfaction when using **JSTOR Database website**? How well does **JSTOR Database website** prompt you, so you always know what the application expects you to do next and what your options are? How well does **JSTOR Database website** allow you to bypass irrelevant steps and get efficiently to the field, function or page that you want? How well does **JSTOR Database website** facilitate learning about it and using it with minimal assistance? How well does **JSTOR Database website** help you perform your research assignments more efficiently and effectively?

Data Analysis and Findings:Total 25 students recruited to perform a Task. We found following results. Following tablesillustrate the success rate of participants as they completed these tasks. While nearly all

participants were able to find and retrieve a full-text article. Eight per cent were unable to determine the title of the article when using EBSCO host and four per cent were unable to determine the article title when using JSTOR Database. Students taking part in the study were predominately had never used an online database before the usability test. Despite being confronted with new technology and a learning environment that required independent inquiry and activity, all participants demonstrated the ability to enter search terms and retrieve an index list of corresponding article entries.

Table: Was User Able to Find Article Title?

	YES	NO
EBSCO host	23	2
JSTOR Database	24	1

Who is the author? All participants were able to determine the author of the full-text article retrieved when use EBSCO host. The success rate fell from one hundred per cent to eighty-eight per cent when users attempted to determine the author of articles retrieved within JSTOR database. This may be due to the differing labeling used during article displays in database or it may differ in search options.

	YES	NO
EBSCO host	25	0
JSTOR Database	22	3

Usability Ratings: After completing the task list for each database, participants rated various elements of usability, assigning values from a five-point scale that ranged from Strongly Agree to Strongly Disagree. Each participant was offered an opportunity to provide additional written comments to explain any difficulties encountered. Comparative results of the usability study questions are illustrated in Figures below. Participants rated EBSCO host highest in terms of quickly finding what users wanted. When asked to rate difficulty moving around the database Web site, participants ranked EBSCO host as the least difficult to navigate. EBSCO host also ranked highest in ease of use. When asked if the database Web site needed more instructions, the majority of participants found JSTOR the most self-explanatory.

Que: I can quickly find what I want on this Web site

	Strongly Agree	Slightly Agree	Neutral	Slightly Disagree	Strongly Disagree
EBSCO host	15	6	4	0	0
JSTOR	10	8	3	1	3

Que: It is Difficult to Move around on This Web Site

	Strongly Agree	Slightly Agree	Neutral	Slightly Disagree	Strongly Disagree
EBSCO host	10	6	2	0	7
JSTOR	13	7	4	0	1

Que: This Web site is easy to use

	Strongly Agree	Slightly Agree	Neutral	Slightly Disagree	Strongly Disagree
EBSCO host	12	6	3	0	4
JSTOR	10	7	3	0	5

Que: This Web site needs more instructions

	Strongly Agree	Slightly Agree	Neutral	Slightly Disagree	Strongly Disagree
EBSCO host	9	8	3	3	2
JSTOR	10	9	1	2	3

Participants were invited to include explanatory comments to qualify their responses. A listing of additional comments supplied by participants follows.

EBSCO host :I found this web site easy to use to look up info. I find the web site to run excellent. Web site is useful. Good source to find what you want easily. I find EBSCO host to search well and give results well.

JSTOR database: Sometimes it is hard to understand the instructions of the computers. Easy to use. I found was easier to find what I wanted. It's great to have resources like this article. It was unfamiliar; never had gone into this website. Search bar did not work. Had to play with it.

User Satisfaction: Findings of College study revealed the majority of participants performed their most successful searches using EBSCO host. This study found that participants also ranked EBSCO host highest in terms of overall satisfaction.

Comparative Ratings of Participant Satisfaction:

	Strongly Satisfied	Slightly Satisfied	Neutral	Slightly Dissatisfied	Strongly Dissatisfied
EBSCO host	16	4	3	0	2
JSTOR	11	7	3	0	4

Comparison of How Well Database Helps Perform Research

	Strongly Satisfied	Slightly Satisfied	Neutral	Slightly Dissatisfied	Strongly Dissatisfied
EBSCO host	12	8	2	3	0
JSTOR	11	7	3	0	4

Comparison of How Well Database Prompts Users:

	Strongly Satisfied	Slightly Satisfied	Neutral	Slightly Dissatisfied	Strongly Dissatisfied
EBSCO host	18	4	3	0	0
JSTOR	14	6	3	0	2

Comparison of How Well Database Allows Users to Bypass Steps:

	Strongly Satisfied	Slightly Satisfied	Neutral	Slightly Dissatisfied	Strongly Dissatisfied
EBSCO host	16	4	4	0	1
JSTOR	12	3	5	2	3

Conclusion: This study had two specific goals. The first goal was to determine whether the target population for whom full-text databases were acquired was actually using electronic resources made available College Library. In an effort to identify any problems or barriers encountered during use of selected electronic resources, representative members of the target population were selected to participate in a usability study that examined two online databases:EBSCO host andJSTOR Databases. Participants taking part in the study rated each database in terms usability and user satisfaction. **BIBLIOGRAPHY**

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BEST OPEN SOURCE SOFTWARE (OSS) FOR LIBRARY AND INFORMATION SERVICES

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Abstract

We are living in a world of information age, and libraries and information centre are expected to use Information and Communication Technologies (ICT) to disseminate information faster and exhaustively than before. The Open Source Software (OSS) model makes source code available to users, who can change the software to build it more closely to their own conveniently. With many OSS applications now available for library and information management, Organisations have a new option for acquisition and implementation of systems. Open source refers to the terms of access to that computer source code. So Open Source Software is software or program for which the source code is freely available. Open source software (OSS) is computer software whose source code is freely available under a license that permits users to change, use, update and modify the software, and to redistribute it in changed or unchanged format.

Keywords: Open Source Software, Library, Automation, Digital Library, Koha, DSpace, ABCD, UBUNTU, etc.

Introduction: Due to the vast explosion of information variety and number of information is being increased faster in every field of knowledge. Open Source Software has grown tremendously in scope and development over the last some years, and is now in using everywhere. OSS can benefit libraries by lowering initial and on-going costs, avoids vendor and allowing for greater elasticity. Open Source refers access to source code of the computer. OSS is software for which the source code is freely available and accessible. Open source software (OSS) is computer software whose source code is freely available under a license that permits users to change, use, update and modify the software, and to redistribute it in changed or unchanged format. Open source software generally allows anyone can make a new version of the software program.

Characteristics of Open Source Software: Open Source Software according to Engard (2011) are applications whose source code is made available for use or modification in line with users' needs and requirements are known with some Characteristics which make it distinct from proprietary software.

Objectives of Open Source Software (OSS) The source code is available freely The software can be distributed and operated freely The software can be modifying.

4. Reasons to Use Open Source Software Establish programmer's creative knowledge Those can't buy license software can download and use open source programs for free Database is safe Money saved Can easily convert software according to user's needs and your needs

5. Advantages of Using Open Source Software: OSS have many benefits such as cost effectiveness, user friendliness and the ability to modify the software to suitable any specific function desirable by the patrons. Tennant (2007) noted that the benefits of open source software are that it is flexible and has the ability to build a complex system at less cost. Clark (2008) found that the benefit of OSS is saving money on a library operation and for support costs. Muffatto (2006) found that one of the main benefits of OSS is the commitment of the society to grow something that is interoperable and respects open standards.

5.1 Credibility: Open Source Software could be said to be reliable because it does not manifest defects which can cause incorrect operation, data loss, sudden failures, or failure to meet specification or appropriate published standards which is generally termed as 'bug'.

5.2 Expenditure: Much Open Source software are provided free of cost. There is also lower administrative cost as no upgrade. Near about zero attack to viruses eliminating less need for virus checking, data loss and downtime

5.3 Freedom: Open Source software offers its operator gives freedom to buy other products. Freedom from a single vendor and freedom to modify your software

6. Digital Library Management Open source software:

6.1 DSpace (<http://www.dspace.org>) DSpace is a management system for institutional repositories developed by the MIT Libraries (Massachusetts Institute of Technology) and Hewlett-Packard (HP) in 2002. It is distributed under an Open Source Licence (BSD Berkeley Software Distribution), an open source software licence with certain restrictions not included in the GNU GPL licence. This type of licence allows the use and modification of the source code and the commercial use of the product.

6.2 Greenstone: Digital Library Software: The Greenstone digital library software is an open-source system for the construction of information collections. It builds collections with effective full-text searching and metadata-based browsing facilities that are attractive and easy to use. Moreover, they are easily maintained and can be augmented and rebuilt entirely automatically. The system is extensible software "plugins" accommodate different document and metadata types. The aim of the Greenstone software is to empower users, particularly in

universities, libraries, and other public service institutions, to build their own digital libraries. (asdneyi.com/digital-library-software)

6.3 Fedora: (<https://getfedora.org/>): It is a group of people working together to develop an open source software programme and to collaborate on and share user-focused solutions. This open source software gives institute a flexible service-oriented architecture for administering and delivering digital content. It is a powerful digital object model that supports many views of each digital content. Digital objects can encapsulate locally-managed content or make reference to remote content. (<https://docs.fedoraproject.org/fedora-project/project/fedora-overview.html>) <http://www.fedora.info/>) Fedora is sponsored by Red Hat.

6.4 E-Prints (<http://www.eprints.org>) E-Prints are a system for the creation of institutional repositories of scientific production, theses, reports, etc. created in this community. It was created by the **University of Southampton** in 2000. E-Prints use the **XML** and **Dublin Core metadata formats** based on the **OAI-PMH**. It is thus able to support different types of documents and data formats for storage and provides open access to their contents.

7. Open Source Library Management Software: Library Management Software is useful for performing all the operation of a library. It is suitable for all type of libraries i.e. Schools, Colleges, Universities, medical libraries, legal libraries, corporate houses, NGO and others. There are some open sources library management software available.

Examples of some of these are as follows:

7.1 KOHA Software- (www.koha.org/) The name Koha comes from a Maori term for a "gift" or "donation". The development of Koha began in 1999, funded by a group of libraries in rural New Zealand that found paid software are costly and deficiency in some useful modules. The full featured Koha was developed in **New Zealand** by **Katipo** Communications Ltd and first deployed in January, 2000 for Horowhenua Library Trust. Koha is developed to work with a minimum of hardware and software requirements. It works on the Linux operating system in combination with the

NewGenLib Software: (www.verussolutions.biz/) This is integrated library management software designed by **Verus Solutions Pvt Ltd**. Technical expertise is provided by **Kesavan Institute of Information and Knowledge Management in Hyderabad, India**. The first version 1.0 was released in March 2005. On 9 January 2008, it was announced Open Source Software under GNU GPL. The latest version of is 3.0.4 R1 released on 13 September 2012.

Characteristics Android mobile and tablet capable Integration with Twitter helping send messages of transactions directly to users' Twitter accounts. OPAC. NewGenLib is available at: <http://www.verussolutions.biz/euniversity.php>

ABCD Software- It is an integrated software for library automation and documentation centres is the culmination of several technologies developed by **BIREME (OPS/PAHO, Brazil)**. These technologies support their online information services and have been developed over many years, involving many experts. The package contains an advanced database management module, an OPAC integrated into a 'library portal' page with meta-search functionality for either local or remote databases (IAH), a **Serials Control module (SeCS)**, a module for Circulation and Statistics, a **Thesaurus Manager** and - to be added later - an Acquisition module.

Characteristics fully web-based ISIS-based, using PHP, ISIS(-Script), JavaScript and AJAX programming Multi-platform and multi-lingual. The software heavily relies on ISIS-database technology (developed by UNESCO, <http://www.unesco.org/isis>, and

BIREME, <http://bvsmodeo.bvsalud.org/php/level.php?lang=en&component=31>), currently in an advanced release (with 1MB max. record size and 60-characters index keys) and migrating to the new ISIS technology (ISIS-NBP, <http://reddes.bvsalud.org/projects/isisnbp/>) in the course of 2009.

The software is available at:

<https://sites.google.com/site/abcdlibraryautomationsoftware/downloads>

It is available for Linux and the tutorial can be seen at:

<https://sites.google.com/site/abcdlibraryautomationsoftware/downloads/tutorials-help-files>

Evergreen Software- (<https://evergreen-ils.org/>): This is one of the best open source library management software. It adds circulation and cataloguing features, OPAC, SIP2.0 to support for interaction with software programmer and search/retrieval through **Z39.50**. Evergreen also accept Open Scalable Request Framework (OpenSRF, pronounced 'open surf') that allows programmer to create applications for Evergreen with a minimum of knowledge. It works on Debian or Ubuntu Linux servers. It is work in English and issued under a GNU General Public License (GPL)

Characteristics Online public access catalog (OPAC) Save book information in Evergreen "bookbags." Statistical Reporting SIP 2.0 support

The software is available at: <http://evergreen-ils.org/downloads.php>

Software support URL is: <http://www.evergreensys.com/support/contactsupport/>

while the Mailing List is at:

<http://evergreenils.org/listserv.php>

7.2 WinISIS (formerly CD/ISIS): WinISIS is a Windows version of the CDS/ISIS system (Computerized Information Service /Integrated Scientific Information System) which was fully developed because CDS/ISIS was not compatible with the WINDOWS platform. It originated at ILO and is developed by UNESCO. The first Window version of CDS/ISIS was distributed for testing in May 1995 and the first WinISIS version officially realized was version 1.31 launched in November 1998. It can run on a single computer or in a local area network.

It is available at: <http://www.unesco.org/isis/files/winisislicense.html>

CDS/ISIS takes advantage from a **worldwide network** of national distributors that very often provide not only copies of the software, but also a great number of services from training workshops to localized documentation. (<http://www.unesco.org/new/en/communication-and-information/information-society/open-source-and-low-cost-technologies/information-processing-tools/cdsisis-database-software/cdsisis-for-window/>)

8. Web Publishing/ Content Management OpenSource Software 8.1 Wordpress (<https://en.wordpress.com/>): Wordpress started out as a quick, free, open-source solution blogging solution. It is a best alternative to create a web site. It is being free to use and easy to install, the Wordpress association has thousands of users and programmers developing custom themes and plug-ins to change the way the software perform and looks. Using this platform you can create mobile friendly website and apps. The most important aspect of the software is its easy-to-use interface and content management system.

Conclusion:- I would like to conclude that open source software are always useful for performing the library operations effectively and use friendly, only requirement is that library professional have taken initiative to learn the open source software training and workshop.

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OPEN SOURCE SOFTWARE LIBRARY APPLICATIONS

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Abstract

In every educational organization having crucial problems of financial assistance and financial deficiency so that whatever the progress should have been done that could not run today itself by organization. The lacunae of finance give huge problems in library science centre too. Here in this article the author has studied the vary types of library software (open source software) which are crucial to every library. While actual implementation of open source software in the library it gives too much problems as back end and front end technical problems as well as having power supply problems. The researcher has stated the deep understanding of open source software its types, names, process of downloading, system configuration, back up, acquisition, cataloging, circulation, admin, web OPAC, serial control, validity, guarantees, warrantees, source code, Barcode, etc. Whatever information is stated in this article is based on actual day to day library science practice in library and faced realistic library software problems while doing library automation.

Keywords:- open source software, system configuration, back up, acquisition, cataloging, circulation, admin, web OPAC, serial control, validity, guarantees, warrantees, source code, Barcode, back end and front end etc.

1) **Introduction:-** I.C.T. applications is a process of designing, capturing, structuring, value, leverage and share these all disciplines data, information and knowledge to all users of library of an organization for futuristic enhancement and betterment the competitiveness in today's world. The I.C.T. management process always done with two crucial steps that are 1) Capture and documentation of tacit and explicit knowledge of the subject experts within an organization 2) To distribute the made up data or crucial information among all needed users of library of an organization for making easy to access the information. This ICT utilization in Libraries process can be done through using computer also as well as human efforts within an organization. We can make the subject wise database as per syllabus and objectives of our organization. It helps to sharing the knowledge as pin points and crucial aspects as integral part of that subjects and doing introduce to fresher about new knowledge, new technology, new facets of a expertise subject knowledge. Library automation is a process of gathering, processing and dissemination the knowledge of all subject experts' knowledge for making the profit and sharing the crucial knowledge for betterment the society. ICT application it is a process of finding, selecting organizing, distilling and pose the information at front of library users / members to better analysis / understanding deep knowledge of particular subject interest for doing new information / knowledge invention for easy life style of human beings. According to merriam-webster web dictionary site defined term knowledge as "knowledge or a system of knowledge covering general truths or the operation of general laws especially as obtained and tested through the scientific method and concerned with the physical world and its phenomena". Man is creative by the nature. He is often engaged in new discoveries, inventions, and finding almost in every walk of the life. Whenever a new query arises in the human mind that time he tries to find out its answers. Whenever the society faces the problem, its solution is searched. Human being are unique the product of their creation. They are having highly developed nervous system, which enables them for effective communication and recording of their ideas, observations and experience. Human being desires to know more about their world has led them from primitive superstition to modern scientific knowledge.

2) **Statement of Problem** "Implementation of Open Source Software in Libraries".

3) **Objectives of Research Study** The present research paper objectives are as follows.

1) To identify the vary Role I.C.T. devices which impacted on real life of library automation and its transactions through open source software. 2) To analysis new Roles & challenges of ICT / open source software on Libraries and Information Centers.

3) **Scope of Research Study:** The present research study scope is limited to libraries and information centers Information and Communication Technology Utilization in various geographical areas in India. Researcher has focused especially on impact factors of ICT / open source software application in Libraries and information centers. The scope ICT application is global level so that resent research study scope too at global level due to ICT process, applications, impacts, problems, services, facilities, and students assistance in libraries and information centers are much crucial job for crating the new generation which is based on knowledge and information, Technology.

4) **Need of Research study:** The present research study is much needed due to vary types of new technology have been using since long period in the libraries and some crucial technical problems, profits, loss, and real business analysis system in libraries and information centers etc. should be studied for futuristic analysis and understand the importance of Library and Information Science Discipline in today's world.

5) **Definition of important terms:** The definitions of important terms must be clarify due to it avoid misunderstanding about the concepts used in research study. Some following terms have been cleared as follow.

1) **Software and its types, meaning:-** According to business dictionary web site defined term software as "Organized information in the form of operating systems, utilities, programs, and applications that enable computers to work". Software consists of carefully-organized instructions and code written by programmers in any of various special computer languages. Software is divided commonly into two main categories: (1) System

software: controls the basic (and invisible to the user) functions of a computer and comes usually preinstalled with the machine. See also BIOS and Operating System. (2) Application software: handles multitudes of common and specialized tasks a user wants to perform, such as accounting, communicating, data processing, word processing. Software is a generic term for organized collections of computer data and instructions, often broken into two major categories: system software that provides the basic non-task-specific functions of the computer, and application software which is used by users to accomplish specific tasks. System software is responsible for controlling, integrating, and managing the individual hardware components of a computer system so that other software and the users of the system see it as a functional unit without having to be concerned with the low-level details such as transferring data from memory to disk, or rendering text onto a display. Generally, system software consists of an operating system and some fundamental utilities such as disk formatters, file managers, display managers, text editors, user authentication (login) and management tools, and networking and device control software. Application software, on the other hand, is used to accomplish specific tasks other than just running the computer system. Application software may consist of a single program, such as an image viewer; a small collection of programs (often called a software package) that work closely together to accomplish a task, such as a spreadsheet or text processing system; a larger collection (often called a software suite) of related but independent programs and packages that have a common user interface or shared data format, such as Microsoft Office, which consists of closely integrated word processor, spreadsheet, database, etc.; or a software system, such as a database management system, which is a collection of fundamental programs that may provide some service to a variety of other independent applications. Software is created with programming languages and related utilities, which may come in several of the above forms: single programs like script interpreters, packages containing a compiler, linker, and other tools; and large suites (often called Integrated Development Environments) that include editors, debuggers, and other tools for multiple languages.

2) Library: 1) According to Wikipedia free encyclopedia web site defined term library as “a building or room containing collections of books, periodicals, and sometimes films and recorded music for people to read, borrow, or a collection of books and periodicals held in such a building or room”.

3) Library Automation: Library automation may be defined as “the application of computers to perform traditional library housekeeping activities such as acquisition, circulation, cataloguing, reference and serials control.” Automation is used to reduce the amount of staff time devoted to repetitive (and often less challenging) activities that must be done in any properly functioning library. It is to remember that, various library operations are automated, not the library as such. Automating a college library is the process which restructures its functions and reinvents its services. By keeping a database as the basis, automation converge new technologies of information storage and retrieval with traditional housekeeping operations. An automated school library can serve the teaching and learning community more effectively. A reduction in the time needed for routine operations can be utilized to give customized services to the users. The process of library automation has a short history in our country. It needs proper planning and active implementation. Many Institutions’ the automation of its libraries to cope with the ever changing needs of the students and staff. The modernization of the Library Media Centre helps the students to become skilled information users and lifelong learners.

6) History of Library automation: Punched cards were invented by Hollerith in 1880 and used in tabulating the US census data. The library at the University of Texas was perhaps the first to use punched cards in 1936 for circulation control. The Library of congress used the unit record machines for the production of catalogues in 1950. Many libraries in the US followed the system for automating their activities. Library automation entered into its second era in 1960s with the advent of computers. The notable ventures were MEDLARS, MARC, etc. Until the early 1990s, “automating the library” involved generally the same features as those in place since the advent of machine readable cataloguing record in the late 1960s. 7) History of Library software in India and Abroad. Design and development activity of library software packages in India started in a big way during mid eighties with the introduction of CDS/ISIS software package of UNESCO in libraries by the National Information System on Science and Technology (NISSAT), New Delhi. NISSAT organized a number of short term training courses on applications of CDS/ISIS on library and information activities to make senior professionals aware of the benefits of computerization in libraries, to train library staff to make it operational in the libraries and to develop computer culture among the librarians and information scientists. From the experience of use of CDS/ISIS, MINISIS, etc., me of the libraries and information centers developed / got developed their own software, such as DESIDOC developed Defense Library Management System (DELMS) during 1988 in COBOL language under multiuser Unix environment and implemented it at Defense Science Library (DSL) in DESIDOC. Also Catman was developed by the Indian National Scientific Documentation Centre (INSDOC), New Delhi and implemented at National Science Library (NSL) in INSDOC. Sanjay package was developed for small libraries by DESIDOC under NISSAT project to popularize COS/ISIS and to develop a model automated library by implementing it at Technology Bhawan Library in DST, New Delhi, etc. Now, libraries are fully aware about the needs of computerization and many Software packages are available for their use depending upon the needs. However, selection of suitable software for library is a problem because of lack of good, and up-to-date comparative studies on software packages.

Types of Open Source Library Software:- E – Granthalaya Green stone Koha Lib. System Pollygrane

Library Management. Role of Knowledge Resource Centers / Libraries while using open source software:- There various types of roles often plays by the libraries, here author tried to reveal some crucial types of role of libraries as follow. 1) To understand nascent knowledge trend in academic era. Actually the librarian can realize the nascent trend of academic era due to, the syllabus of Master of Library and Information Science has been shown and analyzes that how to understand the educational trends and its knowledge thirst of readers. So here the crucial role of libraries are to analysis, capturing, acquiring, processing, preserving, and dissemination of knowledge as per criteria of new nascent educational trends. For example new fresh scientists are not fully introduced with knowledge resources availability belongs to his / her subject specialization, so here crucial role of librarians to give that all hard and soft materials which are related to subjects.

9) Library Software Services Acquisition: Does the system carry out duplicate checking while entering the data. Does it have the capacity to print accession register? Data entry and editing: How effective the system is for data entry? Is the software provides easy way for editing of records? Is insertion and deletion of records are easy? Circulation: provision of facility for issue, return, computation of fines, reservation of document etc. Serial control: Provision of monitoring multiple issue of a serial, provision of grace period for receiving the serial , provision of renewal, overdue alert, entering the abstract of a serial. New technologies: Provision of handling un catalog item Provision of internet connectivity, E-Mail connectivity. Scope of integration of the software with other school department. Provision of accessed the software from computer outside of the school walls via a web browser. Does the library software keeping pace with global technology, web enhancement, online information, virtual services etc. Library software is a technical aspect which focuses to make the library automation / computerization. Each and every task of library can be done through computer with help of library staff. Library Software it is designed to automate and manage all type works of libraries. Library Software is capable of managing Issues, Returns, Magazine/Newspaper Subscriptions, Fine and Balances of payments due from Members, Cataloguing, OPAC / powerful web based search facility, various reports for record-keeping and review purposes, according to end user requirements. Library automation, was started in India in late 1970s in few special libraries, has now reached most of the academic libraries. Computerization was started in the libraries to increase the efficiency and effectiveness of the library operations and services. Development and use of information and communication technology (ICT) has enabled the libraries not only to offer their clientele the appropriate information available within their libraries but also provide access to information of other libraries, both local and outstations. In the current scenario there is a greater responsibility on the libraries and information centers to provide the latest and timely information to their users to facilitate improvement in the quality of education in the country and this cannot be done until each institution has an efficient library and information management systems at its command. Library automation systems are elaborately designed and crafted computer applications that require considerable programming skills together with an extensive knowledge of the functional needs of libraries and the exacting standards that are applied in their libraries. Software technologies used in library need of a model for the automation, networking, and federating of resources for other groups of libraries in India.

12) Need of library software: In the Arts, Commerce and Science College Libraries having huge book, non book materials like CDs, DVDs, and educational syllabus wise ICT based materials for easily understanding the rigid subjects' knowledge through utilization of computer. The current and pin point, exact and single subject related materials must be search out in a few seconds for higher education study; therefore the main work of library software is to provide all information about what is available the book and non-book materials in the library? The location, bibliographical details for references, research study purpose, and quick access of information as well as management information system reporting making etc. due to various types of committees are always asks so many questions to library about book and non-books materials purchased during particular period So for that library software is needed. Some key reasons of library software need. To Search of Books and non-Books Materials(OPAC). To search Serial Control / Magazines / Periodicals / Newspaper clippings To make entries of books, non-books materials bibliographical details To do daily books and non-books material computerized transaction To make barcode for book and non-book materials To make various types of reporting To keep up to date information for library users To know expenditures and financial condition of library There are various types impacts identified in real library working experience which got by the researcher and that are as follow.

1) To reduction in the library staff. When the computers are started to use in the libraries and information centers that time the quantity of library staff got reduced due to one computer can handle so many staffs' library works therefore obviously staff requirement is always less in the libraries and information centers. For example – in 1975 if preparation of catalogue cabinet was required two staff for making catalogues of books and maintain it but now in 2013 not need that catalogue cabinet due to readymade book sheet once filled in library software then automatically all rest entries prepared computerized by RDBMS technology. OPAC too helpful in this connection due to online accessibility is there for retrieving the available data in particular library. **2) To get clarity in Job and Library Stipulated works.** The work load of the library is vary from library to library so

here this connection the computer helps in getting the clarity in job of library. An authentication and accuracy can easily get by using the computer. For example –In previously era the hard paper and writing on hard work was too much in library due to not application of computer or unawareness of computerization but in 2013 if we look we will come to know that everywhere computers are use for daily transaction purpose so here clarity and library workload can be easily done.**3) To detection of thief / stealing of books and other reading materials.** The RFID / Barcode technology made easy to library staff to controlling on stealing and detect the thief in very short time due to if we see in the British Library or in Jayakar Library, Pune University, we will come to know that bracket frame is ser down at front of the library entry point at threshold, when user come across the borderline that automatically if book issued or not issued it indicate and alarm.**4) To understand rigid subject knowledge.** E books / E Journals are much important to get understand the rigid subject knowledge gaining due to not required hard copy, heavy load of books, lengthy notes etc. due in one laptop an approximately one million books can be downloaded at a time. With help of ipad/ e book reader can help to read it easily with color shades. The quantity of publishing e books more than hard copy books.**5) To saving the cost.** The e books are cheaper than hard copy books due to e book not required the hard pages, binding, imposing, printing, etc. but hard copy books required all these points. Therefore the cost of hard copy books are too much as compare to e books. So hard copy buy is expensive than e books buying. **6) To saving the library space.** The space of library is much important due to library is an growing organism. Therefore everyday books are added in the library here e books / e journals are much crucial role to play due to cost of per square feet is too much in big high tech cities as well as in rural areas.**7) To retrieval the books and journals location and contend analysis.**

The find out a particular book or journal in a library which having millions of book / journals that it is too rigid work to find out a book in a few minutes but if we are using the library software or excel sheet then it will get easily.**8) To save the time of library staff and users.** By using the computer based library software we can save time of the user as well as library staff. For example – suppose reader want some information on library automation then it would get in Library and Information Science Encyclopedia and this encyclopedia is available in soft as well as in hard copy then automatically time will be saved with help of use computer.**9) To save the hard copy journals.** E journals are much important to play the role to save pages due to e journals are paper less journals which published in the form of digital. There are vary types of publishers and e consortia forum who offers these types of e – journals. For example – UGC – Inlibnet N – LIST is offers the online journals for all vary discipline which required to keeping up to date the knowledge of the students of the library. So automatically it leads to save trees.

Conclusion: The role of knowledge resource centers (Libraries) while using open source software have big an opportunity to enhancement the quality of education through providing the reading materials, IT devices, transaction facilities etc. The higher education having much IT challenges to face in this new internet age so that the use of computer / open source software is helped to library and information science professionals to keep our library up to date with saving time of library users and staff. Above mentioned all points are too much important and helpful to our LIS profession on our professionals / Librarians must be utilized the internet as smart user to purvey excellent library services and facilities. The open source software impacts shown that Library and Information Science Profession is excellent profession which can keep the society alert, aware and knowledgeable society and have been making so many generations intellectual and knowledge based society as well as remove illiteracy of many subject knowledge from the society.

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THE GROWING UNIVERSE OF KNOWLEDGE NETWORKING SCENARIOS

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The universe of knowledge is growing rapidly. The paper analyses the types of knowledge resources and finds out what impact these resources will have on networking of knowledge in an increasingly growing universe of knowledge. The paper discusses Tacit knowledge, Explicit Knowledge, knowledge requirements of people and the universe of untapped knowledge. The author approaches the problem by analyzing the components of knowledge including segments, subjects and subject system. He provides the characteristics of segments, subjects and subjects- systems with examples of knowledge networks and knowledge centers and describes the features of the networking of knowledge. He deduces that networking is an inherent characteristic of the universe of knowledge and there is a growing need to organize knowledge for development purposes.

Introduction: A number of definitions of knowledge have come down to us from Aristotle. As this paper does not primarily discuss the definitions of knowledge, In general I have selected the one given by the Oxford English Dictionary which defines knowledge as “(i) expertise, and skills acquired by a person through experience or education; the theoretical or practical understanding of a subject, (ii) what is known in a particular field or in total; facts and information or (iii) awareness or familiarity gained by experience of a fact or situation. Philosophical debates in general start with Plato’s formulation of knowledge as ‘justified true belief’. Knowledge would also mean the proper understanding of a subject. Networking is the first thing which a newly born child begins to learn. Networking with parents, members of the family, environment, etc.

The Universe of Tacit Knowledge: Tacit Knowledge could be simply called the knowledge which is stored in the minds of people say in the form of beliefs, culture, experience, habits, heuristics, norms and particles that people use. This knowledge is displayed by a person through his or her actions, habits, behavior and culture and when necessary through codification and articulation wherein part of it could get converted into explicit knowledge. Generally, in most cases, tacit knowledge is not shared directly, but it is shared indirectly, when a person, for instance, lives with another person, gets to know the habits of the other person over a period of time. The greater the number of people, the more vast the tacit knowledge can be. This knowledge is an amalgam of experience and imagination. There is no limit to the imagination of an individual. Albert Einstein (1879-1955) said: “Imagination is everything. It is the preview of life’s coming attractions”. Max Boisot classified tacit knowledge into the following three types: things that are not said, because: “Everyone understands them and takes them for granted, “Nobody fully understands them. “Although some people understand them, they cannot clearly articulate them”. Tacit knowledge is considered hard to express in explicit form, but its interactions in the crucible of the mind results in innovations and discovery. It is necessary to note that tacit knowledge is an essential resource of knowledge, which has a link with the new knowledge as it gives birth to it and has a link with the explicit knowledge as it uses it as a plank to proceed higher in discovery and innovation. Considering that the world’s population is about 6.8 billion, the knowledge in the minds of all the world’s population is definitely unlimited and difficult to quantify. In this situation three situations emerge: There is unlimited tacit knowledge stored in the minds of the world’s population; With tacit knowledge at the back of the mind, every individual needs explicit knowledge including information; and The interaction of tacit knowledge, explicit knowledge and the faculties stored in each mind give rise to new knowledge. The second and third options are taken for discussion in the later part of the paper, yet it’s been quoted by Buddha (563 BC-483 BC) who said: “All that we are a result of what we have through”. If that is so, the universe of tacit knowledge is infinite, but with the help of the Internet, tacit knowledge is nowadays constantly being converted into explicit knowledge. From these infinite sources of knowledge we see that knowledge flows into the unlimited sources which are expanding all the time. In this entire operation every human mind matters.

The Universe of Explicit Knowledge: The knowledge which is known so far in any format is explicit knowledge. The knowledge which we can express to others is also explicit knowledge. There is a universe of explicit knowledge which comprises articulated, expressed and recorded knowledge in different forms including articles, books, seminars, sound and video recordings, codes, numbers, software programs and creations in any form by human beings including visuals, art objects, buildings, other objects, etc. the universe of this knowledge is in itself vast and there is a growing relationship that exists between the units of knowledge within this universe itself. In the networking of knowledge we get associated with all types of knowledge and the knowledge needs of users as well.

The Universe of Knowledge Requirements of People: The knowledge required by people would be the one which exists in tacit or explicit forms, or it could be the one which does not exist at all in any of these forms and yet the user wishes to have it. This makes this universe unlimited as there is no control over the flights the minds can take in their imaginative realms.

The Universe of Untapped Knowledge: We notice that knowledge is doubling much faster than it used to be in the past. The estimates on the Web say that knowledge is doubling every 1 to 10 years. But whatever the exact figure, we are convinced that with the onset of Internet the processes of creating new knowledge have grown in

number and new knowledge is emerging in different fields of study much faster. When we consider the networking of knowledge the role of the untapped knowledge also becomes important.

Components of the Universe of Knowledge: In order to understand the role of networking in the universe of knowledge it is important to understand the following: Characteristics of the universe of Knowledge
Characteristics of segments in the Universe of Knowledge
Characteristics of subjects
Interaction within the subjects

Characteristics of the Universe of Knowledge: When we analyze knowledge, we find that knowledge exhibits certain identifiable characteristics. B. K. Sen summarizes them into nine characteristic. I have further consolidated them into the following five: Universe of knowledge is composed of segments which are separated by space; This universe is continuous, infinite, multidimensional, dynamic and expanding in all directions; Action is its important component. As a result, segments keep expanding; Speed will vary from segment to segment; Some segments may split into more segments, some may unite together to create new segments, thus creating clusters. This brings us to the question as to what are these segments?

Characteristics of Segments: Dr. S. Ranganathan evolved five fundamental categories for knowledge organization in the Colon Classification scheme. Any subject in the Universe of knowledge would have five or less such facets which facilitate the classification of subjects. The classification Research Group in the UK in the 1970s and 80s extended them to 13 but that does not reduce the networking effect of segments in the Universe of knowledge. The segments also have characteristics of their own. Without going deeply into the theoretical debates on the segments, we notice that various types of segments emerge in the Universe of Knowledge. Sen groups them into the following eight: The Segments that Harbour

- i. Singular segments
 - a. Unifocal One subject, e.g. Physics
 - b. Bifocal Parts of two subject, e.g. Bioengineering
 - c. Multifocal Several subjects, e.g. Medical Biochemistry
- ii. Binary segment Closely Linked subject e.g. Science And Technology
- iii. Cluster segment Different subject, e.g. Encyclopedia
- iv. Cyclopadic segment All subjects, e.g. Encyclopaedia
- v. Affinitive segment Affinities with other subjects, e.g. Librarianship
- vi. Comprehensive segment All aspects, e.g. Dictionary of a subject
- vii. Form- based segment Form-based tendencies, E.g. textbook, monographs
- viii. Invention-based segment Spectroscope/spectroscopy

Characteristics of a Subject The following are some popular definitions of a subject: ‘A matter or topic that from the basis of a conversation, train of thought, investigation, etc’ An organized body of ideas, whose extension and intension are Likely to fall coherently with the field of interests and comfortably within the intellectual competence and the field of inevitable specialization of normal person’ A subject is an organized and systematized body of ideas.’ From the above three definitions of a subject, we find that a subject comprises a successive body of thought which is organized. At the same time it contains all the characteristics of a segment as discussed above. These characteristics gives rise to extensions and expansion as Ranganathan rightly identified the system as a loose assemblage in the formation of subject.

But efforts have been made to classify the subjects thus created into binary, ternary and quaternary subject systems. In the Universe of knowledge this classification is very limited, but it is helpful in understanding how networking takes place in the Universe of knowledge at the elementary levels.

Examples of Binary Subject Systems:

- | | |
|-------------------------------|---|
| a) Object – Object networking | Science and Technology |
| b) Object – Action networking | Processing of Food |
| c) Object-space networking | Apples of Kashmir |
| d) Object-time networking | Libraries in the 19 th century |
| e) Action-Action networking | Cutting and Polishing |
| f) Action-Space networking | Explosion in the Galaxies |
| g) Action-time networking | Bombings in the 1990s |
| h) Space-Space networking | India and USA |
| i) Space – time networking | Delhi in the 21 st century |
| j) Time- time networking | A comparison of 2007 and 2009 |

There can be similar examples where in three or more objects, space, time, etc, come together and form new subjects. In the above examples when you multiply each characteristic several times and they network, they eventually result in a complex subject. An example has been given to elucidate the idea. “Religious movements of Hinduism, Islam, Christianity, Buddhism and Sikhism in India, Pakistan, China, Japan, UK and Thailand in 1951, 1959, 1965 and 1997” We find that the type of religious movement has not yet been clearly classified. If that is done the subject will become more complex. In the universe of knowledge the networking is going to become more complex hereafter.

Networking Knowledge: In the Universe of knowledge discussed above, the complex interactions between tacit and explicit knowledge being discovered and the unlimited knowledge needs of people have become more

complex and faster with the use of ICT. ICT cannot at this stage, map all these complex operations, through much of explicit knowledge is getting networked. It is not easy to define the networking of knowledge because it is a dynamic phenomenon in which every unit of knowledge in the tacit, explicit and unknown's realms may interact with users and experts in infinite permutations and combinations which the present computing systems may find it difficult to operationalize. Charles savage describes this situation as "the process of combining and recombining one another's knowledge, experiences, talents, skills, capabilities and aspirations in ever-changing profitable patterns". David J. Skyrme depicts eleven characteristics of knowledge networking: "Structural components: the network's nodes and links; Links provide paths for communication, knowledge flows and developing personal relationships; Nodes in networks can be individuals or teams; The nodes are the focal point for activity or formal organizational processes; The pattern of nodes and links continually changes; Density of connections exhibit many forms – some may be more circular with obvious hubs; other may be more diffuse; Individuals belong to several networks – in some they are more central than in others; There is often no discernible boundary to a network; Networks connect to each other, links strengthen and weaken; One-to-one and multiple conversations take place: synchronously; Knowledge flows in both deliberate and unanticipated ways."

Conclusion: From the above presentation it's been concluded that knowledge is expanding rapidly and networking is an inherent characteristic of the Universe of Knowledge. Knowledge which is available as tacit knowledge, explicit knowledge and the growing new knowledge could be grouped or classified in different ways.

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LIBRARIANSHIP AND PROFESSIONAL ETHICS

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Abstract

A Profession, as an occupation, especially that one requiring extensive education in a branch of science or the liberal arts; or the body of persons engaged in such an occupation. Professional ethics is considered as an expression of the ethos (i.e. character, spirit, culture, practice) of an occupation. In other words, it should reflect or be based upon, all the basic values associated with the occupation. While it is easy to think of ethical values as essential to ensure quality of professional performance, it is very difficult to design a universally acceptable standard code for professional ethics. There are, however, a number of practical difficulties in implementing a code of professional ethics.

Keywords: Ethics, Profession, Professional, Professionalism, Professional ethics.

Professional performances should conform to ethical principles to give customers full satisfaction for services rendered by professionals: Librarianship/Information service fulfills prescribed characteristics in order to quality as a profession. The general meaning of ethics is that it is a set of moral principles. These may be rules of conduct recognised with respect to a particular class of human actions or a particular group, culture, etc. Professional associations have been keen to develop ethical values, as to set ethical codes to be followed by professionals. The age-old professions like medicine, education, law, religion and others, have been constantly reviewing the need for ethical codes for their professionals to set minimum standards of performance. The implementation of ethical codes in professional practice is, however, a self-imposed issue mainly because it is not possible for others to enforce these codes on professional practitioners. Another issue that confronts most professions today, is that they are under tremendous pressures due to the application of various kinds of technological advances in professional techniques and practices and consequent societal changes. These advances and changes destabilize established relationships with their respective customers as well as within professional members and others; for example between doctors and patients and among doctors themselves and law enforcing institutions.

ETHICS: The word 'ethic' is derived from the Latin word 'ethicus' meaning the custom or character or attitude of community or people. Ethic is the science of moral. It is one of the branches of the subject of philosophy. Each facet of this branch is concerned with character, attitude and conduct. It deals with what is right or wrong, good or bad. Ethics is the set of moral principles that governs the person's professional conduct, behaviour, morality, values, commitment and obligation to the society / profession. When such guidelines of do's and don'ts is codified for practice it is termed as 'code of ethics'

PROFESSION, PROFESSIONALS, PROFESSIONALISM The Random House Dictionary of English Language (RHD) defines: **A Profession**, as an occupation, especially that one requiring extensive education in a branch of science or the liberal arts; or the body of persons engaged in such an occupation. Synonymous with 'profession' are words such as vocation, employment, occupation, business, trade - all refer to the activity to which a person regularly devotes himself, especially his regular work, or means of getting a living. Whereas 'occupation' is the general word to indicate an activity in which a person is engaged for his living, 'profession' implies an occupation requiring special knowledge and training in some field of science or learning. **A Professional** is one who is engaged in an activity as a means of livelihood or for a gain or pertaining to or connected with a profession. For example: A professional tennis player; a researcher; a musician who are all competent experts in their respective occupations. **Professionalism** is the professional character, spirit or methods, the standard practices of a professional as distinguished: from an amateur. An expertise is expected of professionals with full involvement in and commitment to those who receive services from them. The age-old professions are agriculture, medicine, education, fine arts (painting, sculpture, music) and such other established occupations, recognized and respected by society, not necessarily -measured by the monetary earnings of these professionals. With industrialisation, economic and social growth, many' new professions have sprung up in the last two hundred years: More particularly the 20th century has witnessed the growth of hundreds of new professions Librarianship is one such profession that emerged in the 19th/20th Century when corpus of knowledge multiplied geometrically requiring rapid expansion' in its nature of work and services of knowledge organisation, retrieval and dissemination.

PROFESSIONAL ETHICS: Professional ethics is considered as an expression of the ethos (i.e. character, spirit, culture, practice) of an occupation. In other words, it should reflect or be based upon, all the basic values associated with the occupation. It should reveal what the occupation is, what the practitioners think of themselves and of their place in society. It should indicate what is distinctive about the group. The quality of service offered by them should be of a class that makes them distinguished. Very often; we refer to the quality of a work of a person being highly professional, meaning thereby that there is a near-perfection in the nature of the performance, the intellectual and/or technical expertise and their sense of responsibility and commitment to the customers. So professionals carry, generally, this kind of a reputation, although there may be on occasions poor performance too. In order to sustain societal recognition and to give their best, almost every profession, attempts to evolve a code of professional behavior to guide practitioners. Interest in ethical behavior of

occupations, often formalized into codes, has a long history. Although rules of conduct have existed since many centuries; the modern codes had their' origin in the nineteenth century. To cite examples from the United States, the Code of Ethics of the American Medical Association (AMA) was adapted in 1848 when AMA was organised. Between 1890 and 1925, more than two hundred American Business and professional groups adopted their codes of ethics: The legal profession adopted its first code in 1908. The teaching profession imposed standards as guidelines for conduct in its, first code of ethics: Thus the code "was to serve more as a control mechanism than as a support system." Other countries have also adopted appropriate codes to guide, various professionals. It is of great importance to keep ethical problems under continuing scrutiny and debate through journals, training programmes, with social scientists taking the initiative in the process; in order to provide increasingly acceptable principles for clarifying ethical issues concerning professional performance. Every profession has been constantly engaged in reviewing and resetting ethical codes in order- to be consistent with current professional practices and behaviour. Since its earliest beginnings; medical practice has rested on a solid foundation of principles and values, designed to promote and protect patients in their relationships with doctors. But this stable relationship has been showing signs of destabilization because of scientific discoveries and technological innovations in medical practice and the revolution in social attitudes and behavior, which brought medical practitioners under the scrutiny of consumer protection courts. For example, within the last quarter of a century, we have developed medical facilities for replacing organs, introduce life through surrogate motherhood, prolong life artificially using life-support systems, conduct research in genetic engineering with potentially dramatic effects and assemble data about people and their illnesses on a `scale hitherto unimaginable. Interest in professional ethics has increased due to the growth of numerous occupations and formation of new professional groups. Both legal and ethical issues are getting modified by the' changing demands of society, such as the public expectation for accountability and consumers' demand` to be informed, consulted and protected. The changing roles f the professionals, which have come to include consulting, advising, making policy, and delivering government service, all bring into question the extent to which existing codes provide for these complex questions.

LIBRARIANSHIP AS A PROFESSION: A Code of Professional Ethics for Librarians describes that "The goal of librarianship is to mediate between humanity and humanity's store of recorded knowledge and information; to encourage an informed, enlightened and empowered citizenry; and to join with others in the ' fight for intellectual freedom and access to information." To build up this 'image for the library and information profession, and to establish quality, a set of ethical codes has to be formulated and is to be practiced by librarians and information professionals. But before we get to discuss these codes; we shall see to what extent librarianship can be deemed to be a profession. The generally recognized professions, such as medicine, law, have certain characteristics or attributes that are enumerated below: • Extensive period of training (usually formal education); • Dominance of intellectual component in work activities; • Expertise; • Service orientation; • Altruistic motivation; • Self motivation; • Autonomy. Another set of criteria for a vocation to be considered a .profession, is as follows: 1) A fairly complex, personalized client-professional relationship - usually involving a fee; 2) A certain amount of independence on the part of the professional (he is rarely closely supervised, and is rarely responsible to anyone to a greater degree than he is to his client; 3) A clear-cut body of professional technique and practice held in common by all practioners; 4) A professional association with real power i.e. power of enforcement and power of certification. Taking into consideration these sets of criteria, librarianship cannot, perhaps, be placed on par with the' more well-established professions like medicine, law, accountancy, etc. However, there is certainly a clear-cut body of professional techniques in librarianship that would involve its recognition as a profession: Librarianship in various degree fulfills some of the other characteristics like intellectual component, expertise, service orientation, altruistic motivation, self motivation and autonomy. The Five Laws of Library Science of Ranganathan also provide the right set of guiding principles that could govern and motivate persons towards service orientation; intellectual involvement in developing tools and techniques and a body of professional knowledge to get recognition for librarianship as a profession: The Library Association of U.K. recognized the importance of and an urgent need for giving some broad definition of professional library work to indicate to employers the particular skills which professional librarians can bring to oraganisations, and to help librarians themselves to identify and assert the special skills which they have. One of the reasons for low pay and none too complimentary images of professionals is undoubtedly the fact that there is a lack of clarity, among library and information professionals, about what they actually do. The Association produced a report in two sections, one aimed at employers, and the other aimed at professionals. The section for employers provided a brief guide to the special skills that library and information professionals have and how they apply them. It included a note on professional qualifications, a description of professional skills and activities and gave the following definition: "Professional librarians formulate; plan, direct and deliver library and information services by identifying the needs and demands of actual and potential users; collecting, retrieving and organising knowledge and ideas in a variety of forms; from books and manuscripts to computerised databases; and disseminating and marketing library and information services to clients."

PROFESSIONAL ETHICS IN LIBRARIANSHIP: While it is easy to think of ethical values as essential to ensure quality of professional performance, it is very difficult to design a universally acceptable standard code for professional ethics. Individual/personal ethics are fundamental to any set of ethical codes which are not explicitly stated in any professional code, as they are very often assumed to be basic to every situation. There are also differences in the conception of ethical behavior in different societies and cultures. In order to be effective, therefore, professional ethics have to be perceived at various levels, appropriate to different cultures and situations. These levels may be at the primary, institutional; professional, national and international levels. Primary levels are a set of basic guiding principles which are fundamental to human behavior with reference to any activity, such as honesty, good conduct, adherence to truth and so on. At the professional and organizational levels, there are likely to be occasional conflicts, particularly when a person has to make a judgement in making a choice for a course of action. For instance; professional ethics may at times clash with organizational loyalty. Similarly, there may be conflicts between professional, national and international ethics in performing a particular task. These types of conflicts appear in any professional activity. Therefore, designing ethical codes becomes not only too ideal to be realistic but it is also difficult to implement, particularly because, no ethical code can ever be enforced as they are not statutory laws.

UK Experience: In 1978 the Working Party on Professional Ethics was established within the United Kingdom's Library Association to develop a draft code of ethics. A draft was prepared for discussion and debate in 1980; the final version of the code, the Code of Professional Conduct was adopted by the Council of the UK Library Association at its 100th Annual General Meeting in 1983. The Code includes the procedures and regulatory actions that will follow a breach of the code by a member of the Library Association. A unique feature of the LA's Code of Professional Conduct is its implementation mechanism that involves sanctions imposed by the LA's Disciplinary Committee on those who ignore the professional conduct set by the Code. The features of the Code relate to: a) the competency of the librarian; b) the question of discretion and respect of a client's privacy; c) professional independence and intellectual freedom; d) the impartiality of the library profession; e) financial ethics and f) the integrity of members.

Indian Situation: Indian adventure of designing a professional code of ethics have remained at the level of efforts to survey literature on professional ethics and no more.. Mention has already been made about discussions at a national conference of IASLIC in 1984. The subject of professional ethics has been dealt with in A K Mukherjee's book, *Librarianship - Its Philosophy and History* (1966) and R L Mittal's, *Library Administration* (1964). Two articles by Meganand in *Indian Librarian* in 1962 and a literature survey by Amitabh Chatterji appearing in *Iaslic Bulletin* in September 1965 are additional literature references. The only effort to consider this subject seriously in a professional forum appears to be at the Iaslic Conference in 1984. There were ten papers presented at the Conference five of these give a good overview of professional ethics, four on professional ethics for persons working in university, special and other institutional libraries, and another on Ranganathan's Five Laws vis-à-vis professional ethics with special reference to a research library.

Issues and Problems: Apart from the difficulties in designing an acceptable ethical code for professionals, there are also many other issues and problems in which emerge dealing with professional ethics. Some of them are:

- 1) Image of the library and information profession in society;
- 2) More than one professional body;
- 3) Authority in implementation with provisions for disciplinary action in case of violation of the ethical principles enunciated by ethical codes;
- 4) Expanding dimensions of the profession;
- 5) Consequent undefined state of the profession;
- 6) Quality of professional work;
- 7) Immigration of specialists from other disciplines and professions.

Conclusion: The general meaning of ethics is that it is a set of moral principles such as rules of conduct recognised with respect to a particular class of human action or a particular group, culture, etc. Professional bodies have been keen to develop ethical values, for setting ethical codes to be followed by professionals to ensure quality, social recognition and respect. The age-old professions like medicine, education, law, religion and others, have set up professional ethical codes and have been constantly reviewing the need for ethical codes for their professionals to set: minimum standards for performance. Library and information professionals also try to set up ethical codes to govern performance. Librarianship and information service activities fulfill the basic characteristics to be deemed to be a profession and hence professional practices should conform to certain ethical values.

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CHANGES WITH RESPECT TO EXPERIENCE IN LIBRARIANS ATTITUDE TOWARDS LIBRARY PROFESSION AS A CAREER– A CASE STUDY

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Abstract

The role of librarian became very vast in the changing world. The academic libertarians of the modern century are well equipped with many facilities. Therefore to get adjusted with the changing scenario, the librarians needed to develop more knowledge and skill. At the same time it is also important to develop positive attitude for the librarian. In spite of having all knowledge and skill, just because of lack of attitude many librarians are not able to perform their duty effectively. The present research focuses on the attitude of librarian to see library as a noble profession and it also witness the variations in librarian's attitude with respect to experience and age.

Introduction: With the dawn of 21st century, Academic Libraries have been facing numerous changes. Before the development of Information Communication Technology, libraries were the custody of conventional resources. Apart from issuing books and maintaining records, there are several roles of the librarians in this changing scenario. As observed by Campbell (2006) "Numerous creative and useful services have evolved with academic libraries in the digital age, providing quality learning spaces, creating metadata, offering virtual reference services, teaching information literacy, choosing resources and managing resources licences, collecting and digitizing materials and maintaining digital repositories". The academic libraries are full of both electronics and printed resources. However there is a challenging work for the librarians in providing information resources to the students and staff effectively. Therefore it is needed for the library professionals to have knowledge, skills and positive attitude in availing knowledge resources. However it is seen that in spite of having ample resources, good knowledge and skill, many librarians cannot perform their duties effectively. The attitude of librarians varies according to different parameters like experiences, temporary service, family background, qualification and so on. Different statutory authorities like University Grants Commission, AICTE and Universities always try to well equip libraries with books, electronic resources, user-friendly software and physical facilities. However it is also equally important need to develop an universal attitude among the librarians, irrespective of age, sex and experience to see library as a noble profession.

Objectives: To find out the changes in attitudes of librarians as per the variations in respect to experience. To note the attitude of self-development amongst the librarians and see whether it varies according to experience. To identify the variations in the attitude of social aspect among the librarians. To suggest some measures to the authorities to improve the positive attitude of the librarians towards library as a noble profession.

Hypothesis: The researcher has hypothesised that the attitude of librarian changes as per the experience and age. It is assumed that attitude of self-development amongst the librarians varies according to experience and age. It is also hypothesised that social aspect of librarian also varies person to person.

Scope of the Study: The study focuses on finding out changes in librarian's attitude in respect of personal and social aspect. The study primarily aims at recording variations in librarian's attitude in respect of experience. Before the selection of the sample, a prior survey was done by the researcher to find out the experience span of different librarians of the colleges affiliated to North Maharashtra University, Jalgaon. Finally the researcher decided the scope of the study limited to 30 librarians of the colleges affiliated to North Maharashtra University selected on the basis of experience span. Out of thirty librarians, ten librarians got the experience less than 5 years, another ten were having experience between five to ten years and final ten were having the experience more than ten years. The researcher aims at the survey limited to the mentioned thirty librarians.

Methodology: The researcher used questionnaire and interview technique for the collection of needed data. For the prior survey the research scholar interviewed more than sixty librarians of the colleges affiliated to North Maharashtra University and selected a sample of thirty librarians on the basis of experience span. After selection of the sample group, total thirty questionnaires were distributed to the librarians. The information was collected from all thirty librarians and personal interviews were also taken for the data required for the study.

Data Analysis: A well organised questionnaire was distributed to thirty librarians of different colleges affiliated to North Maharashtra University, Jalgaon. The collected data has been analysed and the systematic findings. The following questions were asked to the librarian and the responses were ranked in three categories as per experience: 1. 0 to 5 years-Experience 2. 5 to 10 years-Experience 3. 10 years onward Experience.

The responses were ranked as 1. Agree 2. Disagree and 3. No response

No.	Question asked
1.	Librarian is a challenging job
2.	Librarian can play a very useful role in making good citizen
3.	The librarian profession provide more opportunities for acquiring knowledge
4.	The librarian profession provide a way to serve society
5.	Librarian is a noble profession

6.	I will advise others to take librarian as a career
7.	I feel that I am doing something worthwhile which gives me a great pleasure
8.	I will not leave my profession even if offered more lucrative one in other field

Table no. 1 Number of respondent (out of 30) to question 1

Question Asked	Experience 0 -5 years			Experience 5-10 years			Experience 10 years onwards		
	A	D	N	A	D	N	A	D	N
Librarian is a challenging job	08	02	00	07	02	01	06	02	02

A-Agree D- Disagree N- No Response

Observation: it has been revealed by the researcher that 08 librarians from - experience group 0 to 5, mentioned librarian job as a challenging job while only 06 librarians from - experience group 10 years onwards mentioned librarian job as a challenging job.

Table no. 2 Number of respondent (out of 30) to question 2

Question Asked	Experience 0 -5 years			Experience 5-10 years			Experience 10 years onwards		
	A	D	N	A	D	N	A	D	N
Librarian can play a very useful role in making good citizen	06	02	02	06	02	02	08	01	01

Observation: it has been seen by the researcher that only 06 librarians from - experience group 0 to 5, believe that librarian can play a very useful role in making good citizen while considerable 08 librarians from - experience group 10 years onwards trust their role in making good citizen.

Table no. 3 Number of respondent (out of 30) to question 3

Question Asked	Experience 0 -5 years			Experience 5-10 years			Experience 10 years onwards		
	A	D	N	A	D	N	A	D	N
The librarian profession provide more opportunities for acquiring knowledge	05	03	02	05	04	01	04	04	02

Observation: from the above table it is seen that 50% librarians from - experience group 0 to 5 and also 5 to 10, believe that librarian profession provide more opportunities for acquiring knowledge while considerable 40% librarians from - experience group 10 years onwards trust their role in making good citizen.

Table no. 4 Number of respondent (out of 30) to question 4

Question Asked	Experience 0 -5 years			Experience 5-10 years			Experience 10 years onwards		
	A	D	N	A	D	N	A	D	N
The librarian profession provide a way to serve society	05	04	01	06	03	01	08	01	01

Observation: The above table clears that more percentage of senior librarians are of the view that the librarian profession provide a way to serve society.

Table no. 5 Number of respondent (out of 30) to question 5

Question Asked	Experience 0 -5 years			Experience 5-10 years			Experience 10 years onwards		
	A	D	N	A	D	N	A	D	N
Librarian is a noble profession	06	03	01	06	03	01	08	01	01

Observation: In the above table it has been revealed that 06 librarians from - experience group 0 to 5, mentioned that librarian is a noble profession while 08 librarians from - experience group 10 years onwards called the job a noble profession.

Table no. 6 Number of respondent (out of 30) to question 6

Question Asked	Experience 0 -5 years			Experience 5-10 years			Experience 10 years onwards		
	A	D	N	A	D	N	A	D	N
I will advise others to take librarian as a career	07	03	00	06	03	01	08	02	00

Observation: In the above table we can see that 07 librarians from - experience group 0 to 5, are ready to advice others to be librarians while 08 librarians from - experience group 10 years onwards are ready to advice others to select librarian as a career.

Table no. 7 Number of respondent (out of 30) to question 7

Question Asked	Experience 0 -5 years			Experience 5-10 years			Experience 10 years onwards		
	A	D	N	A	D	N	A	D	N
I feel that I am doing something worthwhile which gives me a great pleasure	06	03	01	07	02	01	08	02	00

Observation: In the above table we can clearly see that senior librarians having more experience are more satisfied as compared to junior ones as far as job satisfaction is concerned.

Table no. 8 Number of respondent (out of 30) to question 8

Question Asked	Experience 0 -5 years			Experience 5-10 years			Experience 10 years onwards		
	A	D	N	A	D	N	A	D	N
I will not leave my profession even if offered more lucrative one in other field	04	06	00	06	04	00	06	04	00

Observation: The above table reveals that 60 % librarian having more than five years - experience are not willing to leave job even if they are offered more salary while 60% librarians having less than 5 years-experience will be ready to leave job for more salary.

Conclusions and Suggestions:After interviewing and analysing questionnaires, the researcher came to the conclusion that there is a considerable change in librarian's attitude towards librarian as a profession with respect to the experience. The considerable number of senior librarians having more experience considers librarian as a noble profession and they are not willing to change the job for more salary. Even the social service attitude of the senior librarian is positive than the junior one and they believe that the job is more for the society of society.

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JOB SATISFACTION OF UNIVERSITY LIBRARY STAFF: A STUDY OF UNIVERSITY LIBRARIES IN GUJARAT

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Abstract

Employee job satisfaction is a key component in the contribution of personnel to organizational success. The activity satisfaction of its employees can affect the overall performance of a library. This research presents the consequences of a study of personnel of university libraries in Gujarat (INDIA) (selected 7 university Libraries Staff). The examine got down to recognize the delight prices of the library personnel the usage of a few dimensions of task satisfaction, which includes working surroundings, job satisfaction, development, supervision, nature of the activity. The item concludes with recommendations.

Keywords Academic library, Gujarat, job satisfaction, library employee, university library

Introduction: Job Satisfaction of the library professionals evidently depends at the economic, social and cultural conditions in a given us of a. A library professional who does not get an enough salary will face the hassle of maintaining his or her circle of relative's life. This trouble puts the library experts far from being happy. Low wages and absence of fame and social protection affect motivation. Job satisfaction cannot be idea of where there is absence of motivation. Job Satisfaction of the library expert who has an essential vicinity within the records society will have an effect on the quality of the provider he renders. In this admire, the question of the way the cloth and ethical detail affect the activity pleasure of the college library specialist's gains importance.

Objectives of the Study The objectives of the study were to: Discover the current working situation of library employees To Know current levels of job satisfaction of library Employees Identify the problems that affect job satisfaction Suggest measures to improve job satisfaction

Methodology For the present study of Job satisfaction of university library employees the researcher has decided to collect the information through the primary and secondary data. The researcher has used structured questionnaire to collect primary data related to the study. The secondary data is collected from the published sources like annual report and websites of the selected sample University libraries.

Review of Related Literature McNally (2005) conducted a survey to find out how job satisfaction is related to performance. The sample chosen by him were the Ontario reference library staff. The results showed generally moderate satisfaction with environmental conditions, but low motivation.

Schneider (1991) surveyed interviewed the staff of a large 8 urban public library system, a majority of who were paraprofessionals and worked in public services. They reported satisfaction with the nature of the work itself, co-workers, immediate supervisors, and working directly with patrons.

Data Analysis and Interpretation Data collected from the 43 employees covered their Age, qualification(s), experience, Designation, working environment, Development program... Further information was collected during interviews. The survey findings are presented in the tables below University.

Sample of University Libraries

Table: 1 Analysis based on no of librarian to technical staff in state of Gujarat University.

Particulars	Librarian to technical staff	Percentage (%)
Sourastra University	3	6.98
Gujarat University	7	16.28
Hemchandracharya University	5	11.63
Sardar Patel University	7	16.28
M.S. University	9	20.93
Veer Narmad University	5	11.63
Bhavnagar University	7	16.28
Total	43	100

From the above analysis, it is found that 6.98% librarians are in Anand Agriculture University, 16.28% librarians are in Gujarat University, 11.63% librarians are in Hemchandracharya University, 16.28% librarians are in Sardar Patel University, 20.93% librarians are in M.S. University, 11.63% librarians are in Veer Narmad University, 16.28% librarians are in Bhavnagar University,

Gender

Table: 2 Sex Wise Analysis of Librarian to Technical Staff

Particulars	No of librarian to technical staff	Percentage (%)
Male	26	60.47%
Female	17	39.53%
Total	43	100

From the above table, it is analyzed that there is 60.47% (53) librarian are male, while 39.53% (30) librarian are female.

Table 3. Professional Designation**Table: 3** Designation wise analyses of librarian to technical staff

Particulars	Assistant librarian to technical staff	Percentage (%)
Librarian	7	16.28
Assistant Librarian	23	53.49
Technical Staff	13	30.23
Total	43	100

From the above table, it is analyzed that there is 30.23 % (13) librarians are Technical Librarian, while 53.49 % (23) librarians are Assistant librarian and only 16.28 % (7) chief librarians. So we can say that the ratio of Technical librarian is higher than Assistant librarian and Chief Librarian.

Table 4. Professional Experience**Table: 4** Experience wise analysis of librarian to technical staff

Particulars	No of librarian to technical staff	Percentage (%)
0-4	12	27.91
5-9	10	23.26
10-14	15	34.88
15-19	7	16.28
Total	43	100

Above table shows that 27.91%(12) librarians have 0-4 year of experience, 23.62%(10) librarians have 5-9 year of experience, 34.88%(15) librarians have 10-14 year of experience, 16.28%(7) librarians have 15-19 year of experience. So we can say that the ratio of 10-14 years is higher than other

Table: 5 Qualification wise analysis of librarian to technical staff

Particulars	No of librarian to technical staff
Post Graduate	28
B.Lib	41
M.Lib	41
M.Phil	32
Ph.D	12
Technical Course	13

From the above table, it is analyzed that there is 28 librarians who belong to Post Graduate. There are 41 librarians, who belong to B.Lib line, and 41 librarians who deal with the M.Phil. and only 12 librarians who have degree of Ph.D. It shows there are more librarians in Library Science line

Table -6 Job Satisfaction**Table: 6** Analysis based on satisfaction of librarians in their job.

Particulars	No of librarian to technical staff	Percentage (%)
Yes	39	90.70
No	4	9.30
Total	43	100

From above table 90.70 % (36) librarians are satisfied with their job. It is very good point that even 9.30% (4) librarians is not unsatisfied with their job.

Table: 7 Analysis based on how librarians see their job.

Particulars	No of librarian to technical staff	Percentage (%)
Monotonous	3	6.98
Burdensome	8	18.60
Interesting	32	74.42
Total	43	100

From the above information, it is said that 6.98 % (3) of librarians feel that their job is monotonous while on other side large portion of librarians i.e. 74.42%(32) librarians have view that their job are interesting one.

Table: 8 Analysis based on level of satisfaction with the development program of librarians university library.

Particulars	No of librarian to technical staff	Percentage (%)
Always	22	51.16
Mostly	11	25.58
Rarely	11	25.58
Never	0	0.00
Total	43	100

From the above table it can be seen that 51.16%(22) librarians are always satisfied with the development programme of their university, 25.58%(11) librarians are mostly satisfied with the development programme of their university, 25.58%(11) librarians are rarely satisfied with the development programme of their university

Major Findings of the Study From the data it is found that 11.63%(5) of the librarians are of the age between 21-25 years and 16.28%(7) of the librarians are of the age between 26-30 years, 13.95%(6) of the librarians are

of the age between 31-35 years, 9.30%(4) of the librarians are of the age between 36-40 years, , 22%(12) of the librarians are of the age between 41-45 years ,9.30%(4)of the librarians are of the age between 46-50 years, .Thus comparatively more librarians are between the age group of 41-45 years30.23 % of librarians are on the designation of Technical Librarian. 16.28 % librarian while 53.49 %of librarians are on the designation of the Assistant librarian which indicates the sign of the excellent performance in “University Library in Gujarat State”50.56% of librarians have more than 10 years experience. In fact, 49.4% librarians have more than 5-9 years experience. Which shows high loyalty of them towards “University Library in Gujarat State” and the second is that as the man is more experienced, he will be more perfect in their work, which is strongest point for the “University Library in Gujarat State”.From the data is found that 90.70 %(36) librarians are satisfied with their job. It is very good point that even 9.30% (4) librarians is not unsatisfied with their job.From the above information, it is said that 6.98 %(3) of librarians feel that their job is monotonous while on other side large portion of librarians i.e. 74.42 %(32) librarians have view that their job are interesting one.From the data it can be seen that51.16%(22) librarians are always satisfied with the development programme of their university, 25.58%(11) librarians are mostly satisfied with the development programme of their university, 25.58%(11) librarians are rarely satisfied with the development programme of their university

Recommendations On the basis of the findings, the following recommendations are provided with the aim of increasing the job satisfaction rate of library employees. Professional employees have to be recruited. To be eligible as a candidate for the job, it is recommended that Staff must have a graduate and/or postgraduate degree in Library and Information Science. **Conclusion** The level of job satisfaction in University Libraries employees is satisfied of the highest. Some of the employees are dissatisfied with aspects of their job. The key factors in dissatisfaction are: lack of sufficient job facilities, issues of financial reward, and not according to the proper value to staff expertise.

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ALL IN ONE ABCD: OPEN SOURCE SOFTWARE

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Abstract

Open source software are used for different purposes for complete library automation in all aspects. ABCD, offers a solution without any restrictions and free of cost. This paper discusses features of open source library software, selection, advantages, and limitations. ABCD is the all in one solution for library automation in modern libraries. ABCD software is boon for modern libraries and Documentation Centers.

Keywords: - ABCD, Library Management Software, Open Source,

Introduction Library automation is the general term for information and communication technologies that are used to replace manual systems in the library. Library automation is started with library automation management software. It should have the few necessary modules to automate the library. Such as administrator, members, acquisition, cataloguing, circulation, serials control. Now days plenty library automation software are available in the market as well as open sources web based many commercial library software are in use in the different libraries, but open source library management software has generated lot of interest among the library professionals over the past years.

OPEN SOURCE SOFTWARE The primary difference between the open source software and commercial software is the open source software provides the freedom to modify the software by its user. They have source codes which are available under a license for users to look at and modify freely and permits users study, changes, and improve the software. Open source software (OSS) are based on net, they required good speed internet connection, and good computer.

Advantages of Open Source Software Open-source software is free to use, distribute, and modify. It has lower costs, Open-source software is more secured as the code is accessible to everyone. Anyone can fix bugs as they are found, and users do not have to wait for the next release. The fact that is continuously analyzed by a large community produces secure and stable code.

Limitations of Open Source Software There is a shortage of applications that run both on open source and proprietary software; therefore, switching to an open source platform involves a compatibility analysis of all the other software used that run on proprietary platforms. In addition, there are many ongoing parallel developments on open source software. This creates confusion on what functionalities are present in which versions. Lastly, many of the latest hardware are incompatible to the open-source platform; so you have to rely on third-party drivers. The decision of adopting open-source software should not be taken just on the basis of the low-cost involved. It entails a detailed analysis and understanding of the requirements before switching to open source to get full benefits of it. Without the support of the expert you can't any up gradation/change in this software. Commercial Software Company will immediately respond on customer requests for any problem. With OSS, if one doesn't do it himself, he is at the mercy of a disjoint community of developers. The main problems faced in the libraries are related to retraining end-user to get use to new paradigm shift. The library professional and user have faced initial difficulties adopting to open source technology practice due to non-availability of proper training.

ABCD- OPENSOURCE SOFTWARE: **ABCD** stands for "Automatización de Bibliotecas y Centros de Documentación" (Spanish), which means: Library and Documentation Centers Automation. Its development was promoted and coordinated by BIREME, with the support of VLIR. **ABCD** is web-based integrated library management software comprising the main basic library functions. This kind of library application is a long held aspiration for the ISIS community, since the first MS-DOS version came out more than 20 years ago. Several library automation systems were developed during this period and are still in operation worldwide. BIRME EMP previous system was limited to the circulation services. The main characteristics of ABCD are the coverage of the main library functions, its web centrality and its development and maintenance under the methodology of Free and Open Source Software.

Main functions Definition of any number of new databases (similar to Winisis), which includes: FDT, PFT, FST, and worksheets directly on the Web, or copying from existing ones either from the Web or from Winisis on a local hard disk, Cataloguing of books and serials, independently of the format: MARC, LILACS, AGRIS, etc. End-user searching (OPAC), Loans circulation, Acquisitions, Library services like SDI, barcode printing, quality control, etc. Compatible with CDS/ISIS database technology for the bibliographic databases, i.e. reading ISIS-databases and making use of ISIS Formatting Language for producing output and indexing of records; Run on both Windows and Linux platforms; Features and modules in ABCD click here: -

<http://redes.bvsaude.org/projects/abcd/wiki/Features>

General Considerations **ABCD** is aligned with the CISIS/1660 version 5.2 platform, and will eventually be made compatible with later versions. This means that the inverted file entries are 60 characters long, and will increase in length in the ISIS-NBP based version. **ABCD** is compatible with programming languages accepted by the GNU licenses, i.e. PHP, Java, Javascript, Python, etc. The current version of ABCD is written in PHP v.5 and IsisScript. The system is totally language independent. The product is available in Spanish, English, French

and Portuguese and can be translated into other languages in the same way the CDS/ISIS applications always were.

CONCLUSION:- The Library & Information Science (LIS) professionals should keep eyes on development in order to choose appropriate technology depending upon Institution's needs. Since, numbers of libraries worldwide are using OSS for managing their library systems more economically and effectively. Librarians and programmers should worked together in order to implement open source integrated library systems and at the same time, library professional are also required to acquire new skills for developing and managing the library by using open source LMS. For taking benefit from OSS additional technology, education, and training of the professionals is essentially required. The 21st century has come out with convergence of wireless technology, fiber optics, software application and new generation Internet switches, IP version that will permit anything with electricity to have a web address and run off the internet. Open source software are best alternative to the costly library software available in market. Open source software have the professional and working standard. They have all the modules which are required for library automation and digital library. Before going for the costly software one must try an open source software ABCD the complete solution/ all in one source software, which is boon for modern libraries and documentation center.

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ESTABLISHING OF E-GOVERNANCE IN MEDICAL COLLEGE LIBRARIES IN MAHARASHTRA: A FEASIBILITY STUDY

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Abstract

The main objective of this paper is to establishing of E-Governance in medical libraries. Medical libraries need to be well equipped and standard to make basic doctors and provide the health science information and take E-health care facility. E-governance would as ail the standard books which would result in accurate diagnosis. So E-governance should be made for the availability of books anytime, anywhere even on user's cello phones. The need and important of this study was felt to reduce the difference between medical libraries and readers (Doctors). The study included a survey of forty three medical college libraries in Maharashtra employed the use of questionnaires for data collection. This paper focusses on Maharashtra case study. The authors concluded that there is great potential for libraries to provide and promote E-Governance. But this is faced with many challenges which included technological human and financial resources.

Keywords: E-governance, Medical college, medical Libraries, E-health, internet, WAN, LAN, MAN, computer, Digital, M-Governance

1.0 Introduction : The main objectives of this project are to bring about digital revolution in India which would enable Indian society to understand economy and control the red-tape administration by converting E-Governance in to M-Governance. Some important changes will surface in "Digital India" project. It includes E-health care, E-apartment, e-Departments of various subjects, E-Scholarship and E-payment. This project aims at providing good health along with basic needs of food, shelter and clothing. Provision of prompt and quality health care is the main objectives of this project which also intends to control and expose the practice quack..

1.2 Selection of the Topics : In the 21st century, science and technology have brought about drastic changes in every walk of life. In the era of science and technology, almost all sectors are accessing electronic devices easily.

1.3 Definition of E-governance : Dr. A P J Abdul Kalam (Ex President of India) says that "A transparent smart e-governance with seamless, access, secure and authentic flow of information crossing the interdepartmental barrier and providing a fair and unbiased service to the citizens."

Aman Singh, Joint Secretary to CM of Chhatisgarh E-governance is a citizen centric process that primarily leverages it for improving governance by bringing transparency, responsiveness and efficiency. as far as the end goal is concerned, e-governance should be a journey towards smart governance where all transactions are made online with the least possible delays and at the lowest possible cost. in other words, it's a dream of anywhere, anytime, non-stop governance.

1.4 Components of E-governance The following are the specific components of E-governance of library:- Computer: Connectivity: Information: Website: Users/Readers:

1.5 Present Scenario of Medical Libraries in Maharashtra: In the state of Maharashtra there are 43 MBBS, 31 BDS, 62 Ayurveda, 45 homeopathies, 6 unions, 64 B.Sc. (Nursing) & 34 B.Ph. medical colleges established. A survey was limited to only for 43 allopathic medical colleges and conducted to examine the present condition of these libraries to identify the drawbacks in the provision of E-governance. Hence the suggestions can made to improve these services.

1.6 Objectives of the Study The following are the specific objectives of the surveys-To find out the implementation of E-governance in medical college libraries in Maharashtra. To examine the transparency & effectiveness in medical college libraries in Maharashtra after the implementation of E-Governance. To find out the library software used done by the all work in medical college libraries in Maharashtra. To find out to improvement of library work and its system To know the problem regarding implementation of e-Governance in Medical College Libraries in Maharashtra. To find out the distribution of information services very speedily

1.7 Hypothesis of the study The following are the specific hypothesis of the study:-All medical college libraries in Maharashtra are computerized. Use of e-resources in medical college libraries in Maharashtra that has reduced the workload of library staff & administration. E-governance has brought about transparency & efficiency in the medical college libraries in Maharashtra.

1.8 Research Methodology The researcher has used survey based research methodology to carry out this research. This survey uses a questionnaire only for librarians. The study is related to the Establishing of E-Governance in Medical (MBBS) College Libraries in Maharashtra. This study is primary focused on awareness and usage of E-governance services implemented by Medical colleges in Maharashtra. This primary data collected from all Allopathic medical colleges in Maharashtra. Researcher various sources like journals, government report, E-governance projects, Ph.D. E-Thesis, books, Magazines and internet are explored to collect secondary data and same has been used to support the objectives and hypothesis whenever it needed. Various statistical techniques such as averages, percentage were used. The researcher has used statistical package data.

1.9 Sample Selection There are 43 medical (Allopathic) college libraries in the study area. Among them 17(39.55%) are government colleges, 2 (4.65%) are private colleges, 8 (18.60%) are Society colleges, 12

(27.90%) are Trust colleges and 4 (9.30%) municipal corporation colleges. These are affiliated to Maharashtra Health Science University, Nashik and Deemed Universities of Maharashtra.

1.10.1 Standard followed American Psychological Association (APA, 2010) format has been followed for providing bibliographical references. The two examples of this standard are mentioned as under: Adams, Roy J (1986). Information Technology and libraries: A Future for Academic Libraries. London: CroomHelem, Butcher, Roger (1993). An Overview of British Library Automation at st. Pancras. Program, 27(3), 281-292

1.11 Scope & Limitation The present study is limited area of only State of Maharashtra's allopathy medical college libraries In Maharashtra 43 medical colleges establishing in various regions during last five years (2008-2009).

1.12.1 Major finding & suggestions Basically the analysis of data collected, the following conclusion have been drawn with regard to Establishing of E-Governance in medical college libraries:

Library personnel In Maharashtra Medical college libraries 74.70% library personnel working in the library & 25.30 % library personnel post have vacant library staff (66.67%) have got training in computer application & library software

Library Physical Computer Facility: All libraries having computers & related hardware, software and other e-instruments. 10.25 % medical libraries have Biometrics techniques. It used only library users and library staff. Most of the libraries 36 (92.30%) have separate library software. Most of the libraries 16(41.02%) used SLIM library software & 60% libraries used different library softwares i.e. Libsys, Libman, E-Granthalaya, Lib tech2, Techfouz LIMSver.2.7 and foxpro.

E-Governance All libraries have library committee. Most of the library committees 26 (66.67%) are advisory in nature. Most of the libraries 27(69.23%) have not arranged library meetings online. only 5 (12.82%) libraries have arranged library meetings online.

Acquisition section It found that, most of the libraries (38.48%) have selected books by Library committee, faculties and users suggestions. Most of the libraries have used computers for collected the online publisher's catalogue & book purchase orders.

Periodical section Most of the libraries 27 (69.23%) have purchased printed and non-printed form periodicals. few libraries have purchased only e-printed periodicals. The Majority libraries 18 (46.15%) have renewal of subscription through by e-mail. 13 medical college libraries have renewal of subscription through by post, E-mail, and online.

Technical section Most of the libraries 25 (64.10%) have used electronic system for processing of books. The majority of the libraries 25 (64.10%) are using card catalogue and OPAC. Only 2 (5.12%) libraries are using online catalogue.

Circulation Section The majority of the libraries 22 (56.41%) have users demands of books on seeing OPAC. Half of the medical college libraries 20 (51.29%) users demanded books entry on library software.

Reference section All the medical college libraries are providing all library services to the users through by both manually and electronic form. 27 (69.23%) medical college libraries have entered library service in manually form and 12 (30.77%) libraries gives the services on the library software (using Internet).

Conclusion: In this way, the adoption of recommendation in present research will certainly lead to dynamic, efficient and transport administration of medical libraries.

INTELLECTUAL PROPERTY RIGHTS AND COPYRIGHT : AN OVER VIEW**Dr. G N Panchal** - Librarian, Madhavrao Patil College, Palam, Tal. Palam, Dist. Parbhani (MH)**Dr. Sambhaji G. Patil** - Librarian, MET's Institute of Engineering, Bhujbal Knowledge City, Adgaon, Nashik-422003.**Abstract**

The twenty first century will be the century of knowledge, indeed the century of mind. Innovation is the key for the production as well as processing of knowledge. A nation's ability to convert knowledge into wealth and social good through the process of innovation will determine its future. In this context, issues of generation, valuation, protection and exploitation of intellectual property (IP) are going to become critically important all around the world. Exponential growth of scientific knowledge, increasing demands for new forms of intellectual property protection as well as access to IP related information, increasing dominance of the new knowledge economy over the old 'brick and mortar' economy, complexities linked to IP in traditional knowledge, community knowledge and animate objects, will pose a challenge in setting the new 21st century IP agenda. Intellectual property will no longer be seen as a distinct or self-contained domain, but rather as an important and effective policy instrument that would be relevant to a wide range of socioeconomic, technological and political concerns. This paper provides an idea about the impact of internet technology on Intellectual Property Rights and Copyright.

Keyword: Internet technology, Intellectual Property Rights, Copyright

1. Introduction: Intellectual property laws vary from jurisdiction to jurisdiction, such that the acquisition, registration or enforcement of IP rights must be pursued or obtained separately in each territory of interest. However, these laws are becoming increasingly harmonized through the effects of international treaties such as the 1994 World Trade Organization (WTO) Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs), while other treaties may facilitate registration in more than one jurisdiction at a time. Certain forms of IP rights do not require registration in order to be enforced.

2. Nature of Intellectual Property Rights: IPR are largely territorial rights except copyright, which is global in nature in the sense that it is immediately available in all the members of the Berne Convention. These rights are awarded by the state and are monopoly rights implying that no one can use these rights without the consent of the right holder. It is important to know that these rights have to be renewed from time to time for keeping them in force except in case of copyright and trade secrets. IPR have fixed term except trademark and geographical indications, which can have indefinite life provided these are renewed after a stipulated time specified in the law by paying official fees.

3. Types of Intellectual Property: Copyrights and related rights, Trade Marks, Geographical Indications, Industrial Designs

Importance of Intellectual Property Intellectual property protection is the key factor for economic growth and advancement in the high technology sector. They are good for business, benefit the public at large and act as catalysts for technical progress. Whether IPRs are a good or bad thing, the developed world has come to an accommodation with them over a long period. Even if their disadvantages sometimes outweigh their advantages, by and large the developed world has the national economic strength and established legal mechanisms to overcome the problems so caused.

5. Why care about IPR? Patents benefit none other than the owner of the IP and add value to all industrial as well as business concerns and laboratory discoveries and in doing so provide incentives for private sector investment into their development. Anyone in the above business should have an independent Research and development (R&D) center. Offering free R&D and processes in over enthusiasm must be avoided.

6. Intellectual Property in India

Intellectual property in India is administered by five central Ministries in terms of the Allocation of Business Rules of the Government.

Industrial property which includes *patents, trademarks, industrial designs and geographical indications* is regulated by the Department of *Industrial Policy and Promotion* of the Ministry of Commerce & Industry.

6.1 Intellectual Property for School Children Children are the custodians of creativity and innovation. It is imperative that they are introduced to the nuances of the importance and use of intellectual property from an early age so that India has an IP-Ready generation by the next 10 years. Till then schools as well as children can refer to the following resources available elsewhere in the world:

World Intellectual Property

Organization http://www.wipo.int/portal/en/resources_students.html

Government of Hong Kon http://www.ip-kids.gov.hk/html/eng/eng_main.html

6.2 Intellectual Property for Small Enterprises Micro, Small and Medium enterprises are independently owned businesses set up with the objective of making reasonable profit on the investment made. Generally, SMEs are defined on the basis of one or more quantitative parameters such as number of persons employed the annual turn over, or the level of their investment. SMEs are an extremely diverse and heterogeneous group with a very wide range of needs and concerns. Their intellectual property needs and concerns are, therefore, dependent on the nature and scale of their operations and on their relationships with other entities and

enterprises. They could help promote innovative new technologies, managerial growth and competitiveness as also, equally, the absorption of technological innovations and exploitation of indigenous research findings. All governments have placed SMEs high on their list of priorities, and generally provide numerous SME support services.

6.3 Intellectual Property Rights Courses IP is today regarded as an important and effective policy instrument relevant to a wide range of socioeconomic, technological and political concerns. The development of skills and competence to manage IPR and leverage its influence requires increasing focus. There is a need for developing skills in filing, reading and exploiting patents which will be crucial in the years to come. Our inventions must be protected. We must fully understand the implications of the patents granted to our competitors. Our graduates emerging from the engineering and technology streams lack any training in IPR even though they are strategic assets in the battle being fought in the knowledge market. Capacity building for IPR protection needs priority. IPRs must be made a compulsory subject in college law courses and in the Universities. Keeping this in mind a number of business and law schools have started giving specialization courses on IP prominent among which include: IIT Kharagpur Rajiv Gandhi School of Intellectual Property Law- Three year LLB programme with specialization in Intellectual Property and one and half year Post Graduate Diploma in Intellectual Property Law (PGDIPL) (www.iitkgp.ac.in)

6.4 IPR Chairs In order to promote teaching and research in Intellectual Property Rights Studies the Ministry of Human Resource Development Government of India had set up six IPR Chairs at the following Universities: University of Allahabad University of Delhi University of Pune,

Ten new chairs have recently been added in specific areas. These are:

i) On IP Management. 1. Indian Institute of Management, Allahabad. 2. Indian Institute of Management, Kolkata. 3. Indian Institute of Management, Bangalore.

ii) In areas of IPRs pertaining to patents, trademarks, industrial designs and geographical indicators. 4. Indian Institute of Technology, Delhi 5. Indian Institute of Technology, Kharagpur 6. Indian Institute of Technology, Chennai 7. Indian Institute of Technology, Mumbai 8. Indian Institute of Technology, Kanpur

iii) Intellectual Property Rights and Development. 9. Delhi School of Economics, University of Delhi. 10. Centre for Economic Studies and Planning, Jawahar Lal Nehru University

7. Impact of Internet Technology on IPR and Copyright In the era of knowledge age or information age, the fundamental unit of most products and services is information-- in one or another form. We are seeing that number of websites, virtual enterprises and virtual products. All these rest upon the cornerstone of 'information': in digital or non-digital form. These have become the top IPR issues; this Internet shall bring several new IPR issues to the fore.

8. Conclusion Surely, authors and other copyright holders have valid concerns about recovering their costs and risks to innovate, and in protecting their intellectual property from piracy and theft. However, for an era where trusted systems can offer perfect control of access, we must weigh these private interests against the public interest in the reasonable sharing of knowledge.

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PROFESSIONAL ETHICS IN LIBRARIANSHIP

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Introduction: Library & Information Science is come under Social Science. Because its gives services to Society. Library professionals play an extremely important role in society. Their mission is essentially to provide members of society with access to the information that they need (Ortega y Gasset 1934). Just like doctors, lawyers, and other professionals, library professionals would like to carry out their mission in an ethical manner. The Library as an institution exists for the benefit of a given constituency, whether it is the citizens of a community, members of an educational institution or some larger or more specialized group. Those who enter the library profession assume an obligation to maintain ethical standards of behavior in relation to the governing authority, under which they work, to the library constituency, to the library as an institution, to fellow workers, to colleagues and to society in general. IFLA (2011) posits that the core mission of library and information professionals is to facilitate access to information for all for personal development, education, cultural enrichment, economic activity and informed participation in and enhancement of democracy. Librarians do not encourage censorship, denial and restriction of information to anybody by any person or groups of persons and use the most efficient and effective methods and standards to serve their clientele.

Definition: Ethics: A set of moral principles, especially ones relating to or affirming a specified group, field, or form of conduct: by Oxford English Dictionary The term comes from the Greek word *ethikos* from *ethos*, which means "custom, habit" The Cambridge Dictionary of Philosophy states that the word *ethics* is "commonly used interchangeably with 'morality' ... and sometimes it is used more narrowly to mean the moral principles of a particular tradition, group or individual. The field of ethics also called moral philosophy involves systematizing, defending and recommending concepts of right and wrong behavior.

Professional Ethics: A set of moral principles and code of conduct is a necessary guide to Professional behavior. The codes of ethics are Dedication, Devotion, Determination and Commitment of the profession. Ethics in the library and information professions is concerned with the application of moral standards to the conduct of librarians and other individuals involved in information dissemination. It is a type of applied ethics concerned with clarifying the obligations and dilemmas of librarians and other information professionals who make decisions regarding the acquisition, processing, and dissemination of information to individuals, groups, and society at large. General social ethics of understanding the users: social obligation, social behavior, equality before service etc. Moral responsibility of the professional. Professional goals and objectives and means of achieving.

Characteristics of professional ethics: Social responsibility: Social responsibility is fundamentally an ethical concept. It involves changing notions of how human needs should be met and emphasizes a concern with the social dimensions of information service that has to do with improving the quality of life. Social responsibility provides a way for the Library profession to concern itself with the social dimensions of service and be aware of the social impact of that service. Excellence in the profession We strive for excellence in the profession by maintaining and enhancing our own knowledge and skills, by encouraging the professional development of co-workers, and by fostering the aspiration of potential members of profession. **Sound Theory:** Librarianship is based on rules of thumb and practices were involved or improved on trial and error basis. The demands of the users started changing fast. With the result there has been a great thrust on library, documentation and information professionals to understand user needs better, understand the technology, adapt and refine them from time to time to provide pin point information. **Seven lamps of conduct.** Service before self, Unbiased, Split mind, Sympathetic behavior, Tact Industry, Scholarship **Area of Specialisation:** In this profession specialist skill reflect the type of information unit the function of documentary chain which it covers and its subject field. The major specialization is archival administration information management, documentation services, etc... Particularly in the field of information and documentation person with the special knowledge in concerned discipline are preferred. Another area of specialization is teaching and research in library science. Lately with the development of large information system and network. Some of the retired professionals have started offering consultancy service and liaison service. The new occupation requires an excellent specialist background, advanced training in library information sciences filed.

Code: Professional ethics are the principles of conduct that govern an individual or a group. Recognizing the importance of having a code of ethics, library associations have a long history of developing and promoting ethics for our profession. The American Library Association formally adopted its first code of ethics in 1939. The code underwent several revisions, the last in 1981, with adoption by ALA Council in 1995. In 2002, TLA Council adopted the ALA Code of Ethics as its professional code of ethics. Kathy Hoffman (2005).

The general purpose of code is to set guidelines for the ethical conduct expected of all librarians.

Some Code of Conduct for librarians suggested by IFLA. **a.** To guide the librarian in maintaining standards of ethical behavior in his relationship with state and society, clients, profession and colleagues and oneself. **b.**

To guide registered librarians in their daily discharge of duties as it will help to regulate professional behavior in terms of safeguarding the interests of the community served, especially as they are engaged in the process of providing access to information. **c.** To provide objective benchmarks for assessing librarians conduct and discharge of professional duties. **d.** To clarify the librarians rights, privileges, obligations and their legal bases. **e.** To boost public confidence in the ability of the library and information science profession to regulate itself and contribute meaningfully to national development in order to enhance the professional image of librarians. **f.** To build a strong moral and ethical foundation for the actualization of an information society

Conclusion: Library and information professionals should cultivate their filed of knowledge in professionals way. They should contribute to the filed by research. Teaching and dissemination through literature.

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ONLINE CATALOGUING

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Abstract

Today's world is the world of technology in which almost all spheres are covered with it and library is not an exception to it but when it comes to library technology plays very important and crucial role in library. i. e. digital library, web 3.00 and the most important is online cataloguing. The present paper the researcher is focusing on the various aspects of online cataloguing viz. history of cataloguing, Machine-Readable Cataloguing Record, AACR in Online Environment, FRBR Implementations, Definition Of Streaming Media, and Digital Catalogues etc.

History of Cataloguing The history of Cataloguing can be summed up (briefly and rather rudely, leaving out a few important people and publication) in a short chain of people and rule sets: Sir Anthony Panizzi's "Rules for the compilation of the Cataloguing" (1841), Charles Jewett's Smithsonian report on the construction of Catalogs of libraries, and their publication by Means of separate, stereotyped Titles, with rules and examples (1853), Charles Cutter's Rules for printed dictionary Catalog (1876), the Prussian Instruction (1908), the American Library Association's Catalog rules: Author and Title Entries (1908) and ALA Cataloguing rules for Author and Title Entries (1949) (the latter closely criticized by Seymour Lubetzky), the Paris Principles (1961), and Anglo-American Cataloguing Rules (1967), which is used internationally and has been revised several times. Donald J. Lehnus explained, "Each successive cod has brought certain refinements, clarifications, simplifications, and in general, many improvements. Many major changes have taken place, but at the same time there are several areas where little or no change has taken place, and some have even reverted to rules used earlier". Most of these cataloguing milestones consist of extremely detailed rules: pages and pages on how to determine the actual title of a book or how to arrange names in alphabetical order. All possible situations need to be covered so that any book, periodical, recording, movie, map, or object of any sort, can be described, put in catalogue, and found there. Classification by systems such as Library of Congress or Dewey Decimal Classification schemes will of course help, as will subject headings that tell what the thing is about, but these are beyond our range of discussion.

Machine-Readable Cataloguing Record "Machine-readable" means that one particular type of machine, a computer, can read and interpret the data in the cataloguing record. The following pages will explain why this is important and how it is made possible. "Cataloguing record" means a bibliographic record or the information traditionally shown on a catalogue card. The record includes (not necessarily in this order): 1) a description of the item, 2) main entry and added entries, 3) subject headings, and 4) the classification or call number.

AACR in Online Environment The Anglo-American cataloguing rules (AACR) are designed for use in the construction of catalogues and other lists in the general libraries of all sizes. The rules cover the description of, and the provision of access points for, all library materials commonly collected at the present time. The second edition of the rules is based on a reconciliation of the British and North American texts of the 1967 edition. This extends to style, which generally accords with the Chicago Manual of style, and to spellings, which are those of Webster's New International Dictionary.

FRBR Implementations One recent survey of FRBR implementations by Martha Yee has described some of the common problems users have with library catalogue systems and ways that a FRBR organization can address those problems. First, she finds that it is difficult to search for author and title combinations because variant name information is isolated in authority records. Second, she finds that catalogues are often poor at displaying the full range of relevant materials that the library holds because of variations in titles. Yee then describes how both problems can be addressed by making the catalogue more aware of connections between author information and work information and between different versions of the same work.

Definition Of Streaming Media Streaming media are video or audio transmitted over a network that can be played immediately, with no need to download and entire file before playback. Audio and/or video content is sent to the user as a data stream. A small amount of data is sent ahead to the user's computer and buffered temporarily on the hard drive, and as playback proceeds, more data is constantly streamed to the user's machine. The files created by buffering are temporary, and are gone when playback is complete.

Digital catalogues In libraries today, cataloguing is considered part of "technical services"- those services generally concerned with the maintenance of the collection, such as acquisition and binding. Technical services are distinguished from "public services," such as reference services, which involve direct contact with library users. Nearly all libraries have cataloguers, although in very small libraries one person may handle other tasks, e.g. reference work and acquisition of new materials, in addition to cataloguing. The cataloguer's job is to produce catalogue records for newly acquired materials. "Original cataloguing" is the process of creating catalogue records from scratch-creating a record primarily using the item itself, e.g. by inspection of the book, including, but not limited to, its title page. This is distinguished from "copy cataloguing," in which the cataloguer makes use of previously existing catalogue record for the item to create a new record tailored to the needs of their own library. Catalogue records that can be used as sources for copy cataloguing are maintained by several institutions, including the Library of Congress, OCLC, and RLG. While it may take only a few

minutes to copy catalogue and item , it is not unusual for the original cataloguing of an item to take on the order of an hour. To sum up The card catalogue was a familiar sight to library users for generations, but it has been effectively replaced by the online public access catalogue (OPAC). Some libraries with OPAC access still have card catalogues on site, but these are now strictly a secondary resource and are seldom updated. Many of the libraries that have retained their physical card catalogue post a sign advising the last year that the card catalogue was updated. The newest generation of library catalogue systems are distinguished from earlier OPACs by their use of more sophisticated search technologies, in particular faceted search, and features aimed at greater user interaction and participation with the system, including tagging and reviewing.

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प्रा. योगेश एन. पाटील, शिक्षपाल, विद्यार्वाधि-नी महाविद्यालय धुळे.

श्रीवारा: सदर लेखात डिजिटल ग्रंथालयाची उद्दिष्टे, वैशिष्ट्ये, आव्हाने व काही निवडक डिजिटल ग्रंथालय यांची ओळख स्पष्ट केली आहे. डिजिटल ग्रंथालयांची ओळख करून त्याच्या संकेतस्थळाची माहिती देण्यात आली आहे. व डिजिटल ग्रंथालयात सोपस्कार पासून ते संदर्भसेवा या ग्रंथालयीन व माहिती सेवेचे भविष्य बदल चर्चा केली आहे.

प्रस्तावना आजचे युग हे माहिती व संगणकाचे युग आहे. इण्टरनेटच्या माध्यमातून माहिती सर्वदूर म्हणजेच जगाच्या कुठल्याही भागात माहितीची देवाणघेवाण संगणक, मोबाईल व इतर इलेक्ट्रॉनिक डिव्हाईस च्या माध्यमाने सहज शक्य झाली आहे. जगातली माहिती किंवा ज्ञान एका क्लिक वर मिळते. वाढत्या माहिती स्रोतात निवडक व आवश्यक माहिती मिळणे सच ईंजिनच्या शोध युक्ती द्वारे ते देखिल सोपे झाले आहे. शैक्षणिक ग्रंथालये संगणक युगात हायटेक होतांना दिसत आहेत. देशाच्या सर्वांगण विकासासाठी त्या देशाच्या गुणवत्तापूर्ण शिक्षणावर भर दिला जातो. शिक्षण हा देशाच्या प्रगतीचा आधार स्तंभ आहे. ग्रंथालय हा शिक्षणव्यवस्थेचा कणा म्हटल्यास अतिशयोक्ती ठरणार नाही. शिक्षण व संशोधन ही निरंतर चालणारी प्रक्रिया आहे. त्यासाठी लागणारी सत्य व अद्ययावत माहितीच्या पुर्तता करणे ग्रंथालयासाठी आव्हानात्मक कार्य आहे. माहितीचे संग्रहन, जतन, एकत्रीकरण, पुनर्प्राप्ती हे वेळखावु कामे डिजिटल ग्रंथालय प्रभावीपणे हाताळता येतात. शैक्षणिक ग्रंथालयामध्ये वाचकांच्या गरजा लक्षात घेता विद्यार्थी व संशोधक यांना लागणारे पुस्तके, नियतकालिक, वृत्तपत्र, नकाशे, विविधपत्रे, भाषणे, वार्षिके, संदर्भ ग्रंथ इ. साहित्य इलेक्ट्रॉनिक स्वरूपात म्हणजेच सीडी, डिव्हीडी, फ्लॉपी, HD, Map, टेक्स्ट, इमेजेस व दृकश्राव्य डेटाबेसस इ. प्रकारात उपलब्ध झाल्यामुळे ग्रंथालयीन सेवेमध्ये मोठ्या प्रणावर बदल झालेला दिसून येत आहे. व अजून त्यात नवनविन संशोधन चालू आहे.

व्याख्या : - डिजिटल ग्रंथालय म्हणजे, माहितीचे संग्रहन, एकत्रीकरण, व्यवस्थापन व पुनर्प्राप्ती इ. साठी इलेक्ट्रॉनिक संसाधने आणि संबधित तांत्रिक क्षमतांचा संच म्हणजेच डिजिटल ग्रंथालय होय.

डिजिटल ग्रंथालयाची उद्दिष्टे डिजिटल ग्रंथालयाची महत्वाची उद्दिष्टे खालील प्रमाणे : - माहितीचे संग्रहन व व्यवस्थापन करणेमाहितीचे जतन व पुनर्प्राप्ती करणेमाहितीचे संघटनात्मक सहकार्य / देवाणघेवाण करणेमाहितीची सहज उपलब्धता करणेग्रंथालयासाठी लागणा-या जागेच्या समस्येवर मात करणे वाचक व सेवक यांची वेळेची बचत करणे कमी खर्चात अधिकधिक माहिती स्रोत उपलब्ध करणेग्रंथालयीन सोपस्कार कार्याची परिणामकारकता वाढविणे.संसाधन देवघेव मध्ये सुलभता आणणे.इलेक्ट्रॉनिक साधनांच्या आधारे माहिती सर्वदूर पाठवणे.

डिजिटल ग्रंथालयाची वैशिष्ट्ये डिजिटल ग्रंथालयाची महत्वाची वैशिष्ट्ये खालील प्रमाणे : - डिजिटल ग्रंथालयामध्ये सीडी, डिव्हीडी, टेक्स्ट, इमेजेस व दृकश्राव्य असे इ. प्रकारच्या स्रोतांचा समावेश असतो.डिजिटल ग्रंथालयांना वेळ व काळ व स्थळ याचे बंधन नसते.डिजिटल ग्रंथालयांना जागेची समस्या भासत नाही. डिजिटल ग्रंथालयांमुळे माहितीचा शोध घेणे सुलभ झाले आहे. माहिती पुनर्प्राप्ती सेवा तात्काळ मिळते.एकाच प्रकारचे माहित स्रोत अनेक वाचक वापरू शकतात. डिजिटल ग्रंथालय सेवा जागतिक स्तरा पर्यंत पुरवता येतात.डिजिटल ग्रंथालयात Offline व Online दोन्ही प्रकारात सेवा पुरवता येतात.

डिजिटल ग्रंथालयाची आव्हाने डिजिटल ग्रंथालयाची महत्वाची आव्हाने खालील प्रमाणे : -पायाभूत सुविधांचा विकास करणे.माहिती उपयोजक व ग्रंथालय कर्मचारी यांच्यासाठी प्रशिक्षण कार्यक्रम आयोजित करणेमाहिती सतत अद्ययावत ठेवणे.जुने व दुर्मिळ साहित्याचे डिजिटायजेशन करून माहिती ऑनलाईन उपलब्ध करणे.संकेतस्थळ विकसित करून ऑनलाईन अॅक्सेस देणे.

काही निवडक डिजिटल ग्रंथालये Wikipedia : विकिपिडिया हे सर्वत्र प्रचलित संकेतस्थळ आहे. २००१ मध्ये सुरवात झालेल्या या मुक्त ज्ञान कोशात आजपर्यंत जगातल्या २९० भाषांमध्ये प्रलेख प्रकाशित झाले आहेत. त्या मध्ये भारताच्या सर्व प्रादेशिक भाषेचा समावेश यात केलेला आहे. हे संकेतस्थळ सर्वांनासाठी मुफ्त आहे. व त्याच्या माहिती साधनात भर होण्यासाठी व अद्ययावत होण्यासाठी त्याचे संपादन अधिकार सर्वांसाठी खुले आहेत. म्हणून यात रोज नविन नविन माहितीची भर पडत आहे. विकिमिडीया फाउंडेशन तर्फे चालवल्या जाणा-या विकिपिडिया मार्फत wikibooks, wikinews, wikiquote, wikiversity (Learning resources), wiktionary (Definitions) , wikidata (database), इ. महत्त्वपूर्ण प्रकल्प सुरु आहेत. Web site :- www.wikipedia.org

Digital Public Library of America : अमेरिकेची डिजिटल पब्लिक लायब्ररी एप्रिल २०१३ पासून निशुल्क सेवा प्रदान करण्यासाठी या ग्रंथालयाची निर्मिती झाली आहे. अमेरिकेतील सार्वजनिक पब्लिक ग्रंथालय लोकांना ग्रंथालय , संग्रहालये आणि अन्य सांस्कृतिक वारसा संस्थांमध्ये ठेवलेल्या संपत्तीशी जोडते. या ग्रंथालयात छायाचित्रे, पुस्तके, नकाशे, बातम्या फुटेज, मौखिक इतिहास, व्यक्तिगत पत्रे, संग्रहालय वस्तू, आर्टवर्क, सरकारी कागदपत्रे इ. साहित्य मुक्त ताबडतोब डिजिटल स्वरूपात उपलब्ध आहेत. डिजिटल पब्लिक लायब्ररी ऑफ अमेरिका मध्ये सहभागी झालेल्या सांस्कृतिक संस्था अमेरिकेच्या समृद्धतेच्या व विविधतेचे प्रतिनिधित्व करतात. लोकांना उत्कृष्ट कार्य करण्यास व समाजास शिकण्यास व सक्षम बनवण्यास मदत करते. Web Site :- www.dp.la.

National Digital Library: मानव संसाधन विकास मंत्रालयाने माहिती व संप्रेषण तंत्रज्ञानाच्या माध्यमाने राष्ट्रीय शिक्षण अभियाना अंतर्गत नॅशनल डिजिटल लायब्ररी ऑफ इंडिया या पायलट प्रकल्पाची सुरवात केली आहे. ७० भाषा, ६० पेक्षा अधिक प्रकारचे वाचन साहित्य १५,००,००० + अधिक साहित्य आज पर्यंत उपलब्ध आहे. कमीतकमी वेळात योग्य संसाधन शोधू शकण्यासाठी एका खिडकीतून योग्य प्रकारचे आभासी वाचन साहित्य वाचक शोधू शकतात. नॅशनल डिजिटल ग्रंथालयात कोणालाही पीडीएफ स्वरूपात डाउनलोड करता येतो. हे आयआयटी खरगपूर येथे विकसित केले जाणारे भारतातील मुफ्त डिजिटल ग्रंथालय आहे. website :- <https://ndl.iitkgp.ac.in>

इतर काही डिजिटल ग्रंथालय संकेतस्थळे : खालील संकेतस्थळे हे विशिष्ट घटकाला अनुसरून तयार करण्यात आले आहेत. त्याच्यावर काही मुफ्त व काही शुल्काधारित इलेक्ट्रॉनिक स्रोत ऑनलाईन उपलब्ध आहेत. ,Cornell University Library - website - <http://arXiv.org> ,Internet Archive : website - <http://archive.org> ,TechXtra : website - <http://www.techxtra.ac.uk> ,Free Ebook.net : website - <https://www.free-ebooks.net> ,Rasik.com : website - <http://www.rasik.com> ,Sahitya chintan : website - www.sahityachintan.com ,Open Knowledge Repository : website - <https://openknowledge.worldbank.org> ,Rarebooks : website - www.rarebookroom.org ,Open Access Books : website - <http://oapen.org>

शैक्षणिक ग्रंथालय व माहितीसेवेचे भविष्य : -शैक्षणिक ग्रंथालयात इण्टरनेट व नेटवर्कच्या माध्यमातून आमूलाग्र बदल झालेला आहे. विविध नेटवर्कच्या माध्यमातून संस्थात्मक, भौगोलिक, संघटनात्मक क्षेत्रानुसार विशिष्ट संकल्पना आधारित ग्रंथालय नेटवर्क व आज्ञावली अस्तित्वात आहेत. व माहितीची देवाण घेवाण सोपे व सुलभ झाले आहे. त्याआधारे माहितीचे संग्रहन, पुनर्प्राप्ती सुलभ असले तरी आजही असंख्य दुर्मिळ ग्रंथ व अचुं,

सत्यमाहिती, गरजे पुरती आत्यवश्यक माहिती, मिळण्यासाठी सर्वच स्तरावर म्हणजे माध्यमिक, महाविद्यालय, विद्यापीठ व संशोधन केंद्र ह्या सर्वच स्तरावर नेटवर्क ची स्थापना व त्याच्या एक प्रकारच्या माहिती देवाणघेवाण संदर्भात समन्वय होण्याची आवश्यकता भासत आहे. सोशल मिडिया देखील ह्या माहिती युगात मागे नाहीत. व्हाट्सअप, फेसबुक, इन्स्टाग्राम, ट्विटर, लिंक्ड इन, जीमेल, इ. सोशल साइट वर देखील विशिष्ट गटाचा गृप तयार करून माहितीसेवा पुरण्यास सक्षम करण्याची आवश्यकता वाटत आहे. ग्रंथालय व माहिती शास्त्र व्यावसायीकांनी Gmail च्या माध्यमातून बनलेला ILOSC (Indian Librarian Online Study Circle) सारखा कम्युनिकेशन ग्रुपवर ग्रंथालय प्रोफेशन संदर्भात अडीअडचणी, समस्या किंवा आपल्या कडील माहिती शेअर करण्यास एक प्रभावी माध्यम आहे. त्या धर्तीवर असे गृप तयार होउन समस्या निरसन होण्यास मदत मिळतांना दिसेल. असे कम्युनिकेशन गृप शाळा, महाविद्यालय, विद्यापीठात भविष्यात निर्माण होणे गरजे आहे. ग्रंथालय व माहितीसेवेमध्ये नवनविन तंत्रज्ञानाच्या सहाय्याने सोपस्कार, स्कॅनलेशन, संदर्भसेवा, रेफरलसेवा, निवडक माहिती सेवा, संघटन, व्यवस्थापन आज फार मोठ्या प्रमाणात बदल झालेला असला तरी शैक्षणिक ग्रंथालयाच्या दृष्टीने विकसित देशाच्या तुलनेने अविकसित व विकसनशिल देशात तंत्रज्ञानाचा वापर वाढने गरजे आहे. व वाढमय चौर्य सारख्या समस्यावर मात करणे तंत्रज्ञानामुळे शक्य झाले आहे. कॉपीराइट अॅक्ट, बौद्धिक संपदा कायदा प्रभावी पणे अमलात येण्यास देखील इण्टरनेट व इतर घटकांची मदत होत आहे. भविष्यात त्यात वाढ होणे अपेक्षित आहे. आज प्रत्येका स्मार्ट फोन आहेत व ॲन्ड्रॉइड सारख्या ऑपरेटिंग सिस्टिम्स आहेत त्यांना मोबाईल ॲपच्या माध्यमातून डिजिटल ग्रंथालय सेवा पुरवता येतील.

निष्कर्ष : - माहितीचे जतन व पुनर्प्राप्ती इ. कार्य संगणक व इण्टरनेट च्या माध्यमातून सोपे झाले आहे. माहिती संग्रहाची स्थान मर्यादा व सेवेच्या प्रमाणात आमूलाग्र बदल झालेला दिसून येतो. विविध ग्रंथालय नेटवर्क व संकेतस्थळामुळे माहितीची देवाणघेवाण शिघ्र व अचुक मिळण्याचे साधन होवू पहात आहे. नवनविन संशोधन प्रलेखासह जुने एतिहासहासकालिन व दुर्मिळ स्रोत घरि बसल्या संगणक व मोबाईलच्या माध्यमातून डिजिटल स्वरूपात उपलब्ध होतांना दिसत आहेत. भविष्य काळातील वाचकांच्या गरजा लक्षात घेता त्यानुरूप तंत्रज्ञानाच्या मदतीने बदल होणे व समस्येवर मात करणे सोपे झाले आहे. आहे त्या पेक्षा विकसनशिल व अविकसित राष्ट्रांना डिजिटल ग्रंथालयाचा विकास होणे गरजेचे आहे.

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सार : माहिती तंत्रज्ञानाच्या युगा मध्ये ग्रंथालये माहिती केंद्र बनली आहेत. या केंद्रामध्ये ग्रंथ आणि नियतकालीका पेक्षा ही संगणक आणि इलेक्ट्रॉनिक माध्यमांनी जागा घेतली आहे. सुरवातीच्या काळात ग्रंथालये ही पारंपारीक पद्धतीने काम करत असत. परंतु माहितीच्या परीस्फोटा मुळे दररोज नवनिर्माण माहितीची निर्मिती होत असल्यामुळे ज्ञानसाठा अधिकाधिक वाढत आहे. माहिती तंत्रज्ञानाच्या प्रभावामुळे प्रत्येक क्षेत्रात संगणकीय करणाचे महत्त्व वाढले. ग्रंथालये ही त्याला अपवाद नाहीत. या तंत्रज्ञानाच्या प्रगतीमुळे ग्रंथालय व "माहिती शास्त्र" ही शाखा विकसीत झाली. आज माहिती तंत्रज्ञान युगात आणि विज्ञान वशांत या संकल्पना जाणून घेवून त्या संकल्पनेत वरवर पहाता भेद दिसतो.

स्वरूप - बदलत्या स्वरूपात डिजीटल ग्रंथालय हे काळाची गरज बनत आहे. इलेक्ट्रॉनिक माध्यमांच्या बदलत्या स्वरूपात बरेच बदलते प्रवाह त्यात इंटरनेट, ई-बुक्स, ई-जर्नलस, ई-स्त्रोत इ. प्रकारांचा समावेश होतो. डिजीटल ग्रंथालयाच्या परिपुर्तते साठी साधारण तीन घटकांची आवश्यकता आहे.

संगणक समाज, साहित्याचे डिजीटल स्वरूप, आदान प्रदान तंत्रज्ञान, सॉफ्टवेअर, निर्देश बनविणे, इमेज कनव्हेशन, संपादित करणे, साठवणे

व्याख्या - टेरेन्स स्मिथ - यांच्या मते डिजीटल ग्रंथालय म्हणजे शास्त्र शुद्ध पद्धतीने तयार केलेले व डिजीटल तंत्रज्ञानाचा वापर करून त्यांची व्यवस्थित मांडणी करून ते वापरण्यासाठी विविध पद्धतीचे व विविध अंगांनी वापरण्या योग्या मार्गांसहित उपलब्ध डिजीटल साहित्य संग्रह होय.

सुरवात - ग्रंथालयाच्या सहकार्यातून रिसोर्स स्कोअरिंग ही संकल्पना पुढे आली प्रत्येक वाचकाचे साहित्य ग्रंथालय द्वारे शोधित नाही वाचकांना त्यांचे वाचन साहित्य मिळवून देण्यासाठी जवळच्या ग्रंथालयातून उसनवार पद्धतीने वाचन साहित्य घेवून वाचकांना देवघेव करता येते. त्यामुळे इंटर लायब्ररी लोन संकल्पना उदयास आली. त्यामुळे अनेक ग्रंथालये एकमेकांना जोडण्यात आली. या पद्धतीच विद्यार्थ्यांच्या, ग्रंथालयाच्या संघटनांना प्रेरणा मिळून अनेक दरात नियतकालिके पूर्ण स्वरूपात इंटरनेटच्या माध्यमातून मिळत असल्यामुळे वाचण्याची वाचन विषयक गरज पूर्ण होऊ लागली.

फायदे - ३.१) इंटरनेट व बाऊंडर द्वारे चोवीस तास माहिती मिळविता येते. ३.२) वेळेचे बंधन नसते. ३.३) डिजीटल माहिती स्रोतांचा एकाच वेळेस अनेक उपभोक्त्यांना वापर करणे शक्य होते ३.४) विखुरलेल्या डेटाबेस मधुन अनेक संज्ञाच्या आधारे माहिती मिळू शकते. ३.५) डिजीटल माहिती स्रोत वापरण्यावर मर्यादा नसते. ३.६) डिजीटल असलेला डेटा संग्रहीत करणे, पुनर्प्राप्त करणे, जतन करणे सहज शक्य होते.

प्रक्रिया - डिजीटल माहिती स्रोतांचे स्वरूपात करणे आवश्यक आहे. माहिती स्रोतांचे डिजीटलायझेशन करण्याची पद्धत कठीण असली तरी हाताळण्यास सोपी आहे. माहिती स्रोतांची निवड अथवा ग्रंथ साधनांची निवड केली जाते. डेटाकॅप्चर, संग्रहण डेटा प्रोसेसिंग, इंडेक्सींग पुनर्प्राप्ती या प्रक्रिये द्वारा डिजीटल स्वरूपात डेटा होत असतो.

भविष्यात होणारे फायदे - डिजीटल ग्रंथालयाच्या निर्मिती मुळे भविष्यात त्याचा फार मोठ्या प्रमाणावर फायदा होणार आहे.

ग्रंथालयातील सर्व माहिती डिजीटल रूपांतर केल्याने ती सुरक्षित व सहज उपलब्ध होण्याची सोय होईल. दुर्मिळ ग्रंथ ज्याचा कागद ठिसूळ असतात अशांचे जतन करून ठेवण्याचे डिजीटायझेशन उपयोगी साधन आहे. डिजीटायझ्ड माहिती किंवा समूह दळण वळणाचे आणि संदेश वहनाचे उपयुक्त व प्रभावी साधन आहे. डिजीटायझेशन मुळे जागतिक संगणकीय जाळ्या वरिल डिजीटायझ्ड माहिती पाठवता येते.

छापील माध्यमांची मर्यादा. ग्रंथालय तालिकेची व्याप्ती वाढवणे. माहितीच्या वेग जास्त असतो. भुभागाची मर्यादा नसते. डिजीटलच्या क्षेत्रात भविष्यातील वाचन साहित्य संग्रहाचे स्थलांतर हे सोयीचे झालेले आहे.

सारांश - इंटरनेट हे ग्रंथालयातील माहिती साधनाचे प्रभावी माध्यम बनले आहे. आता इलेक्ट्रॉनिक प्रवाहात माहिती साठवण्यासाठी ई-इंटरनेट, ई-बुक्स, ई-जर्नलस अशा वेगवेगळ्या माध्यमांचा यात समावेश आहे. डिजीटल ग्रंथालयाच्या निर्मितीमुळे माहिती तंत्रज्ञान युगात एक प्रकारे क्रांती झाली आहे. आठवड्यातील चोवीस तास ग्रंथालये सुरु झाले असून हव्या त्या वेळेस आपणास ग्रंथालय वाचन साहित्याचा उपयोग घेता येवू शकतो.

संदर्भग्रंथ -

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सारांश: पारंपारिक ग्रंथालये, संकरित ग्रंथालये आ ण आभासी ग्रंथालये अशा ग्रंथालय आ ण माहिती केंद्राच्या तीन पढी आजही जगात अस्तित्वात आहे. परंतु कुठेतरी वाचकांचा मोठा वर्ग हा आधुनिक सुख सोयीकडे वळतांना दिसत आहे परिणामी ग्रंथालय आ ण माहितीकेंद्रांना सुध्दा आधुनिक सेवा आ ण सु वधा उपलब्ध करून देण्यास प्राधान्य देणे गरजेचे आहे. जेणे करून वाचकांना ह्या असणा-या माहितीचे संग्रहण, जतन आ ण प्रतीप्राप्ती हि प्र क्रया सरळ आ ण आ ण सोपी करता येणे शक्य होते. आधुनिक पद्धतीने माहितीचे संग्रहण, जतन आ ण प्रतीप्राप्ती करण्यासाठी डी स्पेस या प्रणालीचा वापर सुध्दा खूप फायदेशीर आहे आ ण म्हणूनच या संशोधन पत्रात संशोधकाने डी स्पेस या आधुनिक प्रणालीचा अभ्यास करून या प्रणालीच्या कार्यपद्धतीचा आ ण उपयोगाची मुद्देसूत मांडणी केली आहे ती स वस्तरपणे जाणून घेऊया.

शोधसंज्ञा: माहितीसंग्रहण, जतन आ ण प्रतीप्राप्ती, डजीटायझेशन प्रणाली, डी-स्पेस

प्रस्तावना: जगामध्ये आजही ग्रंथालयांच्या तिनही पढी उपलब्ध आहे असे म्हटल्यास वावगे ठरणार नाही या पढी म्हणजे पारंपारिक ग्रंथालय, संकरित ग्रंथालय आ ण आभासी ग्रंथालय या तिन्ही पढीचे कार्य, त्याचे संसाधने आ ण वाचक हे सुध्दा फार वेगळे आहे. त्याचप्रमाणे त्यांच्या कार्यशैलीत सुध्दा खूप मोठा बदल झालेला आपणास लक्षात येईल. आधीच्या काळात ग्रंथ हे सामान्यांना उपलब्ध सुध्दा होत नसे तर आज ग्रंथ हे लोकांच्या एका बोटांवर म्हणजे मोबाईलच्या एका क्लिक वर उपलब्ध आहे हि खूप मोठा चमत्कारच समजला जातो आ ण यामागे इंटरनेट आ ण माहिती तंत्रज्ञान या क्षेत्रात झालेल्या अनेक संशोधनाचा खूप मोठा वाटा आहे हात आहे आ ण संशोधनकार्यामध्ये मध्ये ग्रंथालयांचा सुध्दा खूप मोठा वाटा आहे. हि एक परस्पर पूरक प्र क्रयाचा आहे. आज माहिती आ ण संप्रेषण तंत्रज्ञानाचा वाढता उपयोग आ ण त्यातून होणारा बदल हा आज ज्याप्रमाणे संपूर्ण जगाला मान्य आहे त्याचप्रमाणे ग्रंथालय आ ण माहितीकेंद्रात सुध्दा याला स्वीकृती देण्यात येत आली असून यांवर आधारित उपक्रमांना खूप प्राधान्य देण्यात येत आहे. आज ग्रंथालयातील वाचक सुध्दा माहिती आ ण तंत्रज्ञानाधारित सेवा आ ण सु वधांची मागणी करू लागला आहे. ग्रंथालयातील बाह्य स्वरूपच नाही तर ग्रंथालयातील संसाधने सुध्दा आज खूप मोठ्या प्रमाणात बदललेली दिसतात आ ण त्यांचा वापर हा वाचकांना सुध्दा अनेक दृष्ट्या फायदेशीर ठरत आहे. यामुळे ग्रंथालयातील संसाधनाचा आधुनिक पद्धतीने संग्रह करून त्याचे जतन करणे आ ण ते वाचकांसाठी कंवा सर्वांसाठी उपलब्ध करून देणे या प्र क्रयेवर कार्य होतांना खूप मोठ्या प्रमाणावर दिसत आहे. आधुनिक संसाधने आ ण त्यांचे व्यवस्थापन हि जरी नवीन आ ण तंत्रज्ञानाधारित संकल्पना असली तरी तीची अंमलबजावणी मात्र फार काही अवघड कंवा कचकट प्र क्रया नाही. यांसाठी व वध प्र क्रया आ ण प्रणाली आज उपलब्ध आहे आ ण अनेक मोठ्या ग्रंथालयामध्ये कंवा माहिती केंद्रात यांचा वापर हा फार यशस्वीपणे सुरू आहे. अशा ठिकाणी या कार्यासाठी डजिटल कंटेंट व्यवस्थापन करणा-या प्रणालींचा वापर केला जातो. वाढत्या ई-संसाधनाचा वापर आ ण त्यांची लोक प्रयता लक्षात घेता ग्रंथालये सुध्दा आता यांच्या

संग्रहनाकडे लक्ष देऊ लागली आहे. ग्रंथालयांकडून डीजीटायझेशन वर सुध्दा भर देण्याचा प्रयत्न खूप मोठ्या प्रमाणात सुरु आहे अगदी हस्तलिखितांपासून तर संशोधन प्रकल्पापर्यंतच्या संसाधनाचे डीजीटायझेशन ग्रंथालयांद्वारे केले जात आहे आ ण त्यांना इंटरनेट च्या मदतीने ऑनलाईन उपलब्ध करून दिले जाते व यातून ग्रंथालयांच्या वाचकांना, वद्यार्थ्यांना आ ण संशोधकांना खूप फायदा होतो. ई-संसाधनाचे संग्रहण आ ण जतन करणे हे खूप अवघड नसले तरी यांसाठी अत्याधुनिक प्र शक्षण आ ण तंत्रज्ञानाची गरज भासते आ ण यांसाठी आगोदर ग्रंथपाल आ ण ग्रंथालय कर्मचारी यांना डीजीटायझेशन म्हणजे नेमक काय? त्यांचे फायदे कोणकोणते? यांसाठी कोणती प्र क्रया अवलंबवणे गरजेची आहे? याचा वापर कसा केला जातो? अशा अनेक बाबींची माहिती असणे आवश्यक आहे. यासर्व माहितीचा अभ्यास या संशोधन लेखांत करण्यात आलेला आहे. या संशोधन पत्रात डी स्पेस या प्रणालीचा अभ्यास करण्यात आला आहे हि प्रणाली सुध्दा डीजीटायझेशन याच कार्यासाठी तयार करण्यात आली आहे. डी स्पेस च्या मदतीने कशा प्रकारे माहितीचे कंवा माहिती संसाधनाचे संग्रहण, जतन आ ण प्रतीप्राप्ती केली जाते याची स वस्तर माहिती करून घेणे हे सुध्दा या संशोधन लेखाचा मुख्य भाग आहे.

माहिती संग्रहण, जतन आ ण प्रतीप्राप्ती: ग्रंथालय आ ण माहितीकेंद्रे त्यांच्या पालक संस्थेच्या प्रकारानुसार आपली संसाधने संग्रहित करतात आ ण त्या संसाधनाचे जतन करून त्यांना वाचकांच्या मागणीनुसार उपलब्ध करून देता याच प्र क्रयेला माहिती संग्रहण, जतन आ ण प्रतीप्राप्ती असे म्हटले जाते. पारंपारिक ग्रंथालयांत या कार्यासाठी खूप सा-या संकल्पना होत्या ज्यात निर्देशने, ता लका अशा संकल्पनाचा अंतर्भाग होता आ ण यांच्या मदतीने माहितीचे एक प्रकारे व्यवस्थापनच केले जात असे, मात्र आज आधुनिकतेच्या मदतीने अशा कार्यासाठी अनेक पर्याय उपलब्ध झाले आहे तसेच याकार्यातील कचकटपणा सुध्दा कमी करण्यात आला आहे. आता अशीच कार्ये आधुनिक प्रणालीच्या मदतीने केली जाते आ ण त्यांच्याच मदतीने ती वाचकांपर्यंत पोहच वली जात आहे. यामुळे वाचकांचा व ग्रंथालय आणी माहितीकेंद्राचा वेळ वाचतो

डीजीटायझेशन म्हणजे काय: डी स्पेस या कार्यप्रणालीचा अभ्यास करण्याआगोदर डीजीटायझेशन म्हणजे काय याची हि माहिती असणे फार आवश्यक आहे. यंत्रांच्या मदतीने (उदा. स्कॅनर, डिजिटल कॅमेरा, बुक स्कॅनर इ.) भौतिक स्वरूपात अस्तितवात असणा-या ग्रंथ कंवा ग्रंथेत्तर साहित्यांना ई-स्वरूपात रूपांतरीत करून संगणकावर साठवून ठेवणे म्हणजे डिजिटायझेशन होय. डिजिटायझेशनमूळे ई-स्वरूपात तयार केलेला संग्रह हा इंटरनेटशी जोडून सुध्दा वापरता येतात आज फार मोठ्या स्वरूपात या कार्यास चालना मळाली आहे. डिजिटायझेशन प्रक्रीयेत सध्या सर्वात जास्त ज्या घटकांचा समावेश आहे ते म्हणजे दूर्मळ ग्रंथ, महत्वाची व ऐतिह सक कागदपत्रे शोध प्रबंध (पी.एच.डी/एम. फल) लघु शोध प्रकल्प (शैक्ष णक) इत्यादी. डिजिटायझेशन मूळे संसाधनांचा संयुक्त वापर शक्य आहे (Resource Sharing). डिजिटायझेशनमूळे आपल्या संस्कृती आ ण परंपरांशी निग डत असलेले ग्रंथ व हस्त ल खते यांना सांभाळून जास्त काळ टिकवता येते. शैक्ष णक क्षेत्रात डिजिटायझेशन प्रक्रीयेवर भर देण्यासाठी यू.जी.सी व्दारे अनुदान देऊन या कार्यास चालना देण्याचे काम सुरु आहे. याचप्रमाणे INFLIBNET (Information and Library Network, Gandhinagar) ह्या

स्वायत्त संस्थेच्या मदतीने देशातील पी.एच.डी संशोधन आराखडा आ ण संपूर्ण शोधप्रबंध डिजिटायझेशन करून इंटरनेट वर Shodhganga आ ण Shodhgangotri या संकेतस्थळावर उपलब्ध करून देण्यात आले आहे.

डी स्पेस : डी स्पेस एक प्रणाली आहे ज्याद्वारे माहितीचे स्रोत आ ण माहितीचे जतन करता येणे शक्य होते. डी स्पेस द्वारे व वध फाईल फॉर्मेट मधील माहिती साधनांचे संग्रहण आ ण जतन करता येते यांत डेटा फाईल्स, ऑडीओ फाईल्स, वडीओ फाईल्स इत्यादींचा समावेश करता येतो आ ण त्यांना इंटरनेट च्या जोडणीने सर्वत्र उपलब्ध करून देणे शक्य होते. डी स्पेस मध्ये संग्रहित असलेल्या माहिती संसाधनाची सूची तयार करता येते आ ण यामुळे वापरकर्त्याला उपलब्ध असलेल्या संसाधनातून हवी असलेली माहिती प्रतीप्राप्त करता येते आ ण म्हणूनच डी स्पेस या प्रणालीचा उपयोग आधुनिक पद्धतीने माहिती संग्रहण, जतन आ ण प्रतीप्राप्ती साठी केला जातो असे आपणास निदर्शनास येईल. डी स्पेस द्वारे संग्रहित आ ण जतन केलेले माहिती संसाधने हे दीर्घ काल टिकून रहाते. डी स्पेस चा मुख्य वापर हा संस्थांची “संस्थात्मक भांडार” (Digital Repositories) तयार करण्यासाठी केला जातो.

डी स्पेस प्रणालीचा इतिहास : डी स्पेस ची निर्मिती Hewlett Packard-MIT alliance यांच्या मदतीने जुलै २००० या वर्षात झाली. डी स्पेस ची सर्वात पहिली आवृत्ती हि १.० होती आज डी स्पेस ची ४.० हि नवीन आवृत्ती सर्वत्र उपलब्ध आहे.

डी स्पेस तीन प्रमुख कार्ये करण्यासाठी तयार करण्यात आले आहे १) व वध प्रकारच्या माहितीस्रोतांचे संग्रहण आ ण जतन करण्यासाठी २) अगदी सोप्या पद्धतीने उपलब्ध असलेल्या माहिती संसाधनातून माहितीचा शोध घेणे कंवा बाऊज करता येणे शक्य होते ३) संग्रहित केलेले माहितीचेस्रोत हे दीर्घकाल पर्यंत टिकवता येणे शक्य शक्य होते.

डी स्पेस प्रणाली वापरण्याचे फायदे: १) संशोधन कार्यास आवश्यक असणारी संसाधने जलद गतीने उपलब्ध करता येणे शक्य होते जेणे करून संशोधन कार्यास गती प्राप्त होते. २) इंटरनेट च्या मदतीने जगातील कोणत्याही ठिकाणचे माहिती स्रोत हाताळता येणे शक्य होते. ३) अध्यापन प्रक्रीयेसाठी वारंवार लागणा-या संसाधनांना संग्रहित करून अभ्यासक्रम संच तयार करून तो वद्यार्थ्यांना उपलब्ध करून देता येणे शक्य होते. ४) वेगवेगळ्या स्वरूपात आ ण व वध ठिकाणी वखुरलेले माहितीचे स्रोत एकाच ठिकाणी उपलब्ध करून देता येणे शक्य होते.

निष्कर्ष: डीस्पेस हि एक मुक्त प्रणाली असून यांचा वापर माहितीचे संग्रहण, जतन आ ण प्रतीप्राप्ती करण्यासाठी करण्यात येतो. अनेक वद्यापीठ, महा वद्यालये आ ण इतर शैक्षणिक आ ण संशोधन संस्था यांचा वापर संस्थार्गत भांडार (Digital Repositories) निर्मितीसाठी करतात. यामुळे माहितीचे सामुहिक वापर शक्य होते. जुन्या आ ण जीर्ण झालेल्या कंवा दुर्मळ संसाधनांना सुध्दा नव्याने वापर योग्य तयार करून दीर्घ काळ टिकवता येते. संशोधन प्रकल्प आ ण शोध निबंधांना सुध्दा यांत समा वष्ट करता येते यामुळे संशोधकांना आ ण

संशोधन कार्यात सुध्दा यांचा फायदा होतो. डी स्पेस व्दारे जास्तीत जास्त संस्थार्गत भांडार (Digital Repositories) निर्मतीसाठी प्रयत्न हे केले गेले पाहिजे.

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प्रस्तावना : मुद्रण कलेच्या शोधा अगोदर झाडाच्या सालावर पानावर कातडीवर लिहीले जाई. पुढे कागदाचा शोध लागला. हस्तलिखित साहित्य मोठ्या प्रमाणात निर्माण होऊ लागले. पुढे ग्रंथालय निर्माण झाली पुर्वी ग्रंथालयाच्या काही मर्यादा होत्या ग्रंथ हे पुस्तक बंद अवस्थेत होते. राजे व महाराजे सारखा ठराविक वर्ग हा ग्रंथाचे वाचन करत असे व सर्व साहित्य हस्तलिखित होते. पुढे मुद्रण कलेचा शोध लागला मोठ्या प्रमाणात साहित्य निर्माण होऊ लागले. वेगवेगळ्या लिपीत व भाषेत साहित्य निर्माण झाली. पारंपारिक ग्रंथालये निर्माण झाली मानवाने त्या पुढे जाऊन सर्व क्षेत्रात प्रगती केली. सर्वात महत्वाचा शोध म्हणजे कॉम्प्युटरचा होय. कॉम्प्युटरचा वापर हा सर्व क्षेत्रात व ग्रंथालयात करण्यात आला. कॉम्प्युटर मध्ये साहित्य हे मॅग्नेटिक डिस्क, फ्लॉपी डिस्क, सिडी, डी.व्ही.डी., पेनड्राईव्ह यामध्ये माहिती साठवली जाऊ लागली टेलीकॉम्युनिकेशन टेक्नॉलॉजी मोठा बदल झाला इंटरनेट, मोबाईल इतर मोठ्या साधनाचा वापर हा करण्यात आला. कॉम्प्युटरमुळे माहिती जलद व अचूक मिळाली आहे.

डिजिटल लायब्ररी वर्कशॉप १९९४ : पारंपारिक ग्रंथालय करीत असलेले ग्रंथ व तत्सम माहिती साधनाचे संग्रह तालिकीकरण माहितीचा शोध व वितरण इ. कार्य डिजिटल गणन प्रक्रिया डिजिटल माहिती संग्रह संप्रेषण तंत्रज्ञान आज्ञावली यांच्या सहाय्याने करणारे यंत्राला म्हणजे डिजिटल ग्रंथालय होय.

बर्मिंग यांच्या मते : मल्टीमीडीया डिजिटल स्वरूपातील माहितीच्या आधारे वेगाने विस्तारीत असलेल्या जाळ्यातील माहिती प्रत्यक्ष व अप्रत्यक्ष शोधण्याची सुविधा पुरविणाऱ्या संरचनेला डिजिटल ग्रंथालय म्हणतात.

लार्सन आर. आर. : डिजिटल ग्रंथालय म्हणजे विश्वव्यापी किंवा जागतिक व्हर्चुअल ग्रंथालय हजारो नेटवर्क असणाऱ्या इलेक्ट्रॉनिक ग्रंथालयाचे ग्रंथालय.

डिजिटल ग्रंथालयाचे उद्दिष्टे : १. वाचनसाहित्य आणि नेटवर्कचा सामुहिक वापर, २. आधुनिक आणि उत्कृष्ट सेवा पुरवणे, ३. टेलिकॉम्युनिकेशनद्वारे डिजिटल स्वरूपात माहिती साठवणे व तिचा वापर करणे. ४. वैयक्तिक माहिती पुरविणे.

डिजिटल ग्रंथालयाचे गुणधर्म : १. वाचन साहित्य संग्रह टेक्स, व्हिडीयो, ऑडिओ, संगणक, इमेज, प्रोग्राम, मल्टीमीडीयाचा वापर होतो. २. दुर्मिळ व खर्चिक वाचनसाहित्य डिजिटल ग्रंथालयाद्वारे पुरवितात. ३. आधुनिक स्वरूपातील माहिती डिजिटल ग्रंथालय द्वारे शक्य होते.

डिजिटल ग्रंथालयाचे फायदे : १. दुर्मिळ वाचनसाहित्याचे जपणूक व संवर्धन २. संगणक आणि टेलिकॉम्युनिकेशन साधनाचा वापर. ३. कमी जागेत जास्त माहिती. ४. अचूक व जलद माहिती मिळते. ५. वेळ व क्षम वाचतात.

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डिजिटल ग्रंथालयाचे सॉफ्टवेअर : १. ग्रीनस्टोन डिजिटल लायब्ररी - हे सॉफ्टवेअर न्युझीलंड येथील बार्नेटॉ विद्यापीठाने विकसित केले, २. डिस्पेज - ह्युलेट पॅकड आणि मॅसेच्युसेट्स इन्स्टिट्यूट ऑफ टेक्नॉलॉजी सहकार्यातून विकसित.

डिजिटल ग्रंथालय : १. लायब्ररी ऑफ कॉग्रिस, २. निसाट

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डिजिटल ग्रंथालयाची सुरक्षितता : आजच्या माहिती व तंत्रज्ञान युगात ग्रंथालय यांनी आपले रूपडे पालटले असून आधुनिक तंत्रज्ञानाची जोड घेऊन ग्रंथालयांनी आपली परंपरागत व्यवस्था मोडीत काढून ग्रंथालय इंटरनेट जोडणी अदृश्य ग्रंथालयासारखी तथा इलेक्ट्रॉनिक ग्रंथालय या सारखी माध्यमे वापरात आणण्यास सुरुवात झाली असून त्यामुळे मनुष्यबळ तथा तांत्रिक चुका बऱ्याच प्रमाणात कमी होण्यास मदत झाली. ग्रंथालयीन व्यवस्थेत वेळेची बचत व वाचकांना सह ग्रंथसाधने उपलब्ध होण्यास मदत होत आहे. परंतु त्याचप्रमाणे सायबर गुन्हे देखिल मोठ्याप्रमाणात वाढल्यामुळे ग्रंथालयाचा दस्तावेजच्या सुरक्षिततेचा प्रश्न गंभीर बनला आहे. त्यासाठीच्या या उपाययोजना काय असाव्यात याचा आढावा पुढीलप्रमाणे घेत आहोत.

योग्य अशा अंटी व्हायरस ची निवड : आज सायबर गुन्ध्यामुळे संगणकीय व्हायरस निर्माण करून दस्तावेज करपट करणे संबंधित ठिकाणाची साईट हॅक करणे. यामुळे डिजिटल ग्रंथालयासमोरील आव्हाने, अत्यंत गंभीर झाली असून त्यासाठी योग्य अशा अंटीव्हायरसची निवड करण गरजेचे आहे. ज्यामुळे ग्रंथालयाचा दस्तावेज सुरक्षित करण्यास मदत होईल.

डिजिटल लायब्ररीद्वारे ऑनलाईन दस्तावेज सोबत ऑफ लाईन दस्तावेज निर्माण करणे: सायबर विश्वास निर्माण झालेले ठोके लक्षात घेता ग्रंथालयाचा दस्तावेज दोन प्रतीने कॉपी करणे, जेणेकरून ऑनलाईन दस्तावेजचा धोका निर्माण झाला तरी पर्यायी ऑफलाईन संगणकात दस्तावेज सुरक्षित नोंद करून ठेवल्याने ग्रंथालयाचा संपूर्ण दस्तावेज नष्ट होण्याचा धोका ठरेल.

ग्रंथालयात येणाऱ्या वाचकांच्या पेन ड्राईव्हची तपासणी करून ग्रंथालयात वापरण्यास परवानगी देणे : ग्रंथालयामध्ये येणाऱ्या प्रत्येक वाचकांच्या पेन ड्राईव्ह हा व्हायरस बाधित नसेल याची शाश्वती देता येत नाही. त्यासाठी सर्वप्रथम वापरकर्त्यांच्या पेनड्राईव्हची तपासणी करून बाधित पेन ड्राईव्ह अंटीव्हायरस द्वारे स्वच्छ करून ग्रंथालय वापरकर्त्यांस डिजिटल ग्रंथालय वापरात उपलब्ध करून देता येईल.

तांत्रिक उपाययोजना : तांत्रिक उपायांमध्ये मुख्यत्वे करून ग्रंथालय सर्वसामान्य व इलेक्ट्रॉनिक सुरक्षेच्या दृष्टीकोनातून सक्षम करण्याची गरज स्पष्ट होते.

अ) ग्रंथालयात प्रवेशावर नियंत्रण आणण्यासाठी केवळ अधिकृत वाचक व्यक्तीच ग्रंथालयात प्रवेश करतील यासाठी कार्ड रिडर्स, मॅशिन डिटेक्टर्स, तसेच चुंबकीय बटणे, गेटस्ची व्यवस्था असावी. ब) सुरक्षेसंबंधी घडणाऱ्या या घटनांबाबत तात्काळ धोक्याची सूचना देण्यासाठी बझर अलार्मची व्यवस्था. () ग्रंथालयात प्रवेश करताना सिसीटीव्हीची व्यवस्था तसेच ग्रंथसंग्रह विभागात क्लोज्ड सर्कीट टिव्हीची व्यवस्था असावी. जेणेकरून असामाजिक तत्वांचा संशयास्पद हालचालीची नोंद घेऊन उपाययोजना करता येईल. ड) ग्रंथालयातील ग्रंथ साहित्य व इतर साहित्यांची व यंत्रसामग्री चोरीस जाऊ नये म्हणून इलेक्ट्रॉनिक मॅग्नेटिक तंत्रज्ञानाचा वापर व्हावा.

सारांश : आधुनिक युगातील तांत्रिक साधनांशी ग्रंथालयांनी सांगड घालून त्यातील असणारे धोके ओळखून त्यावर मात करून ग्रंथालय अधिकाधिक सुलभरितेने वापरण्यायोग्य सुरक्षित करावे त्याचा सुयोग्य वापर व्हावा व वाचकांचे समाधान व ग्रंथालयाची सुरक्षितता या दोन्ही बाबी साध्य व्हाव्यात.

संदर्भ : फडके दे. ना. ग्रंथालय संगणकीकरण आणि आधुनिकीकरण पुणे विद्यापीठ प्रकाशन. २००१.

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पांडुलिपियों के डिजिटल संरक्षण में राष्ट्रीय पांडुलिपि मि”ku dh Hkfedk

eatyk tlu ,भोधाथकz, Mkw h-hjjeu, fo” ofo|ky; dkvkjfcykl ij]ANRrh x<½

I kjk”k

Hkkjr fo” व की सबसे प्राचीन समृद्ध सभ्यताओं व विरासतों से परिपूर्ण राष्ट्रों में से है। वि” o ea l okf/kd 50 yk[k i kMfyfi; ka dk HkMkj Hkkjr ea gsf tl ea gekjh l k dfrd], frgkfl d /kjkgjka dk [kttkuk fNik gvk gs tks erz vks verz: lk ea ifjyfr ga ikphu lH; rki ikphu l e) o cgrnk: keh fofdr l k i) fr][kxbyh; foKku]foKku]fofo/k /keld dh ij jk, a l fgr kkr o vul gy>k i kMfyfi; ka dk vfkkg [kttkuk ga ftl s nh?kdkfyd o mfor l j {k.k dh vko” ; drk ga Hkkjr ds bfrgk l o foru dh Lefr bu i kMfyfi; ka ds fMftVy l j {k.k djus dh fn” kk ea Hkkjr सरकार के संस्कृति मंत्रालय के राष्ट्रीय पांडुलिपि मि” ku ¼ ueke ½ }kjk igy dh xba ftl ea 4 yk[k ikphu i kMfyfi; ka ds fMftVy l j {kkr fd; k x; k ga fOj Hkh dbz pukkfr; ka vks epnka ds dkj.k bl ds y{; dh i wkr l s vHkh Hkh nj gsf tl s fujrj vks mfor dk; bdeka l s ijk fd; k tk l drk ga dh&omA & i kMfyfi] fMftVy l j {k.k

i.Lrkouk fo” o dsfdl h Hkh ns” k dh rnyuk ea Hkkjr ea l okf/kd5 fefy; u i kMfyfi; ka dk l xg gs tks fd fofHku सामग्रियों यथा – ताम्र पत्र,चर्म पत्र,ताड़ पत्र,कागज,सोना,चांदी आदि में व विविध लिपियों और भाशाओं में लिखित है। i kMfyfi ml nLrkost dks dgk tkrk gs tks , d 0; fDr ; k vf/kd 0; fDr; ka }kjk gFkka l s fy [kh xbz gk t s s & gLrfyf [kr i=A fi v/ vFkok ; kf=d o fo | r jhr l s r s kj nLrkost vFkok ifrfyfi l kexh dks i kMfyfi ugha dgk tk l drk A Kku dh vueky bl l ank dh mfor ns[kHky vks j [kj [kko dh egrh vko” ; drk ga l j {k.k ds dbz rjhdk vks rduhdka dk bLreky djs i kMfyfi; ka dks l j f {kr j [kus dk iz kl fd; k tk jgk gs yfdu fMftVy l j {k.k , d k iz kl gs ftl l s mUga l j f {kr j [kus ds l kFk mudks tuekul rd vkl kuh l s miyC/k dj; k tk l drk ga Hkkjr ea fMftVy l j {k.k dk iz kl l u-2008 ea i j Hk gvkA ftl ea dN ied [k l xBuka vks , t f l ; ka }kjk dbz ied [k dk; bdeka ds fdz kUo; u }kjk bl ij dk; Zfd; k tk jgk ga Hkkjr l jdkj ds lk; Mu , oa l dfr मंत्रालय ने फरवरी 2003 में राष्ट्रीय पांडुलिपि मि” न की स्थापना 5 वर्षों के लिए की थी। जिसका उद्दे” ; Hkkjr dh fo” kky i kMfyfi l ank dh [kkt dj ml s l j f {kr djuk ga

fMftVkbts”ku o mnns” ; , frgkfl d]dykRed o l k dfrd /kjkgjka l s tMh i kMfyfi; ka dks l j f {kr o iys [ku dj fMftVyhj.k djuk vkt egROIwz {k= ds : lk ea mHkdj vk; k ga mlur l pouk i k s] kfxdh ds dkj.k eny i kMfyfi को प्रलेखित व संरक्षित करना और विद्यार्थियों और भोधाथियों तक आसान पहुंचाना संभव हो पाया है। 2004 ea fe” ku us , d ik; yV iktDV ds : lk ns” kHj ds fofHku {k=ka dh i kMfyfi; ka dks ea fMftVkbT djuk i j Hk fd; ka egROIwz i kMfyfi; ka dh fMftVkbTM dki; ka dh f l k d fMftVy ykbcjh r s kj djuk i kMfyfi; ka ds fMftVkbts” ku ds fy, ekud o ifof/k r s kj djuk , oa i kMfyfi l j {k.k i kVLj l b/l l ¼, el hi h½ djuk bl ds mnns” ; ga

राष्ट्रीय पांडुलिपि मि”ku lk; Mu , oa l k dfr ea=ky;]Hkkjr l jdkj us , d egRokdk [kh i j; kstuk ds : lk ea bl dh LFkku dh FkA ftl dk y{; Hkkjr dh i kMfyfi; ka dk irk yxkuk i y s [ku] l j {k.k o i d kj djuk FkA bl fe” ku us enkl fo” वविद्यालय के साथ अपने प्रारंभिक वर्ष में नए कैटेलोगस कैटेलोगरम कार्यक्रम का पुनः प्रारंभ fd; k ftl ds 36 [kM i dkr” kr gk p d s ga ns” k ds l Hkh j k T; ka ea LFkkr i kMfyfi l d k/ku dnz ¼ , evkjl h ½ vks i kMfyfi l j {k.k dnz ¼, el hi h½ ds l kFk dk; Z d j r s gq ; g fe” ku fo” ofo|ky; ka vks i l rdky; ka vks fofHku /kfed l d Fkka; Fk & efnj k e B i e n j l k f r o g k a o f u t h l x g k a j [k h i k M f y f i ; k a d s v k d m k a d k l x g d j r k g A fe”ku ds dk; Z & – राष्ट्रीय सर्वे व पोस्ट सर्वे करके पांडुलिपियों की खोज करना।- पांडुलिपियों और पांडुलिपियों की f j i k M l V j h d k i y s [k u r s k j d j u k v k s u s ” k u y b y D V R M u d M s / k c d r s k j d j u k f t l l s v c r d f o ” o d k l c l s c M k 4 f e f y ; u M s / k c d r s k j f d ; k t k p p k g A & i k M f y f i ; k a d k s v k / k f u d o H k k j r h ; i j a j k x r r j h d k a l s l j f { k r d j u k v k s u b z i h > h d s ; p k v k a d k s l j { k . k d k i f ” k { k . k n s u k A

fe”ku dh mi yfC/k; ka && i kMfyfi; ka ds iys [ku o l j {k.k ea dk; j r i k V L j l d F k k v k a d k u s / o d A & ns” kHj ea 57 i kMfyfi f l k d dnz r s kj % e u f l d d i V f l k d l b j & , e v k j l h ½ f d , x ,] f t l e a 31 d k ; j r A & 33 i kMfyfi l k > n j d n z e u f l d d i V i k V L j l b j t % A & 42-03 yk [k i kMfyfi; ka i y f [k r A & 2-7 f e f y ; u i kMfyfi ; k a d k o c c l M u s ” k u y M s / k c d A & i kMfyfi ; k a i j n s ” t के 18 राज्यों में राष्ट्रीय सर्वे और 8 राज्यों में पोस्ट सर्वे।

भारतीय कृति संपदा – पांडुलिपियों का राष्ट्रीय डेटाबेस Hkkjr o vU; ns” kka ea miyC/k l Hkh Hkkjr h; पांडुलिपियों का डेटाबेस तैयार करना राष्ट्रीय पांडुलिपि मि” ku dh l c l s egROIwz vks egRokdk [kh i j; kstuk gs dfr l ankA tks fd bVjuv ij fe” ku dh ocl kbV ij miyC/k ga bnfjk xkrkh us” kuy l b j O k j n v k v A v k s u s ” kuy b O e f V D I l b j } k j k b y D V R M u d M s / k H k h b l o c l k b V d s M s / k c d e a L F k k u k a r f j r f d ; k x ; k g A p u k f r ; k a उचित राष्ट्रीय डिजिटल संरक्षण नीति के सही अनुपालन न होने और तकनीकी बाध्यताओं के चलते पांडुलिपियों का fMftVy l j {k.k i j h r j g l s u g h a g s i k ; k g A f M f t V y h j . k d s c k n m i ; k x d r k k / k a } k j k v k u & y k b u } k j k i q u % m i ; k x d j u s d h i f d z k v k a o r d u h d h e a d e h v k s n h ? k d k f y d l j { k . k d h p u k f r ; k a d s d k j . k i w k r k d s y { ; l s c g r n j g A

राष्ट्र विकासात डिजिटल ग्रंथालयाचा उपयोग—एक अभ्यास

प्रतिभा लक्ष्मण वराडे, ग्रंथपाल, दादासाहेब धनाजी नाना चौधरी समाजकार्य महाविद्यालय मलकापूर, जि. बुलडाणा.

प्रस्तावना—प्रत्येक राष्ट्र विकासातील समृद्ध वाटचालीत ग्रंथालय महत्वपूर्ण सहयोग देत आहेत. राष्ट्राच्या शैक्षणिक, सांस्कृतिक, राजकीय, आर्थिक व वैज्ञानिक क्षेत्रात ग्रंथालय महत्वाची भूमिका पार पाडतांना दिसून येत आहेत. ग्रंथालयाकडे आदर्श, सृजनशील, सुसंस्कृत समाजाचा आधारस्तंभ म्हणून पाहायला पाहिजे. राष्ट्रीय ग्रंथालय, सार्वजनिक ग्रंथालय, विशेष ग्रंथालय, शैक्षणिक ग्रंथालय, संशोधन ग्रंथालय, डिजिटल ग्रंथालय आणि ग्रंथालयीन माहिती केंद्र अशा विविध प्रकारचे ग्रंथालये आपल्या ग्रंथालयीन सेवा देऊन राष्ट्र विकासाला सहकार्य करता येईल. हे लक्षात घेवून भारत शासनाने माहिती विषयी राष्ट्रीय धोरण स्विकारले आणि राष्ट्रीय ज्ञान आयोगाची स्थापना केलेली आहे. आज मोठया प्रमाणात ज्ञानविज्ञान आणि तंत्रज्ञानाच्या प्रगतीमुळे दररोज नवनवीन माहितीचा मोठया प्रमाणात ओघ होतांना दिसून येतो. शैक्षणिक ग्रंथालय असो किंवा मग सार्वजनिक ग्रंथालय असो त्यामध्ये येणारा वाचक, संशोधक, विद्यार्थी वा शिक्षक असला तरी त्याला नवीन माहिती त्वरीत उपलब्ध करून देण्याचे काम ग्रंथालयाचे असते. त्यासाठी डिजिटल ग्रंथालय महत्वपूर्ण भूमिका पार पाडते. संगणकाच्या प्रवेशामुळे एका नवयुगाची सुरुवात झाली. ग्रंथालयाच्या पारंपारिक प्रकारामध्ये बदल होऊन माहितीच्या सेवेमध्ये आमूलाग्र बदल झालेले आहेत. संगणकाच्या सहाय्याने कृती अचूक व जलद करण्यास यामुळे मदत होत आहे. नवनवीन संशोधनामुळे आज प्रचंड प्रमाणात होणारी निर्मिती व या माहितीच्या परिस्फोटाच्या माध्यमातून मिळणाऱ्या मोठया प्रमाणातील माहितीचे व्यवस्थापन करण्यासाठी डिजिटल ग्रंथालय तंत्रज्ञान ग्रंथालयाच्या मदतीला आले. त्यामुळे प्रत्येक ग्रंथालयामध्ये नवीन साधने, तंत्रज्ञान माहिती संशोधन यामध्ये बदल होत आहेत. या सर्व गोष्टींचा विचार करून सद्यःस्थितीमध्ये ग्रंथालयात काम करणाऱ्या लोकांमध्ये नवीन तंत्रज्ञान आत्मसात करण्याची स्पर्धा सुरु झालेली असून त्या माध्यमातून ग्रंथालयाच्या सेवेमध्ये सुधारणा करण्याचा प्रयत्न होत आहे.

उद्दीष्टे—१) ग्रंथालयामुळे वाचकांमध्ये आदर्श, सृजनशील, सांस्कृतिक आधारस्तंभ हा दृष्टीकोन रुजविणे.२) मनुष्याच्या जीवनात डिजिटल ग्रंथालयचे महत्व वाढवणे.३)राष्ट्रीय व अंतरराष्ट्रीय स्तरावरील डिजिटल नियतकांचा वापर वाढविणे.४)वाचकांना डिजिटल ग्रंथालयाची जोड दिल्यास पुस्तके वाचण्याची सोय उपलब्ध होऊ शकते. ५)कमीतकमी जागा लागणाऱ्या डिजिटल ग्रंथालयाचा वापर वाढविणे.६)डिजिटल ग्रंथालयामुळे कमी खर्चात जास्तीत जास्त माहिती देशभरात विखुरलेल्या वाचकांपर्यंत पोहचवून राष्ट्र विकासात भर घालणे.

संशोधन पध्दती—सदर संशोधन पेपर तयार करित असतांना दुय्यम स्रोताचा वापर करून संशोधन पत्रिका निष्कर्षाप्रमाणे अभ्यासण्यात येईल.**Digital Library Definition-** 1)A simple definition of a digital library is a library consisting of digital devices, digital material and services.2)Digital materials are items that are stored processed and transferred via digital (binary)devices and network.3)Digital library services are information services that are delivered digitally over computer networks.

डिजिटल ग्रंथालय—राष्ट्र विकासातील एक नवे क्षितिज तंत्रज्ञानाच्या विकासामुळे आणि शिक्षण प्रसारामुळे माहिती मोठया प्रमाणात निर्माण होत आहे. त्या माहितीचे आणि वाचन साहित्याचे संगणकीकरण करून माहिती डिजिटल रूपात केली जाते. डिजिटल ग्रंथालय म्हणजे माहिती आणि ज्ञानांच्या संघटित विशाल संग्रहातून सुसंगत पध्दतीने माहिती शोधून माहिती पुरविण्याची एक विशाल प्रणाली आहे. डिजिटल ग्रंथालयात ग्रंथोपार्जन, माहिती, वाचन साहित्य जतन, संग्रह पुनप्राप्ती प्रदर्शन ही कार्ये संगणकाच्या माध्यमातून केली गेलेली असतात. माहिती जतन करून त्या माहितीचे डिजिटलायझेशन करून संग्रहीत आणि पुनप्राप्ती त्या माध्यमातून होत असते. सीडीच्या रूपात डाटाबेस तयार करून संगणकीकृत देवाण—घेवाण करणे हे प्रामुख्याने डिजिटल ग्रंथालयाचे उद्देश आहेत. सहकारी तालिका, संघ तालिका, वेब ओपॅक, आंतर ग्रंथालयीन ग्रंथे देवाण—घेवाण, रेफरल सेवा, ई—सुविधा, न्युज बुलेटीन सेवा इ. प्रकारच्या सेवा डिजिटल ग्रंथालयातून देण्यात येत असतात. त्यामुळे या माध्यमातून माहिती लवकर मिळते व वाचकांचा वेळ, पैसा, श्रम देखील या डिजिटल ग्रंथालयामुळे वाचतात. आजचे ग्रंथालय हे रूपांतरीत होऊन 'ग्लोबल नॉलेज सेंटर्स' होत आहे. त्यामुळे संगणकीकरण ही त्याची पहिली पायरी आहे. आज अस्तित्वात असलेली बहुतेक ग्रंथालये संगणकीकरणांचा वापर करतांना दिसून येत आहेत. परंतु आज ही बऱ्याच ग्रंथालयात पारंपारिक पध्दतीनेच पुस्तकाचे देवाण—घेवाण होतांना दिसून येत आहे. तिथे अजूनही अत्याधुनिक ग्रंथालयाचा वापर दिसून येत नाही. यामुळे त्यांना अनेक समस्यांना तोंड द्यावे लागत आहे. कारण आजच्या पिढीला हव ते त्याच्याकडून मिळत नाही त्यामुळे अशा ग्रंथालयातून ते डिजिटल ग्रंथालयाकडे वळत असतात. आता सर्वच क्षेत्रात संगणकाचा वाढता वापर व त्यापासून होणारा लाभ सर्वांनाच आकर्षित करतांना दिसत आहे. म्हणूनच आजचे सर्वच ग्रंथालये संगणकीकृत करतांना दिसून येत आहेत. त्यातून डिजिटलायझेशन करण्यास सर्व ग्रंथालये उत्सुक आहेत. त्यातूनच नवनवीन माहिती अद्यावत ठेवण्याचे कार्य करित आहेत. तसेच ऐतिहासिक माहिती साठवणूक ही डिजिटल पध्दतीने करून ठेवत आहेत. आजच्या ग्रंथालयीन सेवेत संगणकाचा वापर या पिढीला वापरणे अनिवार्य

आहे. तसेच सर्वच ठिकाणी संगणक वापर करतांना दिसून येत आहे. त्यामुळेच माहिती सर्वापर्यंत योग्य वेळेत उपलब्ध होतांना दिसून येते. तसेच संगणकाबरोबरच मोबाईल, कॉमेरा, स्कॅनर, ई बुक रीडर, स्मार्टकार्ड अशा अनेक साधनांचा वापर ग्रंथालयात होतांना दिसून येत आहे. त्यामार्फत ग्रंथालयातील वाचन साहित्याचे वर्गीकरण त्या मार्फत करण्यात येते. शिवाय वाचन साहित्य ग्रंथालयात शोधण्याचे आधुनिक तंत्र देखील विकासीत होत आहे. त्यातून कोणत्या प्रकारचे ग्रंथ कुठे ठेवले आहेत तसेच त्यात माहिती कुठल्या स्वरूपाची आहे हे त्यात साठवणूक केलेली असते. त्यातून कुठली माहिती कोणत्या ठिकाणी भेटेल असे वर्गीकृत केलेले असते व ती काळाची गरज देखील आहे. ग्रंथालयांच्या आधुनिकीकरणात शासनाचेही योगदान दिसून येत आहे. प्रत्येक जिल्हयात डिजिटल ग्रंथालय व त्याकरीता आवश्यक त्या सोयी उपलब्ध करून दिल्या जात आहेत. ग्रंथालय संगणकीकरणकरीता केंद्र शासनाचा नॅशनल इन्फॉर्मेटिक सेंटरची उभारणी देखील करण्यात आलेली आहे. त्यातूनच निशुल्क प्रणाली शिक्षणाचे आयोजन त्याच्या मार्फत करण्यात येत आहेत.

डिजिटल ग्रंथालयाचे वैशिष्ट्ये—अत्याधुनिक डिजिटल ग्रंथालयाचे वैशिष्ट्ये म्हणजे संगणकाच्या माऊसवर एक क्लिक केल्याने तात्काळ माहिती आपणास प्राप्त होत असते. मात्र इंटरनेटच्या अफाट ज्ञानसागरातून अचूक माहिती शोधून योग्य प्रकारे वाचकापर्यंत पोहचविणे किंवा पुरविण्याचे काम डिजिटल ग्रंथालयच करू शकते. जागतिक स्तरावर (ज्ञान)माहिती हे खणखणीत वाजणारे चलन बनलेले आहे. त्यामुळे ज्ञान व्यवस्थापन शास्त्रात संगणक प्रशिक्षित डिजिटल ग्रंथालयांना महत्व प्राप्त झालेले आहे. आधुनिक डिजिटल ग्रंथालयात इंटरनेटपासून ते अलीकडील 'टच स्क्रीन' तंत्रज्ञानाचा वापर सुरु झालेला आपणास दिसून येत आहे. विशेष म्हणजे इंटरनेटच्या माध्यमातून ग्राहक कार्यालयात तसेच स्वतःच्या निवासातून ही ऑनलाईन सेवा देता येते ही डिजिटल ग्रंथालयाचे वैशिष्ट्ये आहेत. पारंपारिक पुस्तके व मासिके या संबंधित सेवा देणाऱ्या या ग्रंथालयीन काम काळानुरूप संगणकीय ग्रंथालयाच्या (डिजिटल लायब्ररी) युगातील ई—माहितीपत्रकाद्वारे निवडक माहिती वितरण वृत्तपत्र कात्रण, भाषांतर, पेटंट व ट्रेडमार्क मानके(स्टॅंडर्ड्स)ट्रेड कॅटलॉग हे अपारंपारिक ग्रंथालयीन सेवा उपलब्ध होतात. इंटरनेटच्या आधुनिक माध्यमातून डिजिटल लायब्ररीचे स्वरूप ग्रंथालयीन सेवा, अचूक व्यवस्थापन हे देखील डिजिटल ग्रंथालयाचे वैशिष्ट्ये ठरते. काही ठळक वैशिष्ट्ये पुढील प्रमाणे—

१) ऐतिहासिक माहितीचे संकलन— दुर्मिळ कागदपत्रे, छायाप्रती तसेच अत्याधुनिक दृक्श्राव्य साधनातील माहिती संगणकीय (डिजिटल) स्वरूपात रूपांतरीत करून त्याचा डेटाबेस तयार करून ठेवता येतो. ऐतिहासिक मूल्य असलेल्या या डेटाबेसमध्ये संस्थेच्या स्थापनकाळापासून बहुमोल खजिना आहे. दुर्मिळ कागदपत्रे, छायाचित्र तसेच आधुनिक सीडी, चीप्स हे दृक्श्राव्य माहितीचे डिजिटलमध्ये रूपांतर झाल्यास माहिती सुरक्षित राहते. २) ई—लायब्ररी सेवा—पारंपारिक सार्वजनिक वाचनालयात डिजिटल लायब्ररीची जोड दिल्यास घरबसल्या वाचनालयातील पुस्तके वाचण्याची सोय उपलब्ध होत असते. डिजिटल ई—बुक्सच्या माध्यमातून सीडी मध्ये असलेली पुस्तके वाचकाला आवश्यक असणारे पुस्तके तात्काळ उपलब्ध करून देण्यात येत असते. ३) ई—बुक सेवा—नेटवरून संगणकावर पुस्तके वाचण्याची सोय करण्यात येते. सीडीमध्ये, पेनड्राव्यमध्ये हवी ती पुस्तके सेव करून ती वाचता येतात तसेच नवीन पुस्तकांचे परीक्षण(रिव्ह्यू)तसेच अनुक्रमणिका वरील माहितीपत्रक वाचून पुस्तके खरेदी करण्यास उपयोग होत असते. ४) ग्रंथालयाचे व्यवस्थापन— पुष्कळ मोठ्या किंवा लहान संस्थामध्ये इंटरनेट सुविधासहित डिजिटल ग्रंथालये आहेत. तेथे निवडक ग्रंथसंग्रह व मासिके असतात. पुस्तकाचे विषयानुरूप वर्गीकरण, कॅटलॉगिंग करणे, संगणकीय डेटाबेस तयार करणे तसेच ग्रंथसंग्रहाचे संगणकीकरण करून तात्काळ माहिती मिळवण्याची सोय डिजिटल ग्रंथालयातून सोयीस्कर होत असते. ५) माहितीची साठवण व वितरण— माहिती सुलभतेने उपलब्ध व्हावी हे ध्येय असते. वाचकास हवी असलेली माहिती त्याने विचारलेल्या प्रश्नास अनुसरून कमीत कमी वेळेत आणि अचूक माहिती देणे हा हेतू असतो. विविध स्तरातील वाचकांना सहज सुलभपणे वापरता येणारी आणि उच्चतम प्रतीची माहिती साठवण संस्करण आणि वितरण प्रक्रिया आवश्यक असते.

निष्कर्ष—१) डिजिटल ग्रंथालयाचा मोठ्या प्रमाणात वापर केल्यास समृद्ध राष्ट्राची निर्मिती होण्यास मदत होईल. २) डिजिटल ग्रंथालयामुळे हवी त्या ठिकाणी तात्काळ माहिती उपलब्ध होऊ शकते.

३) डिजिटल ग्रंथालयामुळे माहितीची साठवणूक मोठ्या प्रमाणात होते. ४) डिजिटल ग्रंथालयामुळे ऐतिहासिक दस्ताऐवज, दुर्मिळ कागदपत्रे दिर्घकाळपर्यंत ठेवता येतात. ५) डिजिटल ग्रंथालयामुळे अंतरराष्ट्रीय स्तरावरील माहिती मिळल्यामुळे राष्ट्र विकासाच्या दृष्टीने संशोधनास वाव व चालना मिळते. ६) डिजिटल ग्रंथालयामुळे माहितीचे वितरण वाचकाला हवे त्या पध्दतीने करता येते. ७) डिजिटल ग्रंथालयामुळे ग्रामीण भागात सुध्दा इंटरनेटच्या सहाय्याने शिक्षणाच्या नवीन वाटा उपलब्ध झाल्याने राष्ट्रविकासात मदत होते.

संदर्भ ग्रंथ—

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इंटरनेटवरील माहितीस्रोतांसंबंधी साक्षरता :काळाची गरज व ग्रंथपालाची भूमिका**प्रा. ज्योती सुरेश सुर्ववंशी , ग्रंथपाल धुळे एज्युकेशन सोसायटीचे शिक्षणशास्त्र महाविद्यालय, धुळे****सार**

या पेपरमध्ये इंटरनेटवरील माहिती शोध घेतांना कशा प्रकारे व कोणत्या पध्दतीचा वापर केला पाहिजे यावर लिखाण केले आहे. ग्रंथपाल तंत्रज्ञानावर भर देणाऱ्या आधुनिक ग्रंथालय अभ्यासकांशी कशा प्रकारे संवाद साधू शकतो व योग्य वाचकांना योग्य माहिती, योग्य प्रकारे, कमीत कमी वेळात कशी मिळवावी यासाठी मॅडिया लिटरसी व माहिती साक्षरता कशी करू शकतो यावर प्रकाश टाकला आहे. ग्रंथपालाचे योग्य मार्गदर्शन ग्रंथालय वाचकांना व नेट वापरकर्त्यांना ग्रंथालय व इंटरनेट वरील माहिती शोधातांना योग्य समतोल साधण्यास कशा व कोणत्या पध्दती वापरून मदत करेल या मुद्यावर स्पष्टीकरण केले आहे.

शोध संज्ञा :- इंटरनेट , वापरकर्त्या, ग्रंथपाल, ग्रंथालय

प्रस्तावना :- आज माहिती तंत्रज्ञानामध्ये इंटरनेट माध्यमाचा इतर माध्यमाच्या तुलनेत सर्वात जास्त वापर होतांना दिसतो. इंटरनेट माहिती निर्मिती, वापर व पूर्वनिर्मिती या प्रकारातील माहिती संप्रेषणाचे एक प्रभावशाली माध्यम बनत आहे. आज जगात लोकसंख्येच्या 51% जनता इंटरनेटचा वापर करते म्हणूनच जगभरातील इंटरनेट वापरकर्त्यांची संख्या आता 3.8 अब्जापर्यंत पोहचली आहे. आयपॉड, मोबाईल, लॅपटॉप, आयफोन, अशा विविध प्रकारची उपकरणे इंटरनेट साठी वापरली जातात. प्रत्येक व्यक्ती आपला व्यवसाय, शिक्षण, कला, व उपक्रम इंटरनेट या माध्यमांद्वारे इतरांपर्यंत पोहोचविण्याचा प्रयत्न करत आहे. विद्यार्थी, संशोधक व विषयतज्ञ हे या माध्यमाचा सर्वात जास्त वापर करतांना आढळतात किंबहुना या माध्यमाशिवाय त्यांच्या शिक्षणाचा किंवा संशोधनाचा भाग पूर्ण होऊ शकत नाही असे त्यांचे मत झाले आहे. अशा परिस्थितीत नेट हे एक स्व:शिक्षणाचे तसेच सर्वसमावेशक शिक्षणाचे माध्यम म्हणून जास्त लोकप्रिय होत आहे. ज्याप्रमाणे प्रत्येक गोष्टीचा दोन बाजू असतात तशाच नेट माध्यमाच्याही दोन बाजू आहेत. एक सकारात्मक व दुसरी नकारात्मक. या दोन्ही बाजूंची ज्या वापरकर्त्याला योग्य माहिती असली तरच या माध्यमाचा सकारात्मक परिणाम दिसू शकतो अथवा अत्यंत नकारात्मक परिणामही या माध्यमातून होतांना दिसतो. कमीत कमी वेळात जास्त माहिती, वेळ व पैसा यांची बचत, तत्परता व सहन सोपी हाताळण्याची पध्दती यामुळे इंटरनेट लोकप्रिय झाले आहे हे निश्चित. वापरकर्त्याला सकारात्मक परिणाम साधण्यासाठी तो नेट साक्षर असणे ही खरोखर काळाची गरज बनली आहे. विद्यार्थी, वाचक, अभ्यासक, संशोधक यांना नकारात्मक बदलापासून वाचविण्यासाठी ग्रंथपालाने वापरकर्त्यांना साक्षरता करणे गरजेचे आहे. यालाच आपण मिडिया लिटरसी किंवा माहिती साक्षरता असेही म्हणू शकतो.

माहितीचा शोध व ग्रंथपालाची भूमिका:- इंटरनेटवरील सर्वच माहिती उपयुक्त असतेच असे नाही. अशा वेळी योग्य माहिती शोधण्याचे कौशल्य आत्मसात करणे सर्वात महत्वाचे ठरते. यासाठी शोधसंज्ञा व भाषा संज्ञा निश्चिती, योग्य त्या शोधयंत्राचा निवड व वापर करणे ही नेटवरील माहिती मिळविण्याची योग्य पध्दती आहे. त्यासाठी आपल्या विषयासाठी योग्य त्या शोधयंत्रासंबंधी माहिती करून घेणे आत्यावश्यक आहे. उदा. Google हे सर्व समावेश माहितीशोधाचे शोधयंत्र आहे. परंतु फक्त वैज्ञानिक माहितीचा शोध घ्यायचा असेल तर SciSeek, SciCentral , BioOne अशा अनेक तर गणितीय माहिती हवी असेल तर MathGuide, ZMATH, Symbolab अशा वेळी शोधयंत्राचा वापर करायला हवा. प्रत्येक विषयाला वेगवेगळे शोधयंत्र आपल्या सोईसाठी नेटवर उपलब्ध आहेत त्याचे ज्ञान वापरकर्त्यांना हवे. यासाठी हे ज्ञान वापरकर्त्याला देण्याचे काम ग्रंथपालच करू शकतो. माहिती शोधतांना कोणती काळजी घेतली पाहिजे, शोधसंज्ञा कशी निवडावी ? कोणत्या शोधयंत्राचा वापर करावा ? चूकीची माहिती कशी ओळखावी याबाबतीत ग्रंथपाल वाचकांशी वेळोवेळी संवाद साधून ग्रंथालय व इंटरनेटवरील माहिती यामधील तफावत अभ्यासकांच्या नजरेस आणून योग्य माहिती वाचकांना मिळवून देण्यास मदत करू शकतो.

माहितीचे स्वरूप :- नेटवरील माहिती टेक्स्ट, इमेज, वेबसाईट, ब्लॉग, पी.डी.एफ, पी.पी.टी, व्हिडिओ, ऑडिओ, या विविध स्वरूपात उपलब्ध असते. आपल्याला कोणत्या स्वरूपातील माहिती शोधायची आहे, यासंबंधी शोधकर्त्याला माहिती असणे गरजेचे असते. त्यामुळे वेळ वाचू शकतो व योग्य तीच माहिती आपल्या समोर येईल. या संबंधी शोधकर्त्याला जाणीव निर्माण करून देण्याचे काम ग्रंथपाल करू शकतो. त्यामुळे नेट वापरकर्त्यांचा वेळ वाचून योग्य माहिती समोर येईल.

वेबसाईटचे प्रकार :- नेटवरील माहितीचे सर्वात प्रभावी माहितीचे स्रोत म्हणजे वेबसाईट च्या माध्यमातून माहिती निर्मिती या वेबसाईट ला विविध Domain वापरून त्याच्या प्रकारांना विभागले जाते उदा. Gov. म्हणजे Government, org. म्हणजे एखादी Organization ची वेबसाईट आहे हे आपणांस माहिती शोधतांना आवश्यक असते. त्यामध्ये in, uk. असे Country Code Domain हे देशांसाठी वापरतात. या Domain code वरून वेबसाईटचा प्रकार,माहिती पुरविणारा देश तसेच वेबसाईटचे स्वरूप यासंबंधी माहिती मिळते. नेटवर माहिती शोधतांना हे ज्ञान असणे गरजेचे ठरते. नेटवर माहिती शोधणाऱ्यांना यासंबंधीची माहिती फलक स्वरूपात ग्रंथालयात लावून अथवा ग्रंथालय ओळख कार्यक्रमाद्वारे देता येवू शकते.

वेब साधनांच्या मूल्यमापनाची गरज :- वेब साधने सर्वांसाठी खुली असतात त्यामुळे योग्य व विश्वसनीय माहिती शोधण्यासाठी खालील बाबी तपासणे गरजेचे असते.

1) स्व: प्रकाशन :- हे एक स्व: प्रकाशनाचे माध्यम बनत आहे आपल्या विषयातील, व्यवसाय अथवा अनुभवासंबंधीची माहिती प्रसारणासाठी हे माध्यम अत्यंत लोकप्रिय बनत आहे. परंतु लेखक जर पूर्वग्रहदुषित अथवा नकारात्मक विचारसरणीचा असेल, तर त्या माहितीवर आपण विसंबून राहू शकत नाही. त्यामुळे नेटवरील प्रत्येक माहितीचे मूल्यमापन करणे आवश्यक ठरते. नेटवरील शोधलेली माहिती पूर्वग्रह दुषित अथवा चुकिक्या हेतूने प्रकाशित आहे काय ? हे तपासले आवश्यक ठरते. यासंबंधीचे ज्ञान असणे गरजेचे असते.

2) विश्वसनीयता :- या स्रोताद्वारे मिळालेली माहिती अचूक, अभ्यासपूर्ण, सत्य - असत्यता पडताळलेली असेलच यावर विश्वास ठेवता येवू शकत नाही. माहितीची विश्वसनीयता किती आहे हे पडताळूनच माहितीचा वापर करण्याचे कौशल्य हवे असते.

3) अद्यावावतता :- रोज या माध्यमातून प्रचंड माहिती प्रकाशित होत असते परंतु ती माहिती अद्यावावत आहे किंवा नाही हे तपासणे गरजेचे असते. गरजेनुसार अद्यावावतता असणारीच माहितीचा वापर केला गेला पाहिजे.

4) प्रमाणित प्रसारण :- नेट वर माहिती प्रसारणाची विशिष्ट नियमावली दिलेली असते त्याचा वापर केला किंवा नाही हे पडताळणे आवश्यक ठरते. कोणतीही माहिती नेटवर टाकण्यासाठी प्रमाणित नियमावली दिली जाते त्या द्वारेच माहिती टाकली आहे किंवा नाही हे पाहणे अत्यंत आवश्यक ठरते.

नेटवरील माहिती स्रोताचे मूल्यमापनाच्या पध्दती :-

1. **अंतर्गत मूल्यमापन :-** अंतर्गत मूल्यमापनामध्ये त्या माहितीचा लेखक, प्रकाशक कोण आहे ? प्रकाशनाचा कालावधी, प्रकाशन संस्था कशा प्रकारची आहे, ती संस्था नोंदणीधारक आहे किंवा नाही हे तपासणे अंतर्गत मूल्यमापनात महत्वाचे ठरते.

2. **बहिर्गत मूल्यमापन :-** बहिर्गत मूल्यमापनामध्ये वाचकांचा गट कोणता, त्या माहिती प्रसारणाचा हेतू व उद्देश काय आहे ? आशयाची व्यापकता व मांडणी कशी आहे? आशय उद्देशानुसार परिपूर्ण आहे किंवा नाही हे तपासणे आवश्यक आहे.

नेटवरून माहिती मिळाल्यानंतर मूल्यमापनाचे निकष :- अतिप्रचंड माहिती स्रोतातून आपल्या गरजेपुरती माहिती शोधतांना या विविध मूल्यमापनाच्या निकषांचा वापर करणे अत्यावश्यक असते ज्यामुळे कमीत कमी वेळात जास्तीत जास्त गुणतत्तापूर्ण माहिती मिळविण्याचे कौशल्य आत्मसात करता येते जे आज प्रत्येकासाठी अत्यावश्यक आहे. मूल्यमापनाचे निकष खालील प्रमाणे-

अचूकता :- वेबसाईटवरील माहिती (चुकाविरहीत) बिनचूक असली पाहिजे त्या वेबसाईट/माहितीचा संपादक कोण आहे ? तो त्या माहितीची सत्यता पडताळणीचे काम नियमित करतो का ? प्रमाणित पध्दतीचा वापर केला आहे का ? बाबींवर त्या वेबसाईटची अचूकता तपासायला हवी.

अधिकार :- त्या वेबसाईटवरील माहिती आपण घेतो त्या माहितीचा लेखक कोण आहे ? त्याची शैक्षणिक, सामाजिक व वैचारिक कामासंबंधी माहिती त्यात नोंदविली आहे का ? ज्या माध्यमातून, प्रकाशकाकडून, संघटनेतून ही माहिती देत असेल त्याबद्दल विशेष माहिती पुरविली आहे का ? त्या प्रकाशकाचा, संघटनेचा दर्जा कसा आहे ? या बाबत मूल्यमापन करणे आवश्यक ठरते.

प्रवेश सुविधा :- प्रत्येक वेबसाईट वेगवेगळ्या पध्दतीने बनविली जात असते प्रत्येक वेबसाईट ठराविक पध्दतीने वाचकांसाठी किंवा उपभोक्त्यांसाठी खुली असते. त्यासाठी Browsing , Downloading व Access सुविधा वेगवेगळ्या असतात त्यांची माहिती करून घेणे गरजेचे असते.त्यासंबंधीच्या सुचना त्या त्या वेबसाईटस वर उपलब्ध असतील तर त्यांची माहिती करून घेणे आवश्यक असते.

मांडणी :- वेबसाईटवरील आशय, विषय, मांडणी, भाषाप्रकार, भाषाशैली इ. गोष्टी तपासून ती आपणांस उपयुक्त आहे किंवा नाही ? हे सर्व माहिती घेतांना तपासणे आवश्यक असते. वाचण्यास सोपे व सुलभ भाषाशैली जास्त उपयुक्त असते.

अद्यावतता :- आपण ज्या माहितीचा वापर करतोय ती वेबसाईट नेहमी अद्यावतता ठेवते किंवा नाही ? बदल केल्याची तारीख, लेखक ,संबंधित लिंक वेळोवेळी बदलते किंवा नाही हे वेबसाईटवरील माहितीसाठी महत्वाचे ठरते.

व्यापकता :- जी वेबसाईट विशिष्ट विषयाची माहिती पुरविते ती त्या विषयाला पूर्णपणे न्याय देते किंवा नाही. नवीन बदल संशोधने यांचा त्यामध्ये वेळोवेळी उल्लेख व बदल केला किंवा नाही. विषयातील सूक्ष्म व स्थूल मुद्दे व्यवस्थित मांडलेत का ? हे सर्व माहिती घेतांना विचारात घ्यावे लागतात.

निष्पक्षता :- वेबसाईटवरील माहिती ही संपूर्ण जगभरातून प्रकाशित होणारी असते अशावेळी त्या त्या वेबसाईटवरील माहिती निष्पक्षतापणे मांडली आहे का ? काही विशिष्ट विचारांचा पगडा त्यावर दिसतो का ? एकतर्फी विचार मांडण्याचा प्रयत्न होतोय का ? हे सर्व माहिती घेतांना तपासणे आवश्यक असते.

प्रतिसाद कालावधी :- ज्या वेबसाईटवर माहिती घेतांना जास्त कालावधी लागतो. वेळ व पैसाही वाया जातो. अशा वेबसाईटवरील माहिती घेणेही फार अडचणीचे होते.

स्थिरता :- ज्या वेबसाईटवरील माहिती आपणास आवश्यक आहे ती माहिती कधीही ,कुठेही उपलब्ध होते का ? अचानक गरजेची ती वेबसाईट दिसणे बंद होते का ? अद्यावतता व स्थिरता या बाबी त्या वेबसाईटला लागू पडतात का ? हे तपासणेही माहिती मिळविण्यासाठी आवश्यक असते.

भाषाशैली :- वाक्यरचना व भाषिक शब्द रचना कशी आहे ? दिशादर्शक सुसंवाद, व्याकरणाचा योग्य वापर केलाय का ? हे पाहणेही आवश्यक असते.

समाप्ती :- विषयाची समाप्ती कशी केली आहे. ती परिपूर्ण आहे का ? या बाबी पडताळणे आवश्यक असते. अशा प्रकारे

सारांश :- अशाप्रकारे ग्रंथपाल व ग्रंथालय यामध्ये इंटरनेट हे अदृश्य पण लोकप्रिय माहितीचे साधन म्हणून पुढे येत आहे. परंतु यामध्ये खरी तफावत आहे ती ग्रंथालय हे शाश्वत,स्थिर व विश्वासनीय माहितीचे स्थान तर इंटरनेट अस्थिर, अफाट व अभासी माहितीचा साठा यामध्ये ग्रंथपाल हा योग्य मार्गदर्शकाची भूमिका बजावण्यासाठी सक्षम बनण्याची गरज आहे. अतिप्रचंड माहितीतून योग्य माहिती शोधण्यासाठी ग्रंथपालामध्ये एक उत्तम मार्गदर्शक म्हणून मूल्यमापनाचे कौशल्य स्वतःमध्ये तसेच ग्रंथालयाच्या अभ्यासकांमध्ये निर्माण करणे आवश्यक ठरते. यासाठी ग्रंथालयात नेट वापरकर्त्यां ग्रंथालय अभ्यासकांसाठी डिजिटल बोर्ड लावून, वर्गावर ग्रंथालय तास घेवून अथवा संदर्भपुस्तिका तयार करून वाचक साक्षरता करू शकतो. यामुळे ग्रंथपालाचे योग्य मार्गदर्शन ग्रंथालय वाचकांना व नेट वापरकर्त्यांना ग्रंथालय व इंटरनेट वरील माहिती शोधातांना योग्य समतोल साधण्यास मदत करून सकारात्मक बदल घडवण्यासाठी मदत करू शकतो हे निश्चित.

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डिजिटल ग्रंथालये काळाची गरज : एक अभ्यास

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सारांश: आजच्या माहित तंत्रज्ञानाच्या युगात पारंपारिक ग्रंथालयापेक्ष आज डिजिटल ग्रंथालयाची गरज निमण झालेली आहे. कारण वद्याथाचा क्षेप णक वकास इगजी मध्यामाची शाळा व तांत्रिक उच्च श क्षत वद्याथी वर्ग व ग्रंथालयात असलेल्या जागेचा अभाव या ग्रंथालयात येणा-या उपभोगत्यांना अचूक अशी माहिती कमीत कमी वेळात उपलब्ध करून देणे हि अत्यावश्यक बाब झालेली आहे या सर्व कारणांनी भ वष्यात डिजिटल ग्रंथालयाशीवाय पयाय राहिलेला नाही. प्रस्तुत लेखात सशोधकाने डिजिटल ग्रंथालयाची उद्दिष्ट्ये, फायदे, मर्यादा, डिजिटल ग्रंथालयांच्या सेवा ईत्यादी वषयावर प्रकाश टाकलेला आहे.

शोध संज्ञा : डिजिटल ग्रंथालय, तंत्रज्ञान, इंटरनेट.

प्रस्तावना:: डिजिटल ग्रंथालये:- (Digital Libraries): डिजिटल ग्रंथालय हि संकल्पना अशा माहिती प्रणाली आ ण सेवांकरिता वापरली जाते जी इलेक्ट्रॉनिक स्वरूपातील प्रलेख उदा. टेक्स्ट फाईल्स, डिजिटल साउंड, डिजिटल व्हिडीओ ई. आधुनिक स्वरूपातील प्रलेख पुर वते. काहींच्या मते डिजिटल ग्रंथालये म्हणजे अशा प्रलेखांचा संग्रह ज्यातील माहिती इंटरनेटद्वारे प्राप्त करता येते. डिजिटल स्वरूपातील माहितीची वाढ आ ण माहिती तंत्रज्ञानातील आधुनिक बदल यामुळे वाचकांना उपयुक्त ठरतील अशा तंत्राचा वापर आवश्यक माहिती पुर वण्याकरीता केला जाऊ लागला. डिजिटल ग्रंथालयाचे कार्य हे मुख्यत्वे संगणक संदेशवहन सु वधा तसेच आधुनिक तंत्रज्ञानाच्या वापरातील ग्रंथालये व्यावसायिकांच्या कौशल्य, ज्ञान आ ण वापरली जाणारी साधने यावर अवलंबून असते. यामधील मुलभूत सार्वजनिक जागा असते ज्याद्वारे कोणतीही शैक्ष णक संस्था, संशोधक, वाचक कंवा शक्षणतज्ञ आपल्याला हवी असणारी माहिती कामाच्या ठिकाणाहून प्राप्त करू शकते.

व्याख्या:-आर. आर. लार्सन यांच्या मते : “डिजिटल ग्रंथालय म्हणजे वश्व-व्यापी कंवा जागतिक व्हर्च्युअल ग्रंथालय-हजारो नेटवर्कस असणार्या इलेक्ट्रॉनिक ग्रंथालयाचे ग्रंथालय.”आर्म्स यांच्या मते डिजिटल ग्रंथालय म्हणजे :“माहितीच्या संग्रहाचे संबं धत सेवाहित असे व्यवस्थापन जिथे माहितीची साठवणूक डिजिटल स्वरूपमध्ये करून टी नेटवर्क च्या सहाय्याने उपलब्ध होवू शकेल असे केलेले असते.”

डिजिटल ग्रंथालयाची उद्दिष्ट्ये : संभाषण वाहिनीद्वारे उपार्जन, संग्रहण, संघटन आ ण वापर करता येईल अशा डिजिटल स्वरूपातील माहितीचा समावेश करणेपरिणामकारकरीत्या वैयक्तिक आ ण संहवलौनात्मक सेवा पुर वणे.

डिजिटल ग्रंथालयाचे गुणधर्म : डिजिटल ग्रंथालयाकरिता डिजिटल तंत्रज्ञानाची आवश्यकता असते आ ण पारंपारिक तसेच मध्यम तंत्रज्ञान व संग्रहाचा समावेश त्यामध्ये होतो. त्यामुळे मुद्रित तसेच इलेक्ट्रॉनिक वाचन साहित्याचा अंतर्भाव डिजिटल ग्रंथालयामध्ये केला जातो. डिजिटल ग्रंथालय

म्हणजेच डिजिटल स्वरूपातील वाचानसाहीत्याचा असा संग्रह ज्यामध्ये टेक्स्ट, ओ डयो, व्हि डओ, इमेज, अंक, संगणक प्रोग्राम्स आ ण मल्टी म डया समावेश होतो.वापरकर्त्यांना कामाच्या ठिकाणाहून डिजिटल ग्रंथालयांचा वापर करता येतोदु मळ व ख र्चक वाचानसाहित्य दूरच्या ठिकाणी डिजिटल ग्रंथालयाद्वारे पुर वले जाते मल्टी मडीया आशय आ ण वाचाक्भिमुख सेवा अशा ग्रंथालयान्द्वारे पुर वल्या जातात.

डिजिटल ग्रंथालयाचे फायदे:जागतिक स्तरावर माहितीची उपलब्धता व वापर ख र्चक व दु मळ वाचानसाहीत्याची दूरवर उपलब्धता दु मळ वाचानसाहीत्याचे संरक्षण व संवर्धन

डिजिटल ग्रंथालयांवरील मर्यादा:गुणवत्ता नियंत्रणाचा अभाव हार्डवेअर व सॉफ्टवेअर कालबाह्य होण्याची शक्यता असते . त्यामुळे ठरा वक तंत्रज्ञान कालबाह्य झाल्याने अद्ययावत सु वधा प्राप्त करणे आवश्यक ठरतेइलेक्ट्रॉनिक स्वरूपातील माहितीचे जतन व रक्षण हे आव्हानात्मक कार्य आहेहार्डवेअर कंवा सॉफ्टवेअचे अपयश संपूर्ण डिजिटल ग्रंथालयाच्या कार्यक्षमतेवर वपरीत परिणाम करते डिजिटल स्वरूपातील माहितीचा वापर करणे स्पे असल्याने तसेच अशा माहितीवर नियंत्रण नसल्याने कॉपीराईट कायद्याचे उल्लंघन शक्य आहे

डिजिटल ग्रंथालयांच्या सेवा :- प्रमुख सु वधा :- ई-मेल.बुलेटीन ब्रद स र्वस ,फाइल ट्रान्सफर प्रोटेकॉल,वर्ल्ड वाईड वेब

वापरकर्त्यांना पुर वण्यात येणाऱ्या सेवा पुढीलप्रमाणे: सी डी रोम डेटाबेस ,करट अवेअरनेस बुलेटीन,बाह्य स्त्रोतांकडून खरेदी केलेले डेटाबेस ,संस्थातरगत प्रका शत केली जाणारी न्यूजलेटर्स, अहवाल आ ण जर्नल्स,इन्टरनेट आधारित माहिती स्त्रोत.

निष्कर्ष:नवनवीन तंत्रज्ञानामुळे आ ण त्यांच्या वापरामुळे ग्रंथालयीन कमेचा-यांनी अशा सेवा देण्याकरिता डिजिटल वाचानसाहीत्य मडीयांचे उपार्जन, डिजिटल स्त्रोतान्कारिता वर्गणी देवून माहिती प्राप्त करून स्कॅनिंग द्वारे प्रच लत माहितीस्त्रोतांचे डिजिटल स्वरूपात रूपांतर, पोर्टल सेटची निर्मती व त्याचा वापर तसेच अंतर्गत स्वरूपात डीजिटल डेटाबेस करिता ऑनलाइन अक्सेस प्रच लत प्रवाहांचा म्हणजेच मल्टी म डया संग्रहाचा वापर याद्वारे वाचकांना उपलब्ध करून दिले पाहिजे.

संदर्भ :-

सुतार धनंजय (२०१३), ग्रंथालय आ ण माहितीशास्त्र ,स्नेहा सुतार ,कोल्हापूर पुं.क्र.४७७ते ४८१.

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ग्रंथालय आ ण माहितीशास्त्र व्यावसायिकांसाठीची नितीमूल्ये

प्रा. श्रीमती कल्पना शामराव सोनवणे,

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सारांश: एलआयएस व्यवसाय एक सेवा क्षेत्र आहे जेथे 'एलआयएस' (ग्रंथालय आ ण माहिती वज्ञान) चे कार्यप्रणाली योग्य वापरकर्त्याला योग्य वेळी योग्य स्वरूपात योग्य माहिती प्रदान करणे आहे. तथा प, माहितीच्या वस्फोटांमुळे, एलआयएस व्यावसायिकांसाठी वापरकर्त्यांना संपूर्ण आ ण वेगवान माहिती शोधून प्रदान करणे फार कठीण आहे. या शवाय, वापरकर्त्यांची माहिती मळवण्याची वागणूक देखील बदलत आहे आ ण अशाप्रकारे एलआयएस व्यावसायिकांची नोकरी अ धक क्लिष्ट आहे. माहिती आ ण दळणवळण तंत्रज्ञानाद्वारे ग्रंथालयातील प्रत्येक क्षेत्रात प्रवेश केला गेला आहे आ ण माहितीचा उपयोग गैरवापर म्हणून कायदेशीर तसेच ग्रंथालयाच्या उपयोगकर्त्यांना सक्षम केले आहे. एलआयएस व्यावसायिकांना बौद्धिक संपत्ती अ धकारांची चंता आहे. हे सर्व घडामोडींची मागणी आहे की एलआयएस व्यावसायिकांनी व्यावसायिक नैतिक मूल्यांची सुसज्ज मांडणी केलेली असावी जेणेकरून ग्रंथालयामधील कोणत्याही वषयाबाबत कोणताही निर्णय घेताना ते योग्य दृष्टिकोन घेतील. अशा प्रकारे सध्याच्या डिजिटल माहिती लँडस्केपमध्ये एलआयएस व्यावसायिकांमधील नैतिक मूल्यांना प्रोत्साहन देणे गरजेचे आहे. एलआयएस व्यावसायिकांमधील नैतिक मूल्यांचा विकास करणे अशा अनेक प्रकारे केले जाऊ शकते जसे की परिषदेचे आयोजन, व्याख्यानाचे आयोजन करणे इत्यादी; एलआयएस व्यावसायिक या दिशेने महत्त्वाची भूमिका बजावू शकतात. ग्रंथालय आ ण माहिती वज्ञान व्यावसायिकांसाठी आचारसंहिता व नैतिक तत्त्वे ग्रंथशास्त्रीय यश आ ण भ वष्यासाठी मूल्ये आवश्यक आहेत. यावर हा संशोधन पेपर आधारित आहे.

की-वर्ड:- नीतिशास्त्र, व्यावसायिक नैतिकता, नैतिक तत्त्वे, ग्रंथालय आ ण माहितीशास्त्र व्यावसायिक, एलआयएस व्यावसायिक

प्रस्तावना:- माहिती व्यवसायात नैतिक मूल्यांचा अभ्यास सामान्यतः नैतिक मूल्यांचे अभ्यासाचा एक उपसंच आहे. अशाप्रकारे या संकल्पनेला स्पष्ट करण्यासाठी आचारसंहितांची व्याख्या उपयोगी असू शकते. शब्दशास्त्रीय शब्दांची नेमके व्याख्येवर कोणताही करार नाही. काही जण जे योग्य कंवा चांगले काय आहे ते ठरवण्यासाठी कलांचा वापर करतात. एक संकल्पना म्हणून, नैतिकतेचा हेतू वर्तनाची तत्त्वे स्थापन करणे आहे जे लोकांना पर्यायी पध्दतींमध्ये पर्याय निवडण्यास मदत करतात. ग्रंथपाल व माहिती व्यावसायिकांच्या व्यावसायिक मोहिमा परिभाषत करणारे मूलभूत नैतिक मूल्ये बौद्धिक स्वातंत्र्य, अ भव्यक्तीचे स्वातंत्र्य, ज्ञान, माहिती व संस्कृतीपर्यंत पोहोचण्याचे स्वातंत्र्य आ ण वैचारिक, राजकीय आ ण धार्मिक तटस्थतेचे तत्त्व अनुपालन करतात. ग्रंथपाल आ ण माहिती व्यावसायिकांना सार्वजनिक वश्वासाचे योग्य व्यक्ती असणे आवश्यक आहे, ज्या तज्ञांनी पाठक आ ण माहिती वापरकर्ते आ ण ल खत आ ण माहिती संसाधनांमध्ये मध्यस्थी असणे आवश्यक आहे, त्या वापरकर्त्यांना व वध कार्ये करणे आ ण त्यांचे ध्येय प्राप्त करणे आवश्यक आहे. ग्रंथपाल आ ण माहिती व्यावसायिकांच्या नैतिकतेचे नियम व्यवसायाच्या सर्व प्रतिनिधींसाठी बंधनकारक मूलभूत तत्त्वे निश्चित

करतात आ ण त्यांच्या व्यावसायिक कार्याच्या सर्व वातावरणात त्यांच्या सामाजिक मोहिमा आ ण नैतिक जबाबदारी ओळखतात. प्रश्नातील तत्त्वे तीन गटांमध्ये वभागल्या जातात. सर्वप्रथम सर्वसाधारण प्रासंगिकतेचे सद्धान्त समावष्ट आहेत. दुसऱ्या गटातील पाच उप-गटांमध्ये सार्वजनिक, ग्रंथालय आ ण माहितीचे उपयोगकर्ते, ग्रंथालय आ ण माहिती संसाधने, व्यावसायिक समुदाय, नियोजित आ ण रोजगार देणारी संस्था यांच्यासाठी व्यवसायाची जबाबदारी निश्चित करण्यासाठी नैतिक मानकांचा समावेश आहे. तिसऱ्या समूहात व्यावसायिक नैतिकतेचे लोक प्रयोजन आ ण तत्त्वांच्या पूर्ततेसंबंधी बंधने समावष्ट आहेत. व्यावसायिक आचारसंहिता ही व्यावसायिक काम गरीमध्ये स्वीकार्य मानके निर्धारित, सेट आ ण ठेवणे यासाठी फारच महत्त्वपूर्ण वषय आहे.ग्रंथालय आ ण माहिती केंद्रे मानवजातीच्या ज्ञान कंवा माहितीसाठी भांडार आहेत; ते आपले भूतकाळ, सध्याचे आ ण भविष्यातील आहेत. अत्यंत प्राचीन काळापासून ग्रंथालय बहु स्वरूपांमध्ये उपलब्ध असलेल्या माहितीचे संकलन, आयोजन, संरक्षण आ ण प्रसार करून समाजाची सेवा देत आहेत. सूचना केंद्राच्या म्हणून ग्रंथालय सामाजिक, सांस्कृतिक, बौद्धिक, वैज्ञानिकदृष्ट्या आर्थिकदृष्ट्या माहिती देणाऱ्या व्यक्तींना माहिती पुरवून महत्वाची भूमिका बजावते. एलआयएस व्यवसाय हा एक सेवा देणारा व्यवसाय आहे आ ण लोकांच्या गरजा पूर्ण करणे हे मशन आहे. ग्रंथालयाचे तीन घटक म्हणजेच ग्रंथालय कर्मचारी (एलआयएस व्यावसायिक), माहिती स्रोत आ ण ग्रंथालय संरक्षक यांचा समावेश आहे. एलआयएस (ग्रंथपाल) व्यावसायिक ग्रंथालय आश्रयदाते आ ण माहिती स्रोतांमधील दुवा म्हणून काम करीत आहेत. वाडमय संस्था म्हणून ग्रंथालयाच्या कर्मचा-यांनी योग्यरित्या त्यांच्या व्यावसायिक जबाबदाऱ्या पार पाडल्या म्हणून जेणेकरून ग्रंथालयाचे मशन कोणत्याही अडथळ्यां शवाय प्राप्त होईल. एलआयएसची योग्य प्रकारे वागणूक या बंधनामुळे एलआयएस व्यवसायात व्यावसायिक नैतिकतेची संकल्पना निर्माण झाली आहे.

व्यावसायिक नैतिकता:- प्रत्येक पेशा त्या व्यवसायात नैतिक वागणुकीला चालना देण्यासाठी आचारसंहिता स्थापित करते. व्यावसायिक नैतिकता एखाद्या व्यवसायाची आवड (उदा. वर्ण, आत्मा, संस्कृती, सराव) च्या अभिव्यक्ती म्हणून मानली जाते. दुसऱ्या शब्दात सांगायचे म्हणजे व्यवसायाशी निगडित सर्व मूलभूत मूल्यांवर आधारित कंवा प्रतिबिंबित करणे आवश्यक आहे. व्यवसायाबद्दल काय वाटते, ते स्वतःला आ ण समाजातील त्यांच्या जागेबद्दल काय वाटते हे उघड करणे आवश्यक आहे. या गटाबद्दल वेगळे काय आहे हे दर्शवणे आवश्यक आहे. त्यांच्याकडून देण्यात येणारी सेवा गुणवत्ता त्या वर्गांमध्ये असावी ज्यामुळे त्यांना वेगळे केले जाईल. खूप वेळा ; आम्ही एका व्यक्तीचे काम करत असलेल्या व्यक्तित्वाचा दर्जा पहातो जेणेकरून कार्यप्रदर्शनाच्या प्रकारात बौद्धिक आ ण तांत्रिक कौशल्य आ ण ग्राहकांच्या प्रति जबाबदारी आ ण बांधलकीची त्यांची भावना ह्यामध्ये जवळ-परिपूर्णता असते. त्यामुळे व्यावसायिकांनी सामान्यतः या प्रकारच्या प्रतिष्ठेचा वापर केला.

ग्रंथपालांसाठी व्यावसायिक नैतिकता:- ग्रंथशास्त्रीय व्यवसायासाठी नीतिमूल्ये आवश्यक घटक आहेत. समाजात एकत्रित, संरक्षण व प्रसारित करण्यामध्ये ग्रंथपालनाची अनिवार्य भूमिका आहे. ग्रंथालय आ ण माहितीशास्त्र व्यावसायिकांनी वापरकर्त्यांना, प्रशासनाकडे, पुस्तक, माहिती व्यापारातील आ ण सहकार्यांसह लोकांशी व्यवहार करणे आवश्यक आहे. वेगवेगळ्या गटांमधून एलआयसी व्यावसायिकांच्या

व वध टप्प्यांवर व वध अपेक्षा असतात. व्यवसायाचे स्वरूप करताना या गुंतागुंत सोडवण्यासाठी काही नैतिक मार्गदर्शक तत्त्वे कंवा नैतिक आदर्श आवश्यक आहेत. ए.के.मुखर्जी यांचे मते, "ग्रंथपालन हा पेशा वक सत झाला आहे, ज्यामुळे मानवी सभ्यतेच्या दीर्घकालमध्ये पाळलेल्या तत्त्वांचे मूल्य वाढते हे काही व शष्ट रूपांतरित आहेत. आधुनिक व्यावसायिक ग्रंथपाल आपल्या अधग्रहण, संघटना, उपयोग आ ण ज्ञानाचा अंतिम प्रसार यांच्या तत्त्वांमध्ये प्रद र्शत करतो."

ब्रॉडफील्ड, फॉस्केट आ ण इतरांनी व्यावसायिक ग्रंथपालांना एक पंथ आ ण नैतिक मूल्यांचे पालन केले आहे आ ण या संदर्भात ग्रंथपालाच्या नैतिक, बौद्धिक आ ण व्यावसायिक बन वलेल्या वेगळ्या नसलेल्या गुण वशेष ग्रंथालय सेवा, ग्रंथशास्त्रीय तत्त्वे आ ण ग्रंथपाल यांचे पंथ सर्वच आहेत हे लक्षात घेतले पाहिजे. इफ्ला व्यावसायिक नैतिकतेनुसार "ग्रंथपाल आ ण अन्य ग्रंथालय कर्मचा-यांसाठी राष्ट्रीय ग्रंथालय कंवा ग्रंथपाल संघटनांनी स्वीकारलेल्या कंवा शासकीय संस्थांद्वारे अंमलबजावणीसाठी व्यावसायिक मार्गदर्शक तत्त्वांचा संग्रह आहे." नवलाणी यांचे मते, "व्यावसायिक नैतिकता योग्य आचरण आ ण वर्ण वज्ञान आहे; नैतिक बांधलकीच्या नैसर्गिकतेचे आ ण भूभागाचे पालन करणारे वज्ञान; स्वतःबद्दल आ ण इतरांच्या अधकाराप्रती मनुष्याच्या कर्तव्याची शकवण होय." अमेरिकन लायब्ररी असो सेशनच्या मते, नैतिकतेचा एक कोड "व्यवसायाबद्दल आ ण सामान्य जनतेला नैतिक तत्त्वे सांगते जे ग्रंथपाल, इतर व्यावसायिक, ग्रंथालयाचे ट्रस्टीज आ ण ग्रंथालय कर्मचारी यांना माहिती पुर वणारी सेवा पुर वतात."

ग्रंथशास्त्रीय मूल्ये (The Values of librarianship):- ग्रंथशास्त्रीय यश आ ण भ वण्यासाठी मूल्ये आवश्यक आहेत: ते "लांब पल्ल्यात महत्त्वाचे आ ण योग्य" काय आहे हे दर्श वतात आ ण आपल्या व्यवसायाचे वर्णन करण्यात मदत करतात. एलआयएसमधील व्यावसायिक मुल्यांवरील साहित्यिक आढाव्यात, ली फॅक्स म्हणते की, ही मूल्ये चार प्रकारात मोडतात:

व्यावसायिक मूल्ये ग्रंथपालनामध्ये अंतर्भूत आहेत आ ण सेवा आ ण कारभार व्यवस्थेचे महत्त्व ओळखणे; तत्त्वज्ञान वषयक मूल्यांचे पालन करणे जे बुद्धी, सत्य आ ण तटस्थता दर्शवते; लोकशाही मूल्यांचे संरक्षण; आ ण वाचन आ ण पुस्तकांबद्दल भावनाप्रवण असते.

सर्वसाधारण मूल्य सामान्यतः सामान्य लोकांद्वारे, त्यांचे क्षेत्र काहीही असो. ग्रंथपालांचे कार्य, सामाजिक आ ण समाधान मूल्यांमुळे जीवनभर शक्षण, सहिष्णुता आ ण सहकार्याचे महत्त्व आ ण स्वीकार्य भावना असणे आवश्यक आहे. वैयक्तिक मूल्ये वशेषतः ग्रंथालय कर्मचा-यांची आहेत आ ण त्यात मानवतावादी, आदर्शवादी, पुराणमतवादी आ ण सौंदर्याचा मूल्य समा वष्ट करतात. प्रतिस्पर्धी मूल्ये नोकरशाही, बौद्धिक आ ण निरर्थक कल्पनांसह ग्रंथालयांच्या कार्यास इशारा देतात. ग्रंथालयाला चांगल्या गोष्टी करण्यासाठी व्यवसायाच्या क्षमतेवर वश्वास असणे आवश्यक आहे.

निष्कर्ष:- एलआयएस व्यावसायिकांसाठी नैतिकतेमध्ये खालील गोष्टींचा समावेश आहे: निष्पक्षता, सत्यता, पारदर्शकता, उत्तरदायित्व आ ण स्वतःला, वापरकर्ते, संघटना, संस्था, समयस्क आ ण समाज यांसाठी या उद्योगांची जबाबदारी. एलआयएस व्यावसायिक माहिती संस्थेतील सहभागी म्हणून महत्त्वाची भूमिका बजावतात, ज्यात त्यांचे ध्येय एकत्रित करणे, प्र क्रया करणे, वतरण करणे आ ण माहितीचा वापर करणे समा वष्ट आहे. ज्ञानाच्या वशाल महासागरातील माहितीचा ड्रॉप काढण्यासाठी केवळ एलआयएस व्यावसायिकांची क्षमता आ ण कौशल्य आहे. आम्हाला माहिती आहे की, जर आपण इंटरनेटच्या शोध

इंजिनमध्ये एक शब्द लहितो, तर त्या शब्दाशी संबं धत मोठ्या संख्येने वेबसाइट्सच्या सूचीत त्याचा परिणाम होईल. अशा सर्व वेबसाइट प्रामा णक नाहीत आ ण गुणात्मक, उ चत आ ण मौल्यवान माहिती प्रदान करतात. एलआयएस व्यावसायिकांना योग्य वेळेत त्या स्त्रोतांपासून वापरकर्त्यांना अचूक माहिती शोधून त्याचे प्रसार करण्यासाठी ज्ञान, प्र शक्षण आ ण कौशल्य आहे. वापरकर्त्यांना माहिती सेवा देण्याच्या वेळी LIS व्यावसायिकांना बऱ्याच कठीण परिस्थितीत सामोरे जावे लागते. त्यावेळी त्यांनी त्यांच्या व्यावसायिक मानकांवर आ ण संस्थेचे मूल्य अवलंबून असणे आवश्यक आहे. एलआयसी व्यावसायिकांना व्यवसायाची सामाजिक प्रतिष्ठा वाढवण्याची आ ण नैतिकतेच्या नियमांचे मानदंड आ ण प्रोत्साहन देऊन त्यानुसार माहिती युगात त्याच्या संभाव्य भू मकाची मान्यता देण्याचे प्रयत्न करणे आवश्यक आहे.

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चौधरी जगदीश देविदास

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" गुणवत्ता कधीही अपघात नसते, उपलब्ध पर्यायातून केलेल्या योग्य निवडीची ती परीपुर्ति असते. उत्तम सल्ला काळजीपूर्वक ऐकून स्विकारल्यास शिक्षक व शिक्षकेतर कर्मचाऱ्याची क्षमता वृद्धिंगत होते आणि त्यांच्या कामाचा दर्जा उंचावतो .तसेच व्यवस्थापनात अचुकता निर्माण होते "

प्रास्ताविक :- आधुनिक व्यवस्थापनाची संकल्पना विकसीत होवून औद्योगिक क्षेत्रामध्ये प्रत्यक्ष व्यवहारात आल्यावर कित्येक वर्षांनंतर ती शिक्षण क्षेत्रात स्विकारण्यात आली.संस्थेची अपेक्षित प्रगती व विकास शास्त्रीय प्रशासन व व्यवस्थापन व्यवस्थेमुळेच होऊ शकते हे कोणत्याही व्यक्तींना ऐतिहासिक पार्श्वभूमीवरून स्पष्टपणे जाणवेल. मात्र ते जाणवून घेण्याची दृष्टी व विचारसारणी असावयास हवी .एखादे कार्य व्यवहार किंवा चळवळ प्रभावी रीतीने घडवून आणण्यासाठी आवश्यक असलेली कार्ये ज्या यंत्रणेकरणी केली जातात. त्या यंत्रणेला व्यवस्थापन असे म्हणतात. कोणतीही संस्था चालते ती पुराण व्यवस्थापनामुळे, व्यवस्थापनाची सर्वात सोपी व सुटसुटीत व्याख्या म्हणजे दुसऱ्याकडून प्रभावीरीतीने काम करवून घेणे होय. आजच्या काळात व्यवस्थापन म्हणजे Management या शब्दाला फार महत्त्व प्राप्त झाले आहे.

१) मानवीय साधनसामग्री :- मानवीय साधनसामग्री मध्ये मानवशक्तिचा अंतर्भाव होतो. म्हणजे व्यवस्थापन म्हणजे प्राचार्य, प्राध्यापक, विद्यार्थी, पालक, कर्मचारी वर्ग इत्यादी

२) भौतिक साधनसामग्री :- भौतिक साधनसामग्रीत महाविद्यालयाची इमारत, प्रयोगशाळा, ग्रंथालय, क्रिडांगण, फर्निचर, स्टेशनरी यांचा समावेश होतो. दोघी साधनसामग्री यांची एकमेकाची जोड असावी लागते. दोघाच्या परस्परपुरक उपयोगातून संस्था व्यवस्थित चालू शकते. कार्यालयीन व्यवस्थापनाचा विचार याच दृष्टिने करावा लागतो.

कार्यालयीन व्यवस्थापन :- दररोज सकाळी ऑफीसमध्ये आल्यानंतर आजच्या कामाचे नियोजन करावे. त्यानंतर वेबसाईटवर शासनाचे, विद्यापीठाचे सर्व्युलर प्रसारित झाले आहे की नाही याची खातर जमा करावी.

फाईलचे प्रकार :- शाळा / महाविद्यालयाच्या कार्यालयात फाईलचे प्रकार तिन भागात मोडतात. १. संस्था २. विद्यापीठ ३.प्रशासन .

१. संस्था :- संस्थेकडून आलेल्या पत्रव्यवहाराची फाईल करून आलेले पत्र व त्यावर उत्तर दिलेले पत्र लावावे.

२. विद्यापीठ :- विद्यापीठातील फाईल तयार करतांना विविध विभागानुसार फाईल करावे . हयामध्ये जनरल फाईल व महत्वाची फाईल असे दोन प्रकार करावेत . व विभागानुसार पत्र लावावे.

जनरल फाईल :- उदा. पात्रता महत्वाची परिपत्रके, विद्यार्थ्यांचे पात्रता प्रकरण फाईल, परीक्षा महत्वाची फाईल, संलग्नीकरण परिपत्रक फाईल , संलग्नीकरण प्रस्ताव फाईल, व्याख्याता मान्यता/मागासवर्ग कक्ष विभाग फाईल, प्राध्यापक पात्रता फाईल , प्रवेश प्रक्रीया फाईल,सुटी फाईल, सांख्यिकी फाईल, चर्चासत्र फाईल, विद्यार्थी परिषद फाईल, विद्यार्थी विमा फाईल, विद्यार्थी मेडिकल फाईल, विद्यार्थी विशेष गुणवत्ता फाईल, शासन निर्गमित जी.आर.फाईल, विद्यार्थी कल्याण निधी फाईल, उमवि जनरल परिपत्रक फाईल, इतर जनरल परिपत्रक,

महत्वाची फाईल :- उदा. विद्यापीठ पात्रता मंजुर फाईल, परीक्षा फॉर्म यादी फाईल, कर्मचारी जाहिरात मंजुर फाईल, कर्मचारी नियुक्त निवड समिती अहवाल फाईल, इ. यामध्ये विद्यार्थ्यांना पात्रता नंबर देणे, किती विद्यार्थ्यांनी परीक्षा फॉर्म भरले आहे, जाहिरात मंजुर कश्या प्रकारे झाली आहे,कर्मचारी निवडी संबंधी माहिती इ. माहिती आपणास लवकर मिळते.

शिष्यवृत्ती संबंधी :- खुली गुणवत्ता फाईल, भारत सरकार शिष्यवृत्ती फाईल, एस.सी.,एन.टी.,एस.टी.,एस.बी.सी. इबीसी/पीटीसी फाईल, हया फाईलीमध्ये वर्ष निहाय मंजुरी तक्ते केल्यास व विद्यार्थ्यांना आदेश क्रमांक देण्यास सोयीस्कर जाते.

३. प्रशासन :- प्रशासन १. Rotin Management २. Academic Management असे दोन प्रकारचे असते. प्रशासन म्हणजे महाविद्यालयाची गोपनियता यामध्ये कर्मचाऱ्यांचे पर्सनल फाईल, सर्व्हीस बुक, महाविद्यालयाचे वेगवेगळे शासकिय मंजुरी पत्र , संलग्नीकरण पत्र , आर्थिक बजेट, पगार बजेट, महाविद्यालय मालमत्ता रेकार्ड, इ.महत्वाच्या फाईली असाव्यात. **संस्थेचे ध्येय धोरण :-** संस्थेने दिलेले mission ठरविणे व ते कुठपर्यंत आहे याची नोंद घ्यावी.

कार्यालयाचे स्थान :- कार्यालयाचे स्थान मध्यवर्ती ठिकाणी तळमजल्यावर असावी.

वातावरण :- पुरेशी उजेडाची, हवेशीर, शांततेची, अंतर्गत सजावट, सांडपाडण्याची सोय, स्वच्छता, पिण्याच्या पाण्याची सोय, घडयाळ, इ. वस्तु पुरेश्या असाव्यात.

संगणका :- संगणकात काम करीत असतांना वरील प्रकारच्या विभागानुसार फोल्डर करून त्यामध्ये त्यांच्या कामाच्या फाईल तयार केल्यास काम करणे सोईचे जाते.

अनुदान :- शाळा / महाविद्यालयास मिळणारे वेतन, वेतनेतर अनुदानाचा अंदाज तयार करून त्याप्रमाणे खर्च करणे, युजीसी अंतर्गत सर्व स्किम वेबसाईटवर बघून मुदतीत अनुदानाचा प्रस्ताव करणे व त्याचा पाठपुरावा करणे. शिष्यवृत्ती अनुदानासाठी प्रस्ताव वेळेवर पाठविणे.

कार्यालयीन कामकाजाचे नियोजन :- कॉलेज कॅलेंडर तयार करणे यामध्ये प्रवेश, निकाल, वार्षिक ऑडिट, शिष्यवृत्ती, इबीसी, वार्षिक परीक्षा ऑडिट, परीक्षा फॉर्म, पात्रता फॉर्म, सांख्यिकी माहिती, कार्यभार तपासणी, संलग्नीकरण प्रस्ताव, सर्व्हीस बुक भरणे , रजा रेकार्ड ठेवणे, इनकम टॅक्स , प्रोफेशनल टॅक्स, वार्षिक अंदाज पत्रक यांची प्राथमिक तयारी करणे, हयाव्यतीरिक्त वेतन आयोग, शिष्यवृत्ती ,अेजी ऑडिट, पे - फिक्शेशन, मेडिकल बिल, इतर परिपत्रक

कार्यप्रवाह :- नियोजित, अनियमितपणा नसावा, नियंत्रण असावे, कार्यप्रवाह व्यवस्थित नसेल तर खालील प्रमाणे

उपाय योजना :- माहितीच्या अभावामुळे प्रशिक्षण देणे, कर्मचाऱ्यांचे दोष दूर करणे, कर्मचाऱ्यांचे मनोबल, आत्मविश्वास वाढविणे, खाजगी भेट कमी करावी, विद्यार्थी, कर्मचारी, पालक यांच्याशी कामापुरते बोलावे. दररोज कामासंबंधी पाठपुरावा करणे.

समारोप व्यक्तिगत मुल्यातुनच संस्थात्मक मुल्यांचा उगम होतो. कधीही या उलट घडत नाही. शैक्षणिक संस्थांच्या परिणामकारक व्यवस्थापनासाठी मुल्ये आणि कौशल्ये यांची गरज समान प्रमाणात असते कोणतेही व्यवस्थापनात अनुभवानुसार सुधारणा होत असते. प्रदिर्घ अनुभवाने कार्यालयीन कामकाजाचा वेग त्यामुळे वाढतो. क