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1 **IMPORTANCE OF DIGITAL TECHNOLOGY IN PERFORMANCE APPRAISAL SYSTEM**
Arti More (1-3)

2 **GST "COGNIZANCE FOR A COMMON MAN"**
Mrs. Aruna Sanjay Kadam (4-9)

3 **ROLE OF DIGITAL TECHNOLOGY IN TEACHING LEARNING PROCESS IN TEACHER EDUCATION**
Prof. Dr. B. J. Mundhe (10-14)

4 **AN ARRAY OF INSTRUCTIONAL STRATEGIES: IMPACT OF PERFORMANCE ASSESSMENTS ON TEACHING AND LEARNING**
Bhabani Shankar Panigrahi (15-19)

5 **DIGITALIZATION IN FINANCIAL MANAGEMENT & ELECTRONIC ACCOUNTING FOR P2P CYCLE**
CA. Bharat Khatri (20-26)

6 **USE OF DIGITAL TECHNOLOGY IN E-COMMERCE**
Bhavana N Patil & Dr. Anjali Patkar (27-32)

7 **PERFORMANCE BASED TEACHING AND LEARNING**
Disha Milind Sawant (33-36)

8 **RECOMMENDER SYSTEM FOR M-COMMERCE**
Gulabchand K Gupta (37-40)

9 **EFFECTIVENESS OF DIGITALISATION ON SUSTAINABLE GROWTH OF MICRO-ENTERPRISES**
Dr. Jaya Prem Manglani (41-50)

10 **ROLE OF ELECTRONIC ACCOUNTING IN FINANCIAL MANAGEMENT OF COMPANIES AND ITS IMPACT**
Jyoti Nagdev (51-54)

11 **A REVIEW ON STOCK MARKET STRATEGIES & VALUATION MODELS**
Kailash Chandak (55-62)

12 **CUSTOMER RELATIONSHIP MANAGEMENT (CRM) IN DIGITAL AGE: A SURVEY ON ACADEMIC LIBRARY SERVICES**
Mr. Kiran P. Raikar (63-67)
13 **EMERGING TRENDS OF DIGITAL TECHNOLOGY IN FINANCIAL SERVICES**
Manisha A. Ailani (68-73)
14 **INTERNET OF EVERYTHING AND INTERNET OF THINGS SUPPORTED BY 5G WIRELESS TECHNOLOGY**
Manisha Sriniwas Abhyankar & Gulabchand K. Gupta (74-80)
15 **USE OF DIGITAL TECHNOLOGY IN MATHEMATICS EDUCATION**
Manoj S Narkhede (81-87)
16 **IMPACT OF GST ON EDUCATION SECTOR**
Prof. CA Monica Lodha (88-93)
17 **EFFECTS OF MOBILE PHONE USAGE ON LEARNING PROCESS**
Naik Sameer (94-99)
18 **A STUDY ON ORGANIZATIONAL CULTURE AND JOB SATISFACTION**
Miss. Neelam Dadhibal Jaiswar (100-103)
19 **EFFECTIVENESS OF SOCIAL NETWORKING PLATFORM FOR YOUNGSTERS IN MANAGING STRESS AND ANXIETY: A SURVEY IN ULHASNAGAR CITY**
Prof. Neetu Kapoor (104-108)
20 **RECENT TRENDS IN MARKETING**
Dr.Neha Sanjay Jagtiani (109-113)
21 **DIGITAL TECHNOLOGY IN EDUCATION**
Prof. Nikita Chandwani (114-117)
22 **MAKE IN INDIA OPPORTUNITY AND CHALLENGES**
Niraj Mishra (118-121)
23 **APPLICATION OF ZHOU'S DIFFERENTIAL TRANSFORM METHOD FOR SOLVING DIFFERENTIAL EQUATIONS TO SOLVE INDUSTRIAL PROBLEMS**
Prof. Narhari Onkar Warade & Prof. Dr.Prabha Rastogi (122-129)
4 **INFORMATION RETRIEVAL AND DE-DUPLICATION FOR TOURISM RECOMMENDER SYSTEM**
Rajesh Thasal, Shubhada Yelkar, Amit Tare & Dr. Sharmila Gaikwad (130-133)
25 **A STUDY ON THE LEVEL OF AWARENESS OF RIGHT TO EDUCATION AS A FUNDAMENTAL RIGHT IN THE CITY OF MUMBAI**
Dr. Rajesh Mankani (134-141)
26 **LEARNER & CYBER LAWS**
Dr. Renuka K. Shewkani (142-145)
27 **A STUDY OF THE MOBILE LEARNING PRACTICES AMONG THE HIGHER SECONDARY STUDENTS**
Dr.Rukmini Jamdar (146-150)

28 **FINANCIAL MANAGEMENT AND ELECTRONICS ACCOUNTING**
Prof. Sangeeta J. Jagia (151-156)
29 **COMPUTER VIRUSES: AN OVERVIEW**
Prof. Saquib Ahmad Khan (157-163)
30 **IMPACT OF SOCIAL MEDIA ON EDUCATION OF POST GRADUATE STUDENTS: WITH SPECIAL REFERENCE TO ULHASNAGAR CITY**
Dr. H.S. Patange &Ms. Savita Punjabi (164-167)
31 **TEACHING WITH TECHNOLOGY-ICT AND CHALLENGES**
Ms. Shaheda Sheikh (168-171)
32 **TO STUDY THE ORGANISATIONAL ENVIRONMENT OF THE DIFFERENT CATEGORIES OF ARTS AND COMMERCE COLLEGES OF MUMBAI FOR KNOWLEDGE MANAGEMENT**
Ms. Shaili Vasant Gala (172-179)
33 **ON-SCREEN ANALYSIS OF BIOLOGICAL DATA (PROTEIN, CARBOHYDRATES AND LIPIDS) IN LIVER AND MUSCLE OF EXPERIMENTAL FISH, CHANNA PUNCTATUS (BLOCH) USING SPSS SOFTWARE**
Shanta P. Janyani, Nisar Shaikh and Ajai Kumar Singh (180-188)
34 **RIGHT TO EDUCATION: A NEED OF THE SOCIETY**
Ms. Shubha V. Chaubal (189-191)
35 **SMART FARMING WITH DIGITAL TECHNOLOGY – NEW MODEL OF BUSINESS IN PRIMARY SECTOR**
Dr. Mrs. Sonali Bhushan Deogirikar (192-198)
36 **RETAIL SECTOR AND ENTREPRENEURSHIP**
Soniya Shanker Lakhyani (199-202)
37 **GREEN COMPUTING: A NEED OF THE HOUR**
Trupti Vaity and Sonal Tawde (203-209)
38 **SCRUM: REVIEW OF STRONG AND WEAK SIDE OF METHODOLOGY FOR ADOPTION**
Tushar Sambare & Dr Gulabchand K. Gupta (210-215)
39 **INNOVATIVE BANKING PRACTICE IN RURAL MARKET**
Mrs. Uma V. Tanwar (216-220)
40 **CRYPTO CURRENCY: AN INNOVATIVE ALTERNATIVE DIGITAL CURRENCY**
Dr. Vandana Katare (221-224)
41 **DIGITAL TECHNOLOGY IN PHARMA AND HEALTHCARE INDUSTRY A CASE STUDY OF SUNPHARMA – NO. 1 INDIAN MNC**
Vandana Solanki(225-229)
42 **INNOVATIVE BANKING PRACTICES IN RURAL MARKET:ACASE STUDY OF NABARD**
Vanita Manoharlal Adnani (230-234)

43 **BREAKTHROUGH TECHNOLOGY-BANKING AND FINANCIAL SECTOR BHARATIMAKHIJANI**
Bharati Makhijani & Vanshika Ahuja (235-241)
44 **ENVIRONMENTAL FACTORS INFLUENCING HORMONAL DEVELOPMENT OF ORGANISMS**
Dr Vivekkumar Vasudeo Patil (242-245)
45 **A COMPARATIVE STUDY ON ROLE OF RESEARCH IN EDUCATION**
Prof. Yogesh Pawar (246-250)

IMPORTANCE OF DIGITAL TECHNOLOGY IN PERFORMANCE APPRAISAL SYSTEM

Arti More, *Asst. Professor, Seva Sadan College of Arts, Science and Commence, Ulhasnagar, Mumbai*

Abstract

Information Technology has taken over the world and has been a daily part of life. It is difficult to survive without technology in any filed. So technology has a great impact on every filed. Technology has changed the working of business. In the current Information Age, the use of computers and the Internet has increased that impact significantly. Business cannot even function without the use of computer technology and internet. This impact can be seen in all areas of business sector, including human resource development, where technology will continue to have a significant impact on human resource practices like recruiting, training, data storage and retrieval, performance management, work transition management, employee relation, compensation benefits, training and Development.

Performance management system plays a very vital role, as the overall success of an organization depends on the performance of human assets. The purpose of this research is to understand the importance of digitalization in performance management system of the organization.

Keywords*: Digital Technology, Performance Appraisal System, Appraisal software, Mobile App.*

Introduction: Digital technology plays animportant role to bring radical changes in the world economies and societies are generating more revenues to earn;it allows access to information,improves the world growth efficiency and makes the world a global village or a global market. The IT industry has increased the activities of internetin all walks of life. It has become animportant and integral factor for an organization to survive.

Performance Appraisal: According to John Douglas, Stuart Klein and David Hunt defined: "Performance appraisal as a systematic evaluation review of employee's meaningful job behavior with respect to their effectiveness in meeting their job requirements and responsibilities"The performance appraisal is also referred as performance review, employee appraisal,career development discussion and employee appraisal programme. Every organization public and private cannot function without their employees. Acquiring the best talent, developing and retaining them become an important task for the organization; hence this work is done by human resource development along with the managers of the organization. Performance appraisal is a part of career development and it consists of regular and timely reviews of employee performance within the organizations. The process of assessing the employees on the basis of the standards and objectives set at the beginning of the year and to compare the set standards with the achieved targets; subsequently providing feedback to employees about their performance level. Performance appraisal gives an opportunity to employees to grow in their career or if there is any improvement needed in particular employee it can be discussed with the employee.Performance of an employee measures their efficiency and effectiveness in the achievement of organizational goals and objectives. Digital technology Management is the implementation of digital technology in managing Performance Management System. Digital technology enabled Performance Management is an effective tool to leverage the full benefits of the whole system at a comparatively lesser cost of administration. It alsoenables the organizations to maintain and update the record of core skills and competencies of employees in theirmanaging

process.Digital technology has its powers in performance management. Using an advanced performance management system, employee and organization goals have a better chance of success; industries best practices can be implemented successfully; and it allows the overall process to be managed more efficiently and effectively. Digital technology helps in providing appropriate and meaningful performance result of the employees which in turn helps in the training, career development, succession planning and it also assist in rewarding the performing employees. More and more organization are relying on digital technology because rapidly changing and dynamic scenario are impacting performance management processes, as organization is become more adaptive and rely on more updated and regular information. Digitalization helps to measure and manage the employee performance. It helps to automate the overall processes of human resource which save time and cost. It also reduces the efforts required and the unnecessary paperwork. Most organizations whether be it national or international are already using the digital technology in their appraisal process and the rest organization are planning to buy software for the performance management in the organization. With the emergence of technology, performance appraisal software's are becoming common in the organizations. Performance management software helps the human resource department to carryout performance of the employee in the most effective way, by saving time and cost. Performance management software provides an innovative approach to employees performance appraisals. It not only provides performance review but also helped in increasing productivity, relationship, behavior, employee development and to identify core competencies of the employees. There are some soft-wares like Workforce Performance Management (WPM) suite systems, Talent Management Software, Workday Performance Management, HRweb, Cornerstone Performance, Performance Management Systemetc; are readily available on the internet and organization can make use of this software. These software are easy to use, it is user friendly and has a lot of features. Such soft-wares are readily available and provided by IT companies which help to effectively manage appraisal process. Organization can buy ready to use licensed package software or they can customized the software according to their requirements.These soft-wareshelps to systematically record all the data about performance of the employees, his career objectives, compensation and other related activities related to appraisal. Appraisal form needs to be filled online and needs to be submitted to the Human Resource via immediate manager. Once employee records all this information, automatically his performance can be compared with the set objectives and standards; subsequently performance result will be displayed on the basis of recorded data.Further, recent trend in digital technology is the use of Mobile app in employee performance appraisal processes.Byusing this mobile app for employee performance appraisalit provides several benefits that increasethe efficiency of the performance appraisal process, for example, by using this toolcommunication between managers and employeeswill increase and there will be opendirect communication channels between them. Further, managers can instantly guidance, advice or correct whenever it is needed.Thus, it improves employee performance and overall productivity of the business.Businesses would capitalise on this mobile app system to exchange real-time information, feedback and consider from workers to measure individual performances comparing it against the pre-set organisational

objectives and standards. Thisnew method of conducting evaluation also creates platform for line managers to give immediate guidance and quick solution to any problemsthat employee is facing in any circumstances while doing their duties. Using this mobile app for appraising employees boosts effective team efforts, employee empowerment, feedbacks which areperformed in a simple and very easy manner.However, using mobile app for employee appraisal procedures comes with numerous challenges and problems that obstruct the possibility of implementing it a global level, because there can be countries where availability of internet connection is very limited, however, this obstacle might be resolved by installing high speed internet connectionsin those regions which will pave the way for organizations to take advantage of the technology and specifically the mobile app system phenomenon.

Conclusion: If the digital technology is implemented well in performance appraisal process, it will help organization to foster a more efficiently, timely, user-friendly data based process, encouraging employees to deliver their better performance.Digitalization makes it easy to manage the performance on a continuous process. It reduces the paper work and increase the accuracy of the appraisal. It reduces the long hoursof time spent to do appraisal. It increases the overall efficiency of employees and they are able to get comments on their work and thus, they can improve on their own.

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GST "COGNIZANCE FOR A COMMON MAN"

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Abstract

Goods and Services Tax (GST) is a newly introduced Indirect tax in the Indian tax regime which had subsumed various indirect taxes. With the implementation of the same various opportunities and threats have been evolved in the Indian tax reform history. As it is said that ***"Necessity is the mother of Invention"*** *and GST is the outcome of this invention. In this paper I would like to bring to the knowledge of every common man about GST and try to eliminate the pros n cons and misunderstanding of the GST. This paper will enhance knowledge of the common man and remove fear about it, it also discusses the policy and administrative reform measures needed for a stable, certain, less litigious and facilitative tax environment in India which supports investments and growth.*

KeyWords*: Introduction, Tax structure, Tax Reform, GST, Challenges.*

Introduction- Reform word in itself shows a sign of changing and adaptability in the present running situation, if not changed would led to breakdown of the system, which not only breakdowns the system but also triggers the question of survival as change is the need of time. As per the demand our Indian tax structure is also not left untouched.Tax reforms are concerned with adjusting an already existing tax or tax structure to change existing circumstance and augment present structure to cope up with global trends. It not only includes introduction but also abolition of various taxes as per the growing economic requirements. There have been major changes in tax systems in several countries over the last decades for various reasons. The objective of this paper is to analyze the tax system in India and its newly implemented reform Goods and Service Tax (GST). The paper describes and assesses the introduction of new reforms of indirect taxes, their implications on the various sectors of the Industry as well as the centre of country i.e. a common man. There have been major changes in tax systems of variouscountries with a wide variety of economics systems and levels of development during the last decades. The spur for these reforms has varied from one country to another and the thrust of reforms has differed from time to time depending on the development strategy and philosophy of the times. Tax reforms are considered as a weapon to accelerate revenue to meet impending fiscal crisis in many developing countries. Such reforms, however, are often ad hoc and are done to meet instantaneous exigencies of revenue. In the largest part of gear, such reforms are not in the nature of systemic improvements to augment the long run yield of the tax system. The urge to meet the international competition has aggravated many mounting and midway economies in recent times to opt for tax reforms in their countries. Thus, the tax system has to be adjusted as per the requirements of a market economy to ensure international competitiveness. The general reforms in 1990s were the product of crisis but the reforms were due diligently calibrated. The objective of this paper is to analyze the evolution of the Indian tax system with special reference to the systemic reforms in the plan and accomplishment of the structure and operation of the taxes in Indian federal polity. In the present paper my study is concentrated towards GST,the flow of GST, its implications on common as well as business man, and each and every person who is a stake holder of this society and the government.

Objective of study : To Understand and learn the concept of Tax system and its structure with its importance in economical, global and social environment, as well as it's reforms faced by Indian Taxation system.

Research Methodology: The present study is based on secondary data and observation through internet, books, and newspapers etc.

Indian Tax system: Taxes in India are levied by the Central Government and the State Government and Local Bodies .Constitution of India endows power to levy various taxes between the Central and the State.

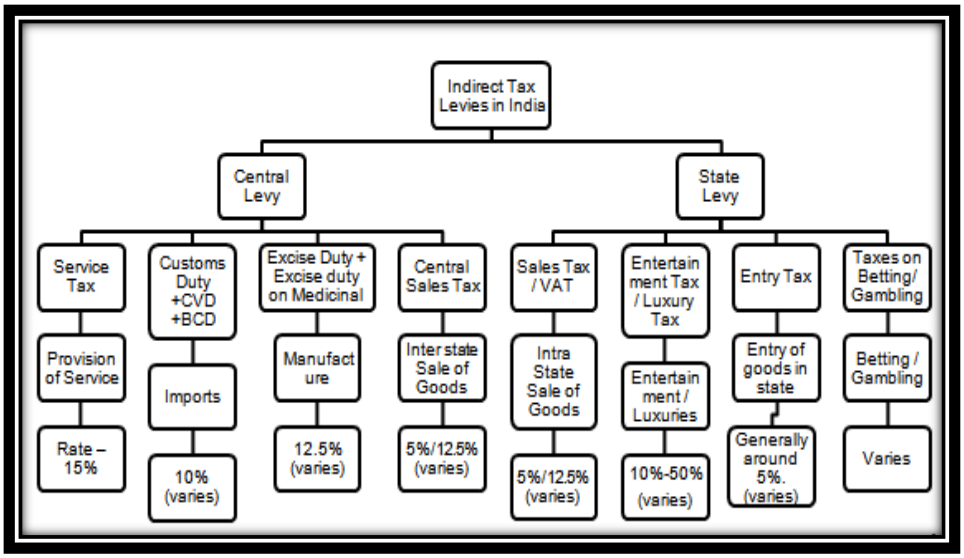
Tax Structure and its policy: Income tax act 1961 as amended by finance act, 2008**.** Enacted by parliament in the twelfth year of the republic of India applies to whole of India. Direct and indirect tax is a principal instrument for ultimate income collecting source for government. By the increase in opportunities in various sectors it led to increase in tax collections also. In India tax is broadly divided in two types mainly direct and indirect taxes.

Present Tax structure: Presently India follows three tier tax structure where Central Government, State Government and Local bodies collect taxes to run the system efficiently and effectively. The chart describes which tax is collected by whom.

TAX COLLECTION SYSTEM		
CENTRAL GOVERNMENT	**STATE GOVERNMENT**	**LOCAL BODIES**
INCOME TAX	**SALES TAX**	**PROPERTY TAX**
SERVICE TAX	**STAMP DUTY**	**OCTROI**
CUSTOMS DUTIES	**STATE EXCISE**	**TAX ON MARKET**
CENTRAL EXCISE	**LAND REVENUE**	**USERS CHARGES FOR UTILITIES LIKE WATER SUPPLY,DRAINAGE ETC.**
SALES TAX	**ENTERTAINMENT TAX**	

Why GST?: Since we all know that "Necessity is the mother of Invention" GST is the invention so what was the necessity? To analyze the need let's focus on revenue generation system of Government. There are two types of Taxes i.e. Direct and Indirect tax.

Direct Tax is paid to the government directly by the individual, where as Indirect tax is paid to the government indirectly by the individual through the intermediaries. Tax is a revenue generating tool of the government. With this fig. you would come to know which indirect tax is collected by whom.



Need of GST : Since from the inception there was always dispute between central and state government for collection of taxes, administration issues etc. in order to untangle this problem and to bring all the nation under one common net with less litigious and facilitative tax environment in India that supports investments and growth, GST was introduced inIndia.Across the globe around 150 countries have already implemented it and now munching the fruits of it.The Government of India replaced all the indirect taxes levied on goods and services by the Centre and States and implemented GST on 1st of July 2017.

Key Benefits of GST: From the above figure you may have noted that government collects en number of indirect taxes. In order to overcome such type of hassle and bring a unified tax system GST was introduced.

Benefits of GST

- A Unified tax system removing a bundle of indirect taxes like VAT,CST,Service tax,CAD,SAD,Excise etc.
- Less tax compliance and a simplified tax policy as compared to earlier tax structure
- Removes cascading effect i.e. removes tax on tax.
- Due to lower burden of taxes on the manufacturing sector, the manufacturing costs will be reduced, hence prices of consumer goods likely to come down.
- This will help in lowering the burden on the common man i.e. we will have to shed less money to buy the same products which were earlier costly.

List showingno. of indirect taxes subsumed with GST.

1. Central Sales Tax	**2. Service Tax**	**3. Excise Tax**
4. Lottery Tax	**5. CVD**	**6. BCD**
7. Entertainment Tax	**8. Luxury tax**	**9. Octroi/Entry Tax**
10. Luxury Tax etc…		

GST is a game changing reform for the Indian economy by creating a common Indian market and reducing the cascading effect of tax on the cost of goods and services. It will impact the tax structure, tax incidence, tax computation, tax payment, compliance, credit utilization and reporting, leading to a complete overhaul of the current indirect tax system.GST will have a far-reaching impact on almost all the aspects of the business operations in the country, for instance, pricing of products and services, supply chain optimization, IT, accounting, and tax compliance systems. All the above indirect taxes is subsumed with GST which definitely reduces the burden on pockets of common man.

What is GST:

- **G – Goods**
- **S- Service**
- **T- Tax**

"Goods and Service tax (GST) is a comprehensive tax levied on manufacture, sale and consumption of goods and service at a national level.

GST is a tax on goods and services with value addition at each stage having **comprehensive and continuous chain of set-off benefits from the producer's/service provider's point up to the retailer's level where only the final consumer should bear the tax".**

Route of GST:

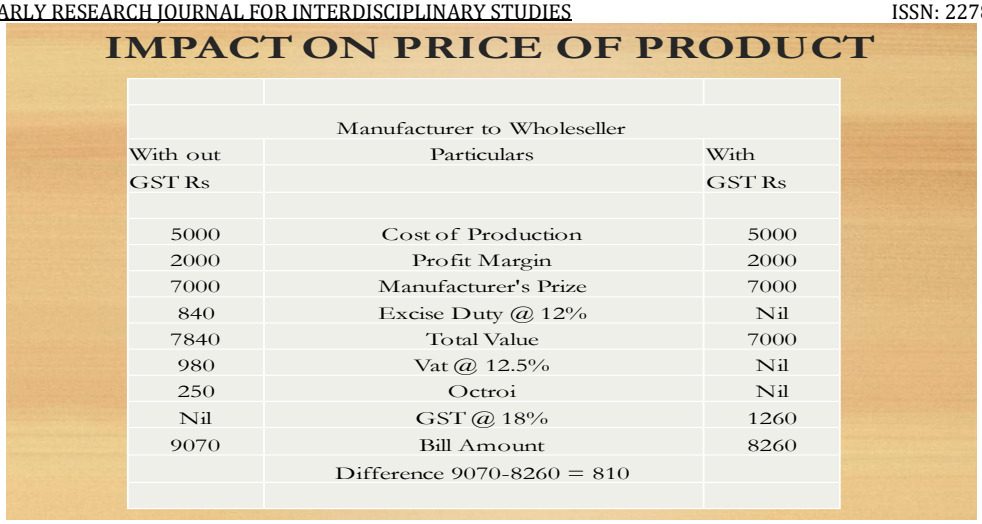
- **2006:-** Announcement of GST for the first was made by the then Union finance Minister, during budget of 2006-07 that it would introduced from 1 April 2010.
- **2017:-** On 1st July 2017 GST was launched. From 2006 continuous efforts were taken to implement this reform.

Dual concept of GST: The GST model is divided in to three parts

1. **CGST :-** Central GST to be levied by central government. Applicable on Intra State Supply of goods and services.
2. **SGST:-** State GST to be levied by state. Applicable on Intra State Supply of goods and services.
3. **IGST :-** Integrated GST to be levied by central government. Applicable on Inter State Supply of goods and services. Expected to be aggregate of CGST + SGST.

In keeping with the federal structure of India, GST will be levied concurrently by the Centre (CGST) and the states (SGST). It is expected that the base and other essential design features would be common between CGST and SGST across SGSTs for individual states. Both CGST and SGST would be levied on the basis of the destination principle. Thus, exports would be zero-rated, and imports would attract tax in the same manner as domestic goods and services. Inter-state supplies within India would attract an Integrated GST (aggregate of CGST and the SGST of the Destination State).

Analysis of Pre GST and Post GST impact onPockets of Customers: Effect on manufacturing sector: By the introduction of GST we come to know that production cost is getting lower as compared to pre GST prices as this will not only boom the manufacturing sector but also economical to the customers.



IMPACT ON PRICE OF PRODUCT

Manufacturer to Wholeseller		
With out GST Rs	Particulars	With GST Rs
5000	Cost of Production	5000
2000	Profit Margin	2000
7000	Manufacturer's Prize	7000
840	Excise Duty @ 12%	Nil
7840	Total Value	7000
980	Vat @ 12.5%	Nil
250	Octroi	Nil
Nil	GST @ 18%	1260
9070	Bill Amount	8260
	Difference 9070-8260 = 810	

Effect on Hotel Bills: With this eg. We come to know that eating out is becoming cheaper as compared to before.

XYZ RESTAURANT			
Items	PRE GST	Items	Post GST
Shahi Paneer	300	Shahi Paneer	300
Butter Naan	50	Butter Naan	50
Cold drinks	50	Cold drinks	50
Total	400	Total	400
Service Charge @ 10%	40	Service Charge @ 10%	40
Service Tax@14 %	24.64	CGST @ 6%	26.4
KKC @ 0.5%	0.88	SGST @ 6%	26.4
SBC @ 0.5 %	0.88		
Vat @ 14.5%	58		
Total Amount payable	524.4	Total Amount payable	493

What becomes Cheaper and Expensive: few list of items are given below .

CHEAPER	EXPENSIVE
Movie Tickets	Mobile telephone bills
Dining in Restaurants	Insurance services, Banking, Wealth mgmt
Basic food products like Wheat, Rice, Pulses	WiFi services, DTH services
Soaps, Oils	Online booking of bus/train/air tickets
Two wheelers/home durables, kitchen items	Tobacco, Cold Drinks and Junk foods

Impact on Economy:

- Improved export competitiveness
- Boost FDI investments in India
- Increase in value of Indian Rupee
- Reduction in Manufacturing cost
- Push GDP growth by 1.5% - 2%
- Increase in employment

Conclusion: Change is definitely never easy. The government is trying to smoothen the road for GST. It is important to take a leaf from global economies that have implemented GST before us, and who overcame the teething troubles to experience the advantages of having a unified tax system and easy input credits, with lower cost to the consumers and healthier environment for the entrepreneurs.ss

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ROLE OF DIGITAL TECHNOLOGY IN TEACHING LEARNING PROCESS IN TEACHER EDUCATION

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Abstract

The 21st century is the age of digital technology ultimately of the ICT. A remarkable trend in the field of teacher education during the last few decades all over the globe has been the use ICT in making teacher education productive giving instruction a more powerful and scientific base, extending the educational opportunities to the masses and creating a new learning environment and information enriched society. The author in this article highlights the role and its significance of digital technology in teaching learning process in teacher education

Introduction: Teaching has become one of the most challenging professions in our society where knowledge is expanding rapidly and much of it is available to students as well as teachers at the same time through technology. As new concepts of learning have evolved, teachers are expected to facilitate learning and make it meaningful to individual learners rather than just to provide knowledge and skills. Transition, transformation and revolution is the scenario of today's educational system. All the process of teaching and learning are crossing the boundaries and barriers. This tendency requires a change in knowledge competencies and skills to deal with technological advancement in networking which is necessary to establish a network among students, educators, parents, institutions and libraries world over. Technology is means to enhance teaching learning quality.One can use technology to better display information, increase access to information, improve information sharing and organize better class presentations. The world is becoming more interconnected, the environment is becoming less stable, and technology is continuously alerting our relationship to inform. Changing global conditions demand that we rethink what, but even more important, how and where we learn. We need education for the 21st century. Reaching today's students require new tools and strategies; the old 'sit' and 'get' approach to learning is not an effective way to reach a generation of learners who are accustomed to active engaged.

Emergence of ICT as a Digital Technology: Information and communication technologies (ICT)have brought revolutions in our education field. Information communication technology (ICT) is not a panacea for all education problems, but it is an essential tool for teaching and learning. ICT is an acronym that stands for:

Information: Meaning and value of information, how information is controlled and how data is captured, verified and stored for effective use, the manipulation, processing and distribution of information. Information in security, designing network to share information.

Communication: Network of sending and receiving equipment, wires satellite links, LAN (Local Area Network) , WAN (Wide Area Network)

Technology: Collection of techniques knowledge of how to combine resources to produce desired products, to solve problems, fulfill needs, it includes technical methods, skills, processes, tools and raw materials.The term 'information and communication technology' (ICT) is generally accepted to mean all technologies that combined, allow people and organizations to interact in the digital world.ICT is technology that supports activities involving information. Such activities include gathering, processing, storing and presenting data. Increasingly these activities also involve collaboration and communication. Hence it has become ICT: information communication technology.A good way to think about ICT is to consider all the uses of digital technology that already exist to help individual, businesses and organizations. ICT covers any product that that will store, retrieve, manipulate, transmit, or receive information electronically in a digital form for example: personal computer, digital television, e-mail and Robots.

Why ICT in Teacher Education?

To develop understanding and application of the key concepts in teacher education curricula
To develop expression power of the teacher trainee
To develop reasoning and thinking power of the teacher trainee
To develop judgment decision making power of the teacher trainee
To improve comprehension, speed and vocabulary
To develop self-concept and value clarification
To develop proper study habits
To develop tolerance risk taking capacity, scientific temper etc.

Application of Learning Technology in Teacher Education: Learning technology is defined as the application of technology for the enhancement of teaching, learning and assessment. It includes computer- based learning and multimedia materials and the use of network and communication systems to support learning. Learning technology clearly embraces a wide range of applications some of which in the past have been classified under various acronyms such as CAI (Computer-Aided Instruction), CAL (Computer –Aided Learning), CBC (computer –Based Learning), CBT 9 Computer-Based Teaching). Newer technologies which are included within learning technology have also brought with them their own acronyms for example: CAA (Computer Aided Assessment), CMC (Computer Mediated Communication), an essential component in a learning technology package is the ease with which the learner can interact with the contents. This is often referred to as the HCI (Human Computer Interface)

Application Areas of Learning Technology: The main application areas of the learning technology are as follows:

- Drills and practice
- Tutorials
- Information retrieval system
- Simulations
- Micro world
- Cognitive tools for learning

- ❖ Productive tools
- ❖ Communication tools

1.3 Dimensions of Technology in Teaching Learning Process

It is the order of the day that every teacher should use all kinds of educational technologies in their teaching strategy.

Presently following are some of the dimensions in teaching learning process:-

a) Electronic Learning: Electronic learning is a general term used to refer computer enhanced learning which deals with both the technologies and associated methodologies in learning using network technologies. It is also known as online learning. However e-learning involves more than just the presentations and delivery of the content.

b) Ubiquitous Learning9 u-Learning): Ubiquitous learning means "everywhere learning."It fulfills e-learning's promise of anytime, anywhere and any context. Ubiquitous learning (U-learning) emerged through the concept of ubiquitous computers in education, the introduction of E-learning and mobile learning epitomized the constant transformations that were occurring in education (Muthuchamy Thiyagu, 2010).

c) Virtual Learning : Virtual learning refers to all learning activities that occur in class where the learners and their teachers are separated from each other temporally. A virtual learning environment is a phrase that refers to technology which supports teaching and learning. It involves collaboration, communication and content tools as well as providing students with an online personal learning space.

d) Blended learning: Blended learning is a face –to face classroom instruction with online learning. A major part of the activities take place online, while traditional classroom time is reduced but not eliminated. Blended learning sometimes also called "Hybrid learning." Provides the best opportunities for learning transition from classroom to e-learning.

e) **Blog:** The term web- blog refers to a simple web page consisting of brief paragraphs of opinions, information, personal diary entries, or links, called posts, arranged chronologically with the most recent first in the form of online journal. It has proven that the education blog is a powerful and effective technology tool for teaching and learning process.

f) **Wiki :** Wiki is a web page or set of web page that can be easily edited by anyone who is allowed access. Wiki is a collaborative tool that facilitates the production of a group work. Wiki pages have an edit button displayed on the screen and the user can click on this to accesses an easy –to- use online editing tool to change or even delete the contents of the page in question.

g) **Collaborative Learning:** Collaborative learning is the acquisition by individuals of knowledge, skills and attitudes occurring as the result of group interaction. In collaborative learning students are encouraged or required to work together on a learning task, so that they can encounter different points of view which may bring to light their misconceptions and give rise to synergistic solutions.

h) M-learning: M-learning is one of the wireless technologies which are used anywhere, anytime and by anybody. By applying this latest technology in teaching learning process we can enrich our communication with pupils and convey our ideas effectively.

The significance of ICT in Teacher Education: The significance of ICT in teacher education can be summarized as below:-

- ICT increases the accesses to teacher education programme
- It improves the quality of teacher education by developing new ways of interaction
- It provides the specialized tools for the learners so that they learn and acquire knowledge on their own space
- It provides equal opportunities to the large number of learners to obtain proper teacher training and related information
- It provides support to each and every teacher education institutions in sharing education/ learning experiences with the different colleges of education throughout the country
- It provides in variety of course material to the trainee teachers
- It enables the distance education system to be more effective
- It promotes digital technology literacy to the young learners
- It provides quality materials to the learners irrespective of their geographical locations
- It provides opportunities for lifelong education
- It enhances the teachers quality both in terms of teaching and research

Challenges & Opportunities of ICT in Teacher Education: India has immense potentialities in the field of digital technology ultimately in ICT and the country has been infusing ICT enabled practices in Teacher Education Institutions since the last decades. But unfortunately till today advantages of ICT in colleges of education have not reached upto the expected level. So in order to meet these challenges of ICT in Teacher Education Institutions in India the following suggestions are put forth.

- For the successful implementation of ICT programme in teacher Education Institutions throughout the country, UGC should provide the financial assistance to meet the basic infrastructure facilities (i.e. power connection, computers, LCD projectors, internet connectivity, appropriate audio-visual aids and human recourse related to the ICT programmes) to all the colleges of education especially to the colleges of rural area.
- The policy makers should look after the priority needs of the rural colleges and especially rural learners to involve them in ICT based teacher training programme.
- In order to develop the awareness among the young trainee teachers regarding the ICT based education, ICT related knowledge should be incorporated in the Teacher Education curriculum throughout the country.
- The competent teacher educators of the colleges of education should provide information/ knowledge related to ICT based education to their trainee teachers for developing a preparatory ground for ICT infused teaching learning process.

- There should be continuously monitoring mechanism. State Government should appoint some IT specialist at the university level to monitor the ICT enabled teaching performed by teacher educators in colleges.
- The colleges of education should organize discussions, seminars and workshops on various aspects of ICTin education for all the teachers in specific intervals of time to time to develop proper knowledge and attitude among the teachers towards the usages of ICT in teacher training institutions.
- The NCTE should develop the curriculum (infusing ICT) for the teacher education programme at all the levels so that these institutions through their training programmes can develop enough skills and capacities among teachers to use the new digital tools and resources for providing quality education to their learners.

Conclusion: ICT has tremendous potentialities to revolutionize the teacher education programme. Its infusion in the teacher training programme can develop new skills and knowledge among the trainee teachers. The highest advantage of ICT in Teacher Education in our country can be achieved if the MHRD of India provides adequate and proper infrastructural facilities to the teacher education institutions, infuses ICT enabled practices in teacher education institutions, takes proper measures for the capacity building of the teacher educators appoints competent authorities for monitoring and evaluating the ICT programmes and formulates policies to provide long term support to maintain the ICT resources properly.

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AN ARRAY OF INSTRUCTIONAL STRATEGIES: IMPACT OF PERFORMANCE ASSESSMENTS ON TEACHING AND LEARNING

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Abstract

Evaluating student achievement through performance assessments is not a new strategy. Good teachers have always judged and monitored their students' progress through observations, experiments, written assignments, and research projects. What is new in the current reform effort is the systematic shift toward schoolwide performance assessments and away from multiple-choice tests for measuring instruction and accountability.Performance assessments can be an effective instructional tool, but only if teachers receive sufficient training and support.Proponents of performance assessments argue that assessment and instruction must form a seamless web that promotes teacher/student collaboration, active learning, critical thinking skills, and multidisciplinary understanding. Performance assessments, they reason, have a positive influence in the classroom. Performance assessmentsprovide pedagogical templates that help teachers to develop effective instructional techniques; and gives comprehensive information about student progress, including students' strengths and weaknesses.The current study has demonstrated the needto use different instructional strategiesfor teacher'sprofessional support and development at the local level in the North- Eastern part of India.

Key words*: Instructional Strategy, assessment, performance, teaching and learning.*

Performance assessments can be an effective instructional tool, but only if teachers receive sufficient training and support.Proponents of performance assessments argue that assessment and instruction must form a seamless web that promotes teacher/student collaboration, active learning, critical thinking skills, and multidisciplinary understanding. Evidence is beginning to accrue that performance assessments indeed provide the means for improving teaching and learning. (see, for example, Borko et al. 1993, Falk and Darling-Hammond 1993, Gearhart et al. 1993, Kentucky Institute for Education Research 1995, Koretz et al. 1993, and Smith et al. 1994). For this study, the researcher visited 16 schools across the North-East region of India, Darjeeling. These schools were developing and implementing performance assessments as a result of national-, state-, district-, or school-level assessment initiatives. At each school, the researcher interviewed school personnel, students, parents, and school board members, also collected and reviewed student work and conducted observations of classrooms and professional development sessions. In general, thefindings show that the effect of assessments on the curriculum teachers use in their classrooms has been marginal, although the impact on instruction and on teacher roles in some cases has been substantial.

Few Changes in Curriculum: It has been found that even when teachers adopt the format of performance assessments (for example, portfolios, projects, exhibitions), the content and sequencing of the subject matter remain largely unchanged. This is because existing state and district frameworks dominate the curricular choices teachers make. Only two of the elementary schools the researcher visited had made a conscious change in the curriculum. AtGothal Memorial School in Kurseong, teachers use the Primary Learning Record as an instrument to support the child-centered philosophy of teaching espoused at the school. At St.

Paul'sSchool, Jalapahar, Darjeeling, teachers have undertaken simultaneous curriculum and assessment reform.In a few cases, teachers said the use of performance-based portfolios and projects (extended tasks that typically require students to research a topic and to demonstrate their understanding through essays, exhibitions, experiments, oral presentations, and so on) has had the effect of curtailing content coverage. For example, at a school in Kalimpong, teachers discovered that the integrated instruction and assessment program they had developed led them, unintentionally, to devote less time to teaching mathematics. They realized that they did not yet know enough about integrating mathematics into project-based instruction. Consequently, they have, at least for the time being, returned to teaching mathematics as a discrete subject.

An Array of Instructional Strategies : In general, performance assessments have had a significant impact on instruction. Teachers are using a wide array of instructional strategies modeled on the performance assessments that their states, districts, and schools have developed. The success of their efforts, however, depends in large part upon the opportunities they have to experiment with the assessments.

Performance-based Assignments: The extensive use of performance-based projects that integrate writing, content knowledge, and social or scientific problem solving marks a noticeable change in instruction in many of the schools we visited. In Bethany School, Darjeeling, for example, one social science teacher required his students to weave economics terminology into a story about being stranded on a desert island after a plane crash. The teacher designed the project to help students acquire an understanding of economics while developing their problem-solving and writing skills.

The nature of the assessments themselves drives the project-based instructional mode. Teachers are using portfolios or other performance-based techniques that require students to create different types of reports and products. Hence, teachers must develop and assign tasks that elicit the dimensions to be assessed and enable students to demonstrate their abilities. In many such assignments, the student's role as an active learner is evident—the student seeks information from several sources and applies it to his or her assignments.

Writing: Portfolios and other performance assessments that require students to produce reports also emphasize writing skills. Language arts portfolios are an assessment requirement at certain grade levels, the teachers the researcher spoke with said portfolios are prompting their students to engage in the writing process (writing, editing, and rewriting). These teachers noted, however, that they have not yet achieved an appropriate balance in teaching both the mechanics of writing and the stylistic, expressive aspects of composition.

Performance Expectations: In some respects, the use of scoring instruments has had the most significant impact on performance-driven pedagogy. Many teachers the researcher spoke with said that they use scoring rubrics as "scaffolding" for setting performance expectations for their students. That is, they share them with their students to communicate the important aspects of the performance or product to be assessed. Students, in turn, can use them to

determine the focus and boundaries of their work. Some teachers also require students to judge their own and their peers' work in order to help them understand the assessment process.

The Role of Teachers: Education reformers see the teacher's role as changing from disseminator of information to facilitator of learning. They see teachers as professionals who need the feedback and support of fellow professionals. The findings indicate that the use of performance assessment also has facilitated changes in teacher rolesThe need to establish common frames of reference and to coordinate ongoing assessment efforts has resulted in increased teacher collaboration in several schools. For example, in the Loreto School the researcher visited, where some of the language arts portfolio pieces involve other subject areas, the language arts teacher has helped other teachers devise scoring criteria and performance-based assignments. At three of our elementary schools, melding performance assessments with the philosophy of a child-centered approach to education has encouraged teachers to collaborate on broad issues of instruction and curriculum.

The Effect on Learning: Performance assessments affect learning as well as teaching. Students are more motivated to learn and are more engaged with project-based tasks than with other types of assignments. Teachers at the schools in our study that employ writing portfolios and literacy-based assessments also say students are developing better writing skills and habits. It has been found that a simple change in the format of assignments and assessments is not enough to increase student motivation, however; the content must be challenging as well. In one school, for example, some students reported that performance assessments were better suited to low-performing students (meaning that the assessments did not require much intellectual effort).Only a few teachers said performance-based teaching and assessment helped students learn more and develop a fuller multidisciplinary understanding. They indicated a need for more help in devising meaningful and effective performance tasks and assessments. The teachers who did see improvements in student learning were already comfortable with and adept at performance-based teaching.

Barriers to Effective Classroom Use: The lack of clearly defined content and performance standards, especially for the state- and district-initiated assessments, was a second major concern. For example, in the St. Joseph North Point School,Darjeeling, teachers were enthusiastic about the use of the state scoring rubrics, but were unsure what constituted acceptable performance on outcome dimensions such as conceptual understanding and effective communication in mathematics and science.It has also found that if performance assessments are marginal to the school because of the way they are implemented (for example, they are one-shot accountability mechanisms), they will not provide the foundation for instructional reform. In three of our schools, for example, teachers administer performance assessments only once a year. These assessments have not affected teaching and learning in any fundamental way.On the other hand, teachers who are using portfolios and other types of ongoing assessments have adapted and integrated the assessments into their classrooms. Portfolios and other assessments that involve teachers and students in some form of record keeping provide the structure for documenting student work and progress

on an ongoing basis. Such methods also provide teachers and students some measure of control over assessment tasks.It has been found that a supportive environment where time, professional development, and informal assistance were available to teachers was an important factor in helping teachers work with the assessment. At such schools, teachers met on a regular basis during or after school or at professional development sessions—to discuss assessments and instruction. In those schools where teachers did not receive support or were not encouraged to participate in the reform efforts, little collaborative activity occurred.

Defining a Sound Approach: Two strong conclusions can be drawn from this study, that Portfolios and other ongoing performance assessments encourage students to write and to complete project-based assignments and Project-based assignments motivate students to learn.Problems do remain, however, and educators must consider them in conjunction with the original assumptions undergirding the performance assessment reform movement. It has been found that the relationships among domains to be assessed and the tasks, performance processes, and evaluation criteria are not necessarily clear. Teachers still struggle to define knowledge domains, develop good pedagogical strategies, and set the parameters of acceptable student performance. They do not yet fully understand what constitutes an instructionally and developmentally sound approach to student assessment.These problems have arisen because the proponents and designers of performance assessments made several assumptions about the ease of adopting them. They assumed that educators: (1) possess a clear understanding of the domains of knowledge to be assessed by the new assessments; (2) are knowledgeable about the most effective approaches of teaching to these assessments; (3) have expertise in a variety of teaching modalities; and (4) know what constitutes evidence of critical thinking skills and multidisciplinary understanding. Our most startling finding is that there is no evidence that assessment and instructional changes are driven by a clear understanding of these issues.Thestudy has demonstrated the need for professional support and development at the local level. Teachers need training in how to use these different instructional strategies. They need to learn how to develop projects and performance assessments that effectively address multidisciplinary understanding and critical thinking skills.The impact of performance assessments on teaching and learning has, on the surface, been substantial. Students are now writing and engaging in projects that cut across traditional subject areas—and they are engaged in and excited about learning. However, reforms in curriculum, performance standards, and professional support and development for teachers also are essential if we are to attain the ultimate goals of assessment reform.

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DIGITALIZATION IN FINANCIAL MANAGEMENT & ELECTRONIC ACCOUNTING FOR P2P CYCLE

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Abstract

In any organisation there are many process which are subject to Financial management and Accounting and following are the few process\cycles from them

- *P2P – Procure to Pay Cycle*
- *O2C – Order to Cash Cycle*
- *R2R- Record to Report Cycle*
- *D2D- Demand to Deliver Cycle*
- *FM- Financial Management Cycle, Etc.*

This research paper will focus on digitalization in the process of P2P cycle.
Following are the steps involved in P2P cycle.
Requisition > Approval > Supplier Identification > RFQ > Negotiation > Supplier Selection > PO > Shipping > Invoice > Payment.
The paper will focus on digital technologies at various stages\steps mentioned above.
Through this paper I try to find out the kind of Technology used in P2P cycle, Time and cost involved, simplicity, efforts required for learning and implementing it, remote access possibilities, trust factor of employees on the technology, amount of human interactions & human values etc.
The paper have some limitation in terms of Area (because it's covering few parts of Mumbai as a sample data), the digital technology is subjective (as it depends upon the custom requirement of the organisation), again it depends upon the adaptability of people in the organisation and their responses are subject to their skills and experiences.
Keywords:*P2P > Procure to Pay, ERP > Enterprise Recourse Planning, PO > Purchase Order, RFQ > Request For Quotation,*

Introduction:In any organisation there are many process which are subject to Financial management and Accounting and following are the few process\cyclesfrom them

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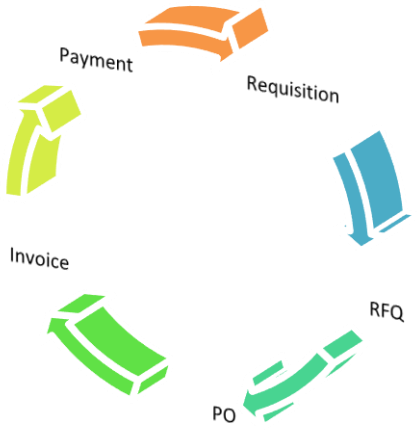


Objective: To find out Digitalization in Accounting and management of P2P cycle at various stages.

- To assess the Benefits of Digitalization in Accounting and management of P2P cycle.
- To know the Future sustainability of Digital Accounting.
- To seek response from the users about the Digital Accounting.

Limitations: This paper have some limitations in terms of Area (because its covering few parts of Mumbai as a sample data).

- The digital technology is subjective (as it depends upon the custom requirement of the organisation).
- Again it depends upon the adaptability of people in the organisation and their responses are subject to their skills and experiences.

Research Methodology:

Research Type: Descriptive Research.

Research Method: Primary Data. (Questionnaires)

Research Design:

Research Universe: ERP Consultant (In Mumbai)

Sampling Unit: ERP SCM & Financial Consultant

Sample Size:35

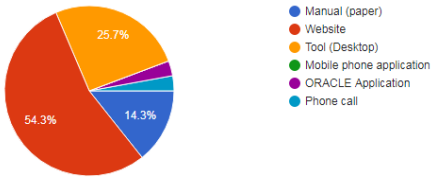
Survey Method: Google Form (Survey-online)

Hypothesis:

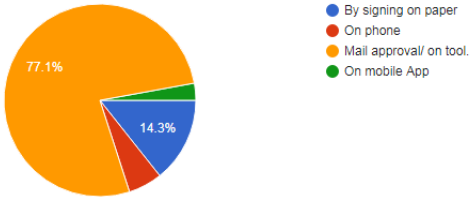
- Consultants are aware of Digitalization in accounting and management of P2P process at various stages.
- There are benefits from Digitalization in Accounting.
- Digital accounting is sustainable in future.

Data Analysis: (Based on Data collected through survey – Google forms)

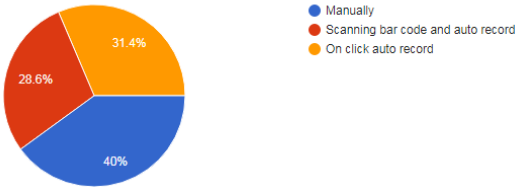
1.What kind of mode you use in your organization
while raising a requisition? -Website



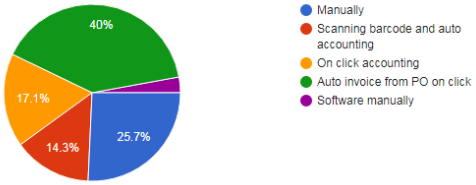
2. How your requisition is approved? –Mail Approval



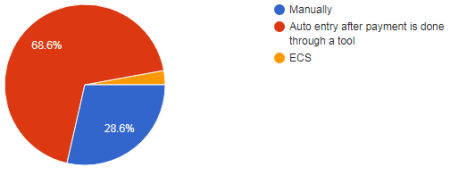
3. How do you account your PO? –Manually



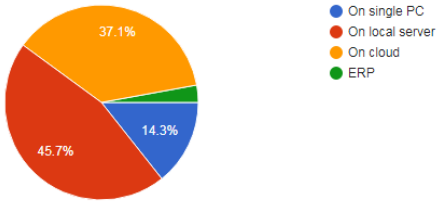
4. How do you account/enter the Invoice? – Auto invoice from PO

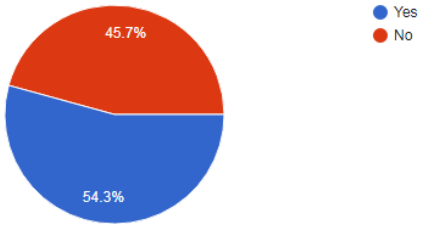
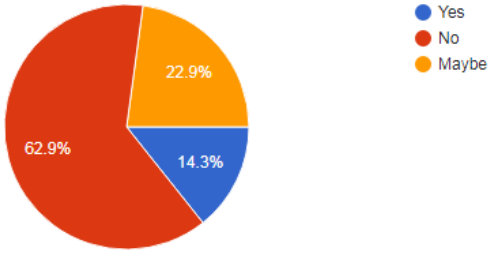
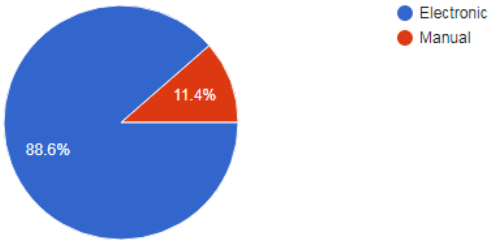
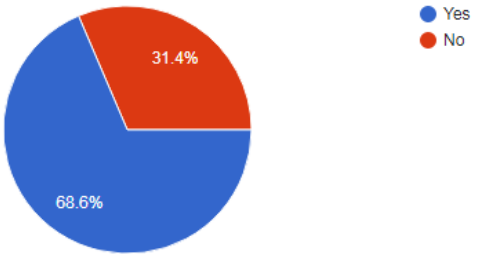
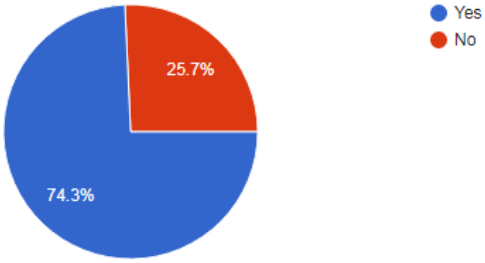
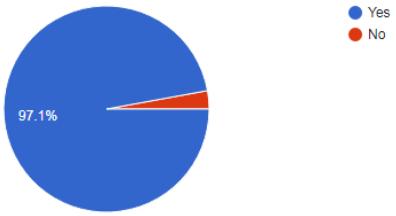


5. How do you make payments and enter accounting for invoice payments? –Auto entry after payment is done

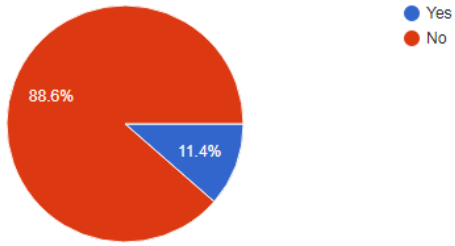


6. Where do you store your accounting Data? –On Local Server

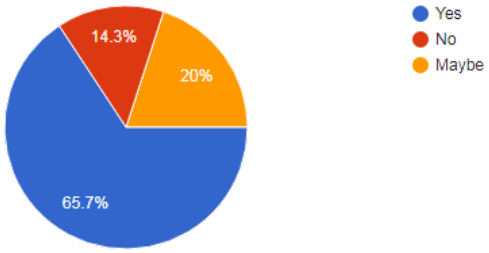


7. Do you need any special technical skill to do electronic accounting? -Yes	8. Do you think that the electronic accounting process is complex? -No
	
9. Which method will take less time in accounting? -Electronic	10. Are you able to do accounting from any remote place? -Yes
	
11. Do the trail of accounting is visible to you? -Yes	12. Can we trust electronic accounting over the manual accounting?-Yes
	

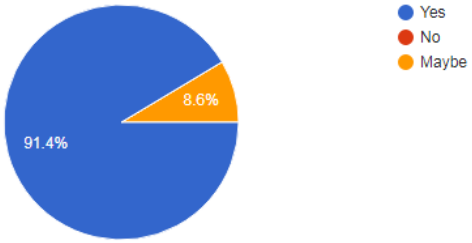
13. Do you think that electronic accounting takes a lot of space as compared to manual? -No



14. Do you think that due to digitalization the human interaction is reduced? -Yes



15. Do you think that digitalization is sustainable in future? -Yes



Hypothesis Testing:

no.	H0	H1	Response in Favor	Total Responses	Percentage %	Accepted Hypothesis
1	Consultants are aware of Digitalization in accounting and management of P2P process at various stages.	Consultants are not aware of Digitalization in accounting and management of P2P process at various stages.	**35**	**35**	**100%**	H0
2	There are benefits from Digitalization in Accounting.	There are no\less benefits from Digitalization in Accounting	**29**	**35**	**83%**	H0
	Data for Hypothesis No. 2					
	Q 9.Which method will take less time in accounting	>>Digital	31	35		
	Q 10.Are you able to do accounting from any remote place?	>>Yes	24	35		
	Q 13.Do you think that electronic accounting takes a lot of space as compared to manual?	>>No	31	35		
		Total	86	105		
		Avg	28.66666667	35		
3	Digital accounting is sustainable in future.		**32**	**35**	**91%**	H0
	Q 15.Do you think that digitalization is sustainable in future?					

Conclusion: I have collected data on digital technologies at various stages\steps mentioned above. Through this paper we witnessed thatdigital Technology do exists in P2P cycle which is mostly online on website Time involved is less, it requires technical knowledge related to the technology, efforts required for learning and implementing are more as compared to manual environment, we can access the accounting application remotely, trust factor of employees on the technology is more as compared with old method of accounting and management, amount of human interactions & human values are reduced as they hardly interact with people in rare case they interact through phone.Again as stated earlier the conclusion drawn is subject to some limitations in terms of Area because its covering few parts of Mumbai as a sample data, the digital technology is subjective as it depends upon the custom requirement of the organisation, also it depends upon the adaptability of people in the organisation and their responses are subject to their skills and experiences.

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https://docs.google.com/forms/d/1gBXMcdTT0qBnLkGiM82eqZETpsNdsSTs6Lm03sdp7PI/edit?ts=5a671732

USE OF DIGITAL TECHNOLOGY IN E-COMMERCE

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Abstract
One of the most common roadblocks that online retailers haven't completely overcome yet is the fact that people still enjoy the experience of shopping at a physical store. Although the research by Forrester predicts that online ***retail sales will reach $370 billion by 2017****, brick-and-mortar is still a dominant player despite the power of smartphones, tablets and the increased investment in online sales by traditional retailers. But, how will new innovations help the e-commerce world become more appealing to consumers? The solution comes in the form of offline and online merging. Ebay, ModCloth, Walmart, and Delta Airlines, for example, have all experimented with pop-up storefronts to use brick-and-mortar opportunities to advocate for their digital experiences. Implementations of technologies can bring convenience, ease of use, personalization, process simplification, and the high level of comfort that could be a game-changer. Big brands have started to use "memory" mirror technologies led by RFID tags to let customers try on virtual outfits and place iPads in fitting rooms enabling customers to ask for help, read reviews, see what sizes are in stock, and so on*
Keywords :- *E commerce, digital technology, upcoming technology*

Introduction: DIGITAL TECHNOLOGY: American engineers began developing digital technology in the mid-twentieth century. Their techniques were based on mathematical concepts suggested by the seventeenth-century German mathematician, Gottfried Wilhelm Leibniz, who proposed a binary computing system. His innovation inspired such numerical codes as American Standard Code for Information Interchange (ASCII) that described objects with digits.Digital technology is a base two process. Digitized information is recorded in binary code of combinations of the digits 0 and 1, also called bits, which represent words and images. Digital technology enables immense amounts of information to be compressed on small storage devices that can be easily preserved and transported. Digitization also quickens data transmission speeds. Digital technology has transformed how people communicate, learn, and work.Telecommunications has relied on digital methods to transmit messages. In the early 1980s, enhanced fiber optics enabled the development of digital communication networks. Digital technology replaced analog signals for many telecommunication forms, particularly cellular telephone and cable systems. Analog-to-digital converters utilized pulse code modulation (PCM) to change analog data into digital signals. Compared to analog transmissions, digitized signals were less distorted and could easily be duplicated.In 1998, commercial digital television broadcasts premiered in the United States. Communication satellites known as direct broadcast satellite (DBS) transmitted compressed digital signals for viewers to receive several hundred television programming choices. Other forms of digital information, including audio programs, were sent to subscribers via satellite. The Federal Communications Commission ordered all American broadcasts to be digital by 2010.

Digital printing with electro photographic and formatted data technologies have altered how books and magazines are published. The Library of Congress National Digital Library Project

has worked to preserve and expand access to rare items. Copyright issues concerning digital technology have addressed the copying of music and videos without performers receiving royalties.The Electronic Numerical Integrator, and Calculator (ENIAC) was often credited as the first electronic digital computer. A 1973 court ruling on patent infringement declared John V. Atanasoff and Clifford E. Berry were the digital computer's inventors and that the ENIAC had been derived from their design.In the early 2000s, digital computers ranging from laptops to Internet networks came in many sizes and performed various tasks. Supercomputers performed complex mathematical calculations analyzing vast amounts of data. The Digital Data Broadcast System (DDBS) guided air-traffic control. Digital radiography converted analog signals of x-rays to create digital images. Digital information was stored on plastic disks with pitted patterns of 1s and 0s that lasers translated. By the early 2000s, digital cameras had transformed photography by recording color and light intensities with pixels. Also, digital compression of images and video was achieved by Joint Photographic Experts Group (JPEG) and the Moving Picture Experts Group (MPEG) codes. Animation had often been digitized with some films and cartoons being created entirely with computers.

Relationship of digital technology with e commerce: The increasing use of digital technologies in buying and selling merchandise for convenience and mobility pushed e-commerce in India to an inflexion point in 2016. The rapid growth of smartphones and internet connectivity across the country, especially in tier-II and III cities, has given greater access to virtual shopping and e-tailing for the tech-savvy generation and millennials.Even as e-tail behemoths Flipkart, Snapdeal and Amazon vied for a greater pie of the growing e-commerce market, enterprises and businesses in diverse sectors have joined the bandwagon to hard-sell their products by leveraging digital technology."E-commerce in India is at an inflexion point, thanks to robust growth in consumer demand. Mobile penetration and increasing use of smartphones have led to the emergence of m-commerce, which accounted for about 40 percent of the sector's sales this year," Tata CLiQ Chief Executive Officer AshutoshPandey told IANS.

Current situation: According to a study by the Internet and Mobile Association of India (IMAI), transition to mobile shopping is faster in India, which overtook the US this year in terms of active mobile users (220 million) and next only to China in user base. The emergence of the Omni-channel model in e-tailing has also enabled netizens shop across e-portals, websites, apps and in stores as per their convenience."As a result, e-commerce players are looking at seamless integration of online and offline stores to offer consumers a unique shopping experience in the virtual and real worlds," Pandey asserted. With digital payments increasing through multiple gateways for online and offline buying, the push for cashless transactions in the aftermath of the November 8 demonetisation has driven more and more consumers to e-shopping and m-shopping.Greater use of cloud computing, data analytics and artificial intelligence has made e-commerce players not only competitive and smart in retaining their mass user-base but also map shopping trends and predict purchasing patterns to consolidate their dominant position for sustaining growth."The sector, however, continues to

face a trust-deficit and last-mile delivery issues persist despite having robust logistics networks and partners. Lack of trust in online transactions makes many shoppers prefer cash on delivery, which is risky and time-consuming," Pandey lamented. The sector is also bedevilled by infrastructure woes across cities and towns, increasing operational cost for timely delivery and expanding the customer base.Though demonetisation has impacted the retail sector due to the cash crunch, digital transactions have enabled e-commerce firms to weather the crisis. Growing at about 40 percent cumulative average growth rate (CAGR), the country's e-commerce market is projected to touch a whopping $38 billion this fiscal (2016-17), with the online travel segment alone accounting for 70 per cent, followed by e-tailing, financial services, classifieds, job searches and matrimony."The key drivers of the sector's growth have been increased internet penetration, growing acceptability of online payments and an increase in per capita income," a Snapdeal spokesperson said. Favourable government policies and improving infrastructure have also contributed in connecting consumers and sellers across the country."The start-up ecosystem has gone through a phase of consolidation, indicating maturity in the sector for achieving scale, building capabilities and increasing the market share," the spokesperson explained. Given the demographics and rapid adoption of the internet, it's advantage for all the stakeholders to grow and consolidate.

Retail fashion industry: Digitisation helped fashion retailers strategize newer ways to reach and engage with consumers. As a result, many fashion e-commerce sites developed and encouraged consumers to look for online products, offers and new collections. Digital innovation has made it possible for fashion and lifestyle products to be extensively bought online. In the last decade, technological innovations enabled fashion consumers to buy online with near-real experience. At the same time, these developments enabled fashion retailers to sell online in a more efficient way.

Technology enhances buying experience : Variety, trends, fitting, colours and brand options are the main factors that impact the consumer's online buying experience. Technologists across the globe are working to enable such near-real experiences of online purchases. Social media enabled fashion e-commerce and has led to take trends, styles and other influential aspects to the next level with sources of feedback and sharing of user experiences.

- **Varied Exposure:** Consumers can quickly search for options across various sites via aggregators like ROPOSO. Technological enhancement has made accessibility more convenient with advent of marketplaces, providing customers with more options on a single platform.
- **Making decisions on selection:**Industry stalwarts are aiming at enhancing consumer experience by enhancing visual appeal for the web store. E-commerce sites are constantly upgrading the technologies. Improved internet speed helps consumers view quality images.
- **Multiple images, various angles:** Image size, zoom functionality, alignment, margins, background, shadows and viewing angles are features that enable customers to view products carefully to be able to take decisions on whether or not to purchase.

Latest Technologies:

1. Storefront Digitizing : The thing is the brick-and-mortar will always dominate and would never lose its value ever, despite of the growing e-commerce stores. Now to maintain people's interest something very innovative could be adapted. In order to make an impact even more to customers, firms like eBay, Walmart, Delta Airlines, have all started the Storefront Digitizing. They use the memory mirror technology.It is nothing but a virtual mirror where a customer sees him/herself and visualize how they would (let's say) look by wearing a particular outfit. They don't have to literally wear it. The mirror is able to store their information, their likes and dislikes, and accordingly can interact with them later if a particular item arrives, say of particular size and color. This technology is going to offer reduction in returns to a greater extent.

Augmented Reality Device: In the form of goggles or headsets one can have a 3-dimensional experience of witnessing the virtual items by augmenting the real objects with the virtual ones at the home itself. Suppose you want to decorate your home and have a confusion of what to purchase. You can simply try the virtual objects whichever are visible at the website. This will help you visualize what looks better on your sofas or shelf or center table or walls, and you shop accordingly. You won't have to choose randomly about which you wouldn't be sure what might look good and what not! The same goes with the dresses available online. Have a virtual experience before actually purchasing and make a wise decision. The chances of returning the products will be greatly reduced, and so do the time.

Voice Assistants: It is a voice-activated, convenient and efficient technology which is based on the IoT (Internet of Things). It listens to the users' voice commands and is capable to perform tasks like purchases, searches, help, etc. It can turn off the light while performing the commanded tasks altogether, so that the energy could be saved. The prime examples are Amazon's EchoAlexa and China's WeChat. WeChat can buy movie tickets, book a taxi, takeout an order, and so on.

Shoppable Videos : By now we already know videos are the future of content marketing and can do a lot to attract visitors.

In past decade we have seen images and content been used for doing eCommerce business. Now the future years will have Shoppable Videos for customers, which will make them shop for products/services directly from the video.

Marks and Spencers even tried their hands on Shoppable video by selling their new denim collection, wherein customer could pause and purchase the denim at any time throughout the video.

A shoppable video will tremendously reduce the catalog browsing time for users, amid giving them the best visual experience for shopping. This year we get to see a massive movement in how e-Commerce businesses sell via videos.

Facebook Messenger Chatbots: Social media responsiveness has led to progress in communicating with customers and enhancing their experience. According to many experts, 2016 was a year of conversational commerce – using chat, messengers, or other natural language interfaces to interact with people, brands, or services.There is no doubt about the importance of social media in the process of making a buying decision. Gartner's research shows that brands will lose 15% of their customers if they don't respond to those who contact them via social media. A study by Bain & Company showed that when responding to customers via this channel, a brand can expect an increase in revenue per customer between 20 and 40%.Facebook Messenger Chatbots have been one of the major leaders in the customer chat space. When properly deployed, chatbots make your interaction with clients efficient and responsive, made even more robust with automation features. It can stimulate communication numbers and build commitment to the brand, having the same impact as a personal assistant (eg. can answer many more questions than a standard FAQ and by using as context the knowledge about the particular customer, provide the information about a specific delivery or availability of products). Not only does it improve satisfaction, but chatbot automation instantly reduces operational costs in customer support.

Conclusion: Such methods are able to improve user experience in numerous ways predicting behavior and indicating probabilities of specific events more accurately. Internal RTB House data showed that using deep learning algorithms can quickly lead to increased performance of display campaigns by 13% (click-throughs) and 25% (conversions). We all need to technologically grow and adapt to changes that are going to show up. The initial days would be tougher because people aren't used to it. People never thought to shift from physical keyboard to touchscreen but they did eventually. Likewise, they will do to each kind of stuffs getting introduced. Changes are for good anyways. These are really just the starting point as we will be seeing fascinating changes and outside-the-box thinking in the e-commerce technology space in the coming years. Throughout this period, some technologies like mobile-first will become a mainstream, while some advances like drones may disappear in the near future. Regardless, investing in these and other emerging technologies is undoubtedly a smart move when it comes to positioning a business that remains with or ahead of the curve over the next 5 to 10 years.

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PERFORMANCE BASED TEACHING AND LEARNING

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Abstract

The order in the process of facilitating education, acquisition of knowledge, skills, value, beliefs and habits has been revolutionised and undergone a massive reformation through years immemorable. With the increase in demography and thus competition all around, rising impact of technology in various fields and the academic ability dominating the view of intelligence has put aback the vitality of enhancing the practices of imparting education. A drastic effect on the generation today and to come, has thus resulted to a high need and pressure to study, comprehend and thus review the system of education followed in the world. This paper is a qualitative study of the importance of creativity in the methods of learning and teaching in various institutions; schools and colleges, highlighting its focus on the 'then needed subjects for industrial work', which needs a memorable learning experience that interests the students and hence help them in making better career decisions. Students and teachers from different institutionswere surveyed to learn their view towards the working education system, their experience, opinions and suggestions with respect to the challenges they faced. The responses received pointed to the fact that many students and teachers have had a negative impact due to various dormant methods practiced with respect to learning and teaching in current institutions.

Keywords: *process of facilitating education, creativity, memorable experience learning, dormant methods*

Introduction : Education is the most important weapon that has the potential to bring a tremendous transformation in the lives of the people inthe society making the world even better place. Education is facilitating the children with the knowledge of the outer world, imbibing the skills within them to sustain in the environment, making them capable of taking their own decisions, and not just intelligent and turn into scholars but intellectual too. When the Industrial Revolution took place in the early 80s, people were made to work in these industries nonetheless. The children studying in schools were given education as per the needs of the industries they will have to work in, in the future. The approach of teaching and imparting education was highly dormant. The students were not pushed to think for the answers themselves but instead they were given the answers onplatter, without the students finding out their own way. This way of teaching was practised due to the methods of working in the industries. Employees dintneed to contribute into creative thinking matters but were expected to follow the set of instructions given to them. This way of learning not only stunted the brain growth in thinking out of the box but also made them indecisive giving rise to fear of making decision which resulted in the children avoiding the burden of situations where they would have to take big decisions.But the time has changed now. People are exploring and no longer working in industries. Children are engaging into practical work more than theoretical ones. However unfortunately the system of education remains the same and the method of teaching is fallow without creating a learning experience for the students to make learning as well as teachingcaptivating and memorably vivid.Teachers must orchestrate activities that generate and benefit the students with practical knowledge from the theoretical lectures in classrooms. This will increase the participation of the students in learning various subjects

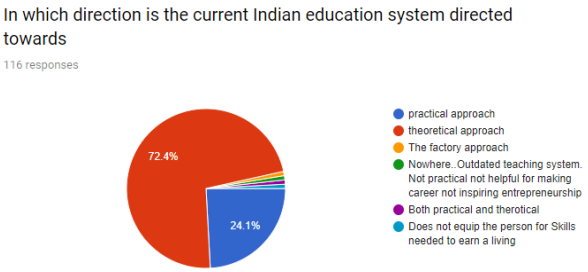
which will in turn assist them in realising their subjects of interest and thus make right career decisions. Variety of approaches should be adapted to have children participate in the classroom instead of only listening. But most importantly a fun and unforgettable learning-teaching experience must be created to bring learning and education alive.

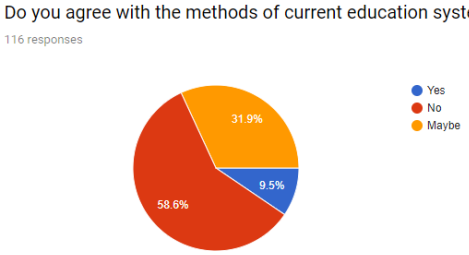
Review of Literature: "There is no such thing as educational value in the abstract. The notion that some subjects and methods and that acquaintance with certain facts and truths possess educational value in and of themselves is the reason why traditional education reduced the material of education so largely to a diet of pre-digested materials" (John Dewey, 1938) *"It is often said that education and training are the keys to the future. They are, but a key can be turned in two directions. Turn it one way and you lock resources away, even from those they belong to. Turn it the other way and you release resources and give people back to themselves. To realize our true creative potential—in our organizations, in our schools and in our communities—we need to think differently about ourselves and to act differently towards each other. We must learn to be creative."* (Sir Ken Robinson, 2001)

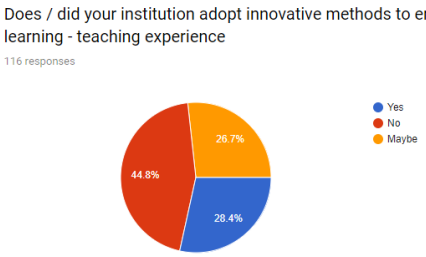
"Even though high school students log more time in the classrooms than anywhere else, their memorable experiences rarely take place there." (Susan Bedford, 1989)"Education is not only concerned with collecting information but also with the best ways of using information that has been collected" (Edward de Bono,1970) "Preparation" is a treacherous idea. In a certain sense every experience should do something to prepare a person for later experiences of a deeper and more expansive quality. That is the very meaning of growth, continuity, reconstruction of experience. But it is a mistake to suppose that the mere acquisition of a certain amount of arithmetic, geography, history, etc., which is taught and studied because it may be useful at some time in the future, has this effect, and it is a mistake to suppose that acquisition of skills in reading and figuring will automatically constitute preparation for their right and effective use under conditions very unlike those in which they were acquired."(John Dewey, 1938).

Objectives and Methodology: The study aimed to find out the need of adapting performance learning and education. The data has been collected through questionnaire form of survey method. Simple random sampling has been used and total of 116 respondents were approached.

1. To incite the education system to adopt experienced learning and teaching.
2. To encourage and make realise the importance of creativity and experienced learning in our education system.
3. To motivate the students to hone their skills and pursue career in the fields of their own choices.
4. To make realise the true importance knowledge over books.







Analysis : 72.4% of the respondents agree to this fact that the current system is directed towards theoretical approach. Most of the institutions even to this date still follow theoretical methods of teaching learning system. Imparting knowledge is done in the most uninteresting way possible which does not grab the attention and or pique curiosity among the learners.44.8% of the respondents agree that their institutions dint/ don't adopt performance based techniques of learning and teaching. Almost 60% of them disagree to these methods which are practiced. The students look forward to experience a better interactive and participative sessions in classroom. The institutions don't put in efforts or support the enhancingof methods ofdelivering memorable and productive lectures to every student which will not only make them attentive but will also be interesting for both, the students and the teachers, and also sharpen the brains of students helping them improvise their decision-making ability, make the intellectual as well as creative.

Recommendation/ suggestions:

1. Institutions should rise above books and make teaching performance based.
2. Innovative teaching techniques should be adopted.
3. Such approaches should be adopted where they build the character of every student and not smother creativity.

4. Should encourage every student in learning subjects of their choices and support their choices of careers.
5. It should adopt more of a practical approach involving interactive sessions and many more participative activities along with theoretical approach and not just entirely theoretical way of teaching.

Conclusion: Classroom lectures are getting dull as days proceed making the brighter brains of every kid stagnant as they pass out of their schools. This is affecting and has affected the students big time. The method of giving answers to questions on platter to the students and not making them think for themselves has had a negative effect through time. Its proven that such methods have deteriorated their decision-making ability and the ability to think out of the box. They are programmed to follow certain sets of rules and work as given instructions without exploring their skills and honing them, without finding out their specialities and preferences. Its high time that performance based techniques of learning and teaching are adopted making studies practical based to enlighten the monotoned lectures,luring the students to participate in classroom. Students today despite of spending longer time in schools, colleges and various other institutions rarely feel that they learnt something productive or apply it in practical situations. Classroom teaching methods must captivate the interests of the students and get them transfixed using such techniques which are creative and fun, and that things learnt in classroom will be inscribed in their minds which they can apply in their lives ahead. This will strengthen and magnify the creative minds, with better, innovative, thinking ability, making successful career choices which ultimately lead to an illuminated world with great minds all around.

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RECOMMENDER SYSTEM FOR M-COMMERCE

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Abstract

The recommender system is a recommendation inputs given by the persons, which the system then aggregates and directs to appropriate recipients. It can be further defined as a system that produces individualized recommendations as output or has the effect of guiding the user in a personalized way to interesting objects in a larger space of possible options. The smart Mobile can be used to perform M-commerce activities which gives lots of benefit to perform the user operation from anytime, anywhere and it turn out to be amazing experience to the user.Mobile device can use for recommendation for the particular product and get the instant replay for M-commerce related query, all these can be possible if provide powerful Smartphone applications which will able to perform lots of analysis and provide result. The papers present the recommender system for Mobile Commercefor various benefits such as data analysis and recommendation.

Keywords*: Recommender, E-commerce, M-Commerce, Mobile.*

1. Introduction: Mobile Commerce(M-Commerce) is the E-business on mobile phones, it is an extension to the Electronic Commerce (E-Commerce) in which various E-business activities can be carried out using small portable hand held devices like mobile phones, tablets etc. M-Commerce is the delivery of electronic commerce capabilities directly into the hands, anywhere, via wireless technology. The M-Commerce and wireless communication technology is being use in E-commerce and give rise to mobileE-commerce, one can find the pattern for mobile users behaviors such as their locations and purchase transaction in mobile E-commerce and provide service to the mobile commerce uses by applying weight frequent pattern and periodical pattern for prediction of purchase behavior of mobile user can be taken, one can have efficient mobile commerce pattern mining algorithm may designed for similarity inference models and develop prediction strategies for future enhancement. [1-3].

2. Recommendation : Recommendation is just giving advice to the user to make decision, E-commerce sites requires good Recommender System, Recommender in M-Commercesystems have become business relevant in filtering as information available in internet to present useful product recommendations to the user. New products are introduced in the market from time to time whereas old ones vanish over the period of time. Hence, the products offered in a web application tends to change, and the recommendations have to base on the currently offered range of goods. However, traditional collaborative filtering suffers from sparse data problem and the lack of scalability. Therefore, new recommender system technologies are needed to address the sparse data problem and quickly produce high quality recommendations especially in large scale mobile environment. As the amount of information in E-commerce and mobile commence grows explosively filtering irrelevant information but finding useful contents and reliable sources has gained more importance [4-5].

The types of recommender systems are given below

- **Collaborative Recommender**

- **Content-based recommender**
- **Demographic based recommender**
- **Utility based recommender**
- **Knowledge based recommender**
- **Hybrid recommender system**

2.1 Collaborative Recommender System : Collaborative recommender systems recognize commonalities between the users on the basis of their ratings and generate new recommendations based on inter user comparisons. The greatest strength of collaborative techniques is that they are completely independent of any machine readable representation of the objects being recommended and work well for complex objects where variations in taste are responsible for much of the variation in preferences. Collaborative filtering is based on the assumption that people who agreed in the past will agree in the future.

2.2 Content based Recommender System : It is continuation of information filtering research. In this, the objects are generally defined by their associated features. A content based recommender studies a profile of the new user's interests based on the features present, in objects the user has rated. It is basically a keyword specific recommender system here keywords are used to describe the items. Therefore, in a content based recommender system the algorithms used are such that it recommends users similar items that the user has liked in the past or is examining currently.

2.3 Demographic based Recommender System: In this system, categorize the users based on attributes and make recommendations based on demographic classes. In Demographic-based recommender system the algorithms first need a proper market research in the specified region accompanied with a short survey to gather data for categorization. Demographic approach does not require a history of user ratings like that in collaborative and content based recommender systems.

2.4 Utility based Recommender System: This system makes suggestions based on computation of the utility of each article for the user. The main problem for this type of system is how to create a utility for individual users. In this system, every industry will have a different technique for arriving at a user specific utility function and applying it to the objects under consideration. The major advantage of using this recommender system is that it can factor nonproduct attributes, such as vendor reliability and product availability, into the utility computation. This makes it possible to check real time inventory of the article and display it to the user.

2.5 Knowledge based Recommender System: Knowledge based recommender system attempts to suggest items based on inferences about a user's needs and preferences. This recommendation works on functional knowledge; they have knowledge about how a particular article meets a particular user need and can therefore reason about the relationship between a need and a possible recommendation.

2.6 Hybrid Recommender System: The combining any of the two systems in a manner that suits a particular industry is known as Hybrid Recommender system. This system combines

the strengths of more than two Recommender system and also eliminates any weakness which exist when only one recommender system is used.

3. M-Commerce: Many technologies is emerging to implement M-Commerce the various technologies like Android. From the past data it is observed that the growth of small devise is large, especially the growth of Android based smart phones is growing exponentially the need of better M-commerce architecture is the need of the hour to provides various business related service to the consumer using their small device mobile phones.

3.1 Advantages of M-Commerce : The following are the some advantages provided by typical M-Commerce application

- It is portable.
- Approach is anywhere and anytime.
- Low operation Cost.
- Much Easier to use.

3.2 Disadvantages of M-Commerce : The following are the some disadvantages provided by typical M-Commerce application

- The life of battery is major concern.
- Security issue is main worry.
- Sometime Internet connection may create issue.
- Lack of physical approach of business.

There are some issue related to M-Commerce to deal with one of the major issue is mobile phones are battery constraints, memory constraints so the heavy networkingapplication with heavy graphics may adversely affect the network traffic and application bandwidth. Such applications need to develop with high care to overcome such issues, The other most important issue is related to security, people may think the E-commerce is secure than M--Commerce, the security enhancement protocols and technique need to use to get the total confident of the consumer.Recommender system is an integral part of E-commerce system many portal, big E-commerce application already using it for various purpose the Amazon is using recommender system to attract customer. A recommender system learns from a customer and recommends that he or she find most appropriate and valuable as compare of different range of the product with same category or price range, we can analyze how recommender system helps E-commerce process to increase sales we arrange several sites. The recommender system for E-commerce system, many of the largest commerce web sites are already using recommender system to help their customers find product and purchase the author focuses on how recommender system help E-commerce sites increase sales, and analyze few sites which uses recommender system, One can compare few E-commerce site and how they are using recommender system, Recommender systems used by E-commerce sites to suggest the products to their customers, the products can be recommended based on certain criteria like overall rating, based on analysis of the past behavior of buying customers which gives idea and prediction for future buying probability of the customers. According to the case study these techniques are part of personalization for each customer, recommender system automate

the personalization for each customer. The trust is the main concern while considering the E-business applications, the system need to provide sufficient trust to perform business either online or on mobile, centralize trust management can be one the solution or third party trust model can also be considered. M-commerce have several issues like low bandwidth, network related problems, cloud computing in M-commerce can address this issues especially 3G Mobile and 4G services provides good results for the mobile related issues [2 & 6].

Conclusion : The E-business activity with M-Commerce and strong recommendation system so that customer can attract and high chance to perform the transaction without any delay. It improves the overall business performance, it also provide various analysis features so that user as well as manufacturer can study the strengths and weakness of the product for future enhancement, user can rely on the recommender system and helps decision making easy to the common user.

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EFFECTIVENESS OF DIGITALISATION ON SUSTAINABLE GROWTH OF MICRO-ENTERPRISES

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Abstract

Digitalization is a necessity in the current era providing access to global information & transmission, high level decision making, reduction of cost in acquiring resources/organizational management and opens vast opportunities for information sharing among individuals, companies and governmental institutions. Cloud services allow individuals and businesses to use software and hardware that are managed by third parties at remote locations.Micro-Enterprises are important both to the individual and to the nation. They provide employment and raise the standard of living of the individual. Micro entrepreneurs face many obstacles that limit their long term survival and development.MSE sector has greater access to credit as it is classified as a priority lending sector. The priority sectors include agriculture, small enterprises, etc. Out of the total advances to small enterprise sector, 60 per cent is reserved for micro enterprises and the balance 40 per cent for the small enterprises. Disruptive technologies can change the game for businesses, creating entirely new products and services. The emphasis is micro enterprises will embrace digitalization to improve the operation capability and focus on the innovation of business mode ode by establishing the core competencies, realizing sustainable growth and development.The study will evaluate effectiveness of digitalizationon sustainability of Micro-Enterprises.

Key words: *Digitization, Demonetization, Disruption, Micro-Enterprises & Sustainable Development*.

1.1 Introduction: The Micro, Small and Medium Enterprise (MSMEs) play a very important and vital role in our economy where the twin problems of unemployment and poverty constitute a major development challenge. Micro enterprises are important both to the individual and to the nation. They provide employment and raise the standard of living of the individual.They complement large scale modern sector enterprises, use agricultural and other raw materials for the nation. Micro entrepreneurs face many obstacles that limit their long term survival and development.Digitalization provides access to global information & transmission, high level decision making, reduction of cost in acquiring resources/organizational management and opens vast opportunities for information sharing among individuals, companies and governmental institutions.

1.2Evolution of the policy framework: The evolution of the policy framework and support measures of the Government of India can be broadly grouped into the following three periods:

1948-1991: The Policy Resolutions from 1948 to 1991, consideredmicro and small enterprises as an effective tool to expand employment opportunities, help ensure equitable distribution of the national income and facilitate effective mobilization of private sector resources of capital and skills.

1991-1999: The new Policy for Small, Tiny and Village Enterprises of August, 1991 laid the liberalisedframework for government support to bring competitiveness and more vitality and growth to MSEs in the face of foreign competition and open market. **2006 to Present:**In 2006, The Micro, Small and Medium Enterprises Development (MSMED) Act, 2006 was passed. In March, 2007, a third Package for the Promotion of Micro and Small Enterprises was

announced to have direct impact on the promotion and development of the micro and small enterprises, with the fast changing economic environment. To facilitate further investments for technological up-gradation and higher productivity in the micro and small enterprises, 654 items have been taken off the list of items reserved for exclusive manufacture by the manufacturing micro and small enterprises andreduced to 21.

1.3 Definition of Micro-enterprises: In accordance with the provision of Micro, Small & Medium Enterprises Development (MSMED) Act, 2006 the Micro, Small and Medium Enterprises (MSME) are classified in two Classes.[1]

1. Manufacturing Enterprises and
2. Service Enterprises.

The limit for investment in plant and machinery / equipment for manufacturing / service enterprises, as notified,vide S.O. 1642(E) dtd.29-09-2006 are as under

	Investment in plant & machinery
Manufacturing Sector	Does not exceed twenty five lakh rupees
	Investment in equipments
Service Sector	Does not exceed ten lakh rupees

1.4 **Significance of Study:**MSE sector has greater access to credit as it is classified as a priority lending sector. The banks are required to compulsorily ensure that specified percentage (currently 40 per cent and 32 per cent of adjusted net bank credit or credit equivalent amount of off-balance sheet exposure, whichever is higher, for domestic commercial banks and foreign banks, respectively) of their overall lending is made to priority sectors as classified by Government, thus ensuring credit to these sectors.The priority sectors include agriculture, small enterprises, etc. Out of the total advances to small enterprise sector, 60 per cent is reserved for micro enterprises and the balance 40 per cent for the small enterprises. The study will evaluate effectiveness of digitalisation for Sustainable growth of Micro enterprises.

1.5 Formulation of the Research Problem: Micro enterprises are also characterized with limited access to both immovable and movable collateral;they are mostly centredonentrepreneurs alone, which make them vulnerable. Disruptive technologies can change the game for businesses, creating entirely new products and services. The low end of technology spending may not provide some key benefits while at the high end spending may be more on proprietary solutions. The emphasis is micro enterprises willcooperate with E-commerce or cloud service provider so as to improve the operation capability and focus on the innovation of business mode and operation mode by establishing the core competencies, to realize the sustainable growth and development.

1.6 Objectives of the Study:

[1]http://www.dcmsme.gov.in/ssiindia/defination_msme.htm

1. To study the Problems & Prospects of Micro enterprises.
2. To study challenges to Micro enterprises due to disruptive technology.
3. To evaluateeffectiveness of Digitalisation on Sustainable growth of Micro enterprises.

1.7 Scope of the Study: The Scope of the study is wider and hence it is limited to selected 150 respondents of the particular micro enterprises in Ulhasnagar, a town in Thane districtin state of Maharashtra in India.

1.8 Methodology & Plan of Work: The proposed work will be based on Analytical method. In order to conduct the study the researcher will collect the data through primary & secondary sources of data collection.

Primary Sources: The questionnaire will be presented to 150 respondents at Ulhasnagar. The surveys conducted and the direct interaction gave an insight into the ground reality of the problems and the challenges faced by the micro enterprises.

Secondary Sources: The relevant data will be collected by referring research reports relating to micro enterprises. Thereviews of the published reports have developed a sound theoretical foundation for this report.

1.9 Limitation of Study: The focus is on the micro enterprises in India. The respondents for primary data were selected randomly on the basis of the type of the enterprise and willingness to fill the questionnaire. The likert scale has its own inherent limitations. The study is limited to150 samples from "Ulhasnagar" a town in Thane District of State of Maharashtra.

2.1 Review of Literature: The MSME sector has been growing at a faster rate than overall industrial sector;There are multiple constraints that threaten to derail the sector's growth trajectory.

- Inadequate market linkages
- Lack of infrastructure
- Inadequate finance
- Lack of managerial competence
- Obsolete Technology
- Lack of Technology
- Access to business information

Access **to information has however not been given the same attention** as access to finance, markets, technology or training. In developed countries, because of digitalisation, it is easy to access business information and services can be identified in order to provide more development support.(Levy, 2000).

Performance of SME'S: Earlier studies have shown that lack of capital and financial resources affect performance in SME'S. Technology affects the businesses to a very great extent by facilitating communication with both the supplier and customers, by easing the transportation and marketing of the products.[2] Disruption by its very nature is extremely

[2]http://www.ijsrp.org/research-paper-1214/ijsrp-p3618.pdf

difficult to predict. However, with careful analysis of technology, industry and consumer behaviour trends, business can efficiently manage disruption. The magnitude of disruption through demonetisation and cashless economy has resulted in conducting rigorous market research and frequent innovation workshops.Customers build loyalty and enable the organizations to test new ideas quickly and inexpensively.[3]RajibLahiri (2011): The analysis of performance of MSMEs in India during the pre and post liberalization period revealed that except marginal increase in growth rate in employment generation, the growth rate in other parameters is not encouraging during the liberalization period.[4]Dr.Padmasani, S. Karthika (2013), A study on Problems and Prospects of Micro, Small and Medium Scale Enterprise in Textile Exports with special reference to Tirupur and Coimbatore District revealed the standardization of the business process, and adoption of latest technology can help MSME'Sto overcome problems and improve productivity.Srinivas K T,(2013), studied the performance of micro, small and medium enterprises, their contribution in India's economic growth, identified the number of enterprises, employment in MSMEs concluded that MSMEs play a significant role in inclusive growth of Indian economy.[5]Nishanth P, Dr.Zakkariya K.A. (May 2014) reviewed that "there exists problem in accessing finance from banks and financial institutions and also viewed that this problem.Dr.NeeruGarg(Sept. 2014), Micro, Small and Medium Enterprises in India: Current Scenario and Challenges. This paper made an attempt to highlight the growth of this sectormay differ from region to region between sectors, or between individual enterprises within a sector. The study was restricted to Kozhikode district in Kerala.[6]Microenterprises play a significant role in inclusive growth of overall economy. Due to advancement in technology, the large enterprises pose a challenge to microenterprises. This was fuelled with demonetisation by Indian Government where the only resort to these micro enterprises is to embrace digitalisation for their enterprise to survive and grow.

Methodology & Research Design:

The research methodology adopted to achieve the study's objective that use of ICT resources will enable the microenterprises to survive and sustain growth. The contribution ofICT resources will also allow the transition from cash based Economy to less cash based economy smoothly.The study adopted a descriptive design.Descriptive research involves field survey where theresearcher goes to the population of interest to ask certain issuesabout the problem under the study. As part of the study, 150 Micro enterprises were randomly selected based on occupation

1. Textile (Thread /Yarn),

[3]https://www.crisil.com/crisil-young-thought-leader/dissertations/2015/AJIT-REDDY-KANDELA.pdf

[4]RajibLahiri; Problems and Prospects of Micro, Small and Medium enterprises (MSMEs) in India in the era of Globalization;www.rtc.bt/Conference/2012-10…/6

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2. Readymade Garments
3. Garage,
4. Beauty Parlours and
5. Tailoring shops.

The primary data is collected by way of the questionnaire.The sample of the Micro-enterprises was selected on the nature of the enterprise and equal number of questionnaires administered. The Profile of the respondent is analysed using percentage method.Quantitative analysis was donethrough the use of statistical techniques such as frequency and percentages. The Perceptions of the Respondents have been collected using likert scale to understand Contribution of digitalisation to Business Performance. The responses were analysed using descriptive analysis. The Mean and the standard deviation were used to find skewness using Pearson's Coefficient of Skewness.

3.1 Data Analysis and Interpretation

The data analysis and interpretation is divided into three parts.

1. Profile of the respondent.
a. Percentageswere used to interpret the profile.
2. Perception of the Respondents
a. Use of pie chart to interpret the responses to the individual question
3. Use of Pearson's coefficient of skewness to interpret the responses collectively

4.1Profile of the Respondents

Table 4.1A: Age of the Respondents

Age--group(A)	Mean Value of Age-group(B)	Respondents(C)	Percentage(D)	(E)=(B)*(C)
20-34	27	72	48	1944
35-49	42	48	32	2016
49-60	54.5	30	20	1635
Total	123.5	150	100	5595

Source: Compiled by the researcher.

It is observed that the age of the major respondents is in the age group of 20-34 which is 48% followed by the age-group of 35-49 which is 32%. The average age of the respondent is 37.3 years.

Table 4.1B: Gender of the Respondents

Gender	**Respondents**	**Percentage**
MALE	108	72%
FEMALE	42	28%
TOTAL	150	100%

Source: Compiled by the researcher.

It is observed that the sample is male-dominated which may be due to the nature of the micro enterprise selected, as few sectors are male-dominated.The sample of the Micro-enterprises was selected on the nature of the enterprise and equal number of questionnaires administered.

Table 4.1C:Access to E-Resources (ICT)

Access to E-Resources	Respondents	Percentage
YES	150	100%
NO	0	0
Total	150	100%

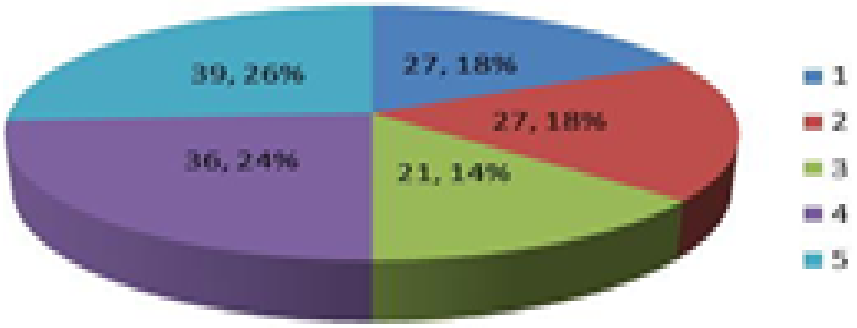
Source: Compiled by the researcher

100 % of the respondents had access to internet through computer or Smart Phone.

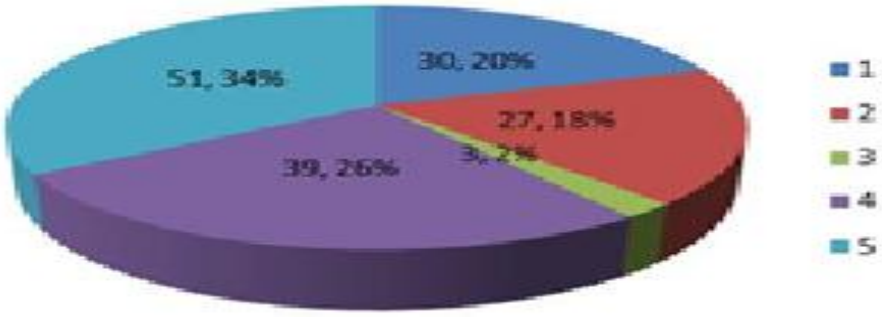
4.2 Perceptions of the Respondents

Effectiveness of Digitalisation in Business Performance

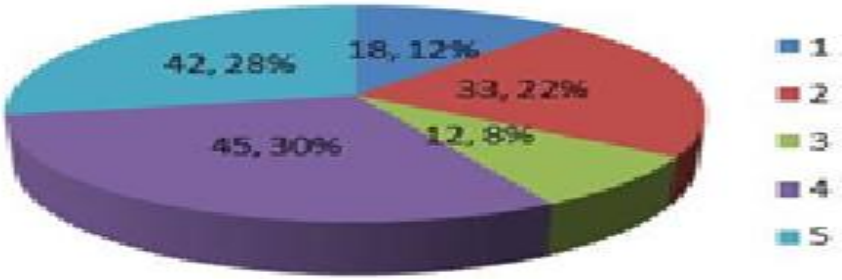
A1: Digitalisation helps to provide timely information to interpret changes in business environment:



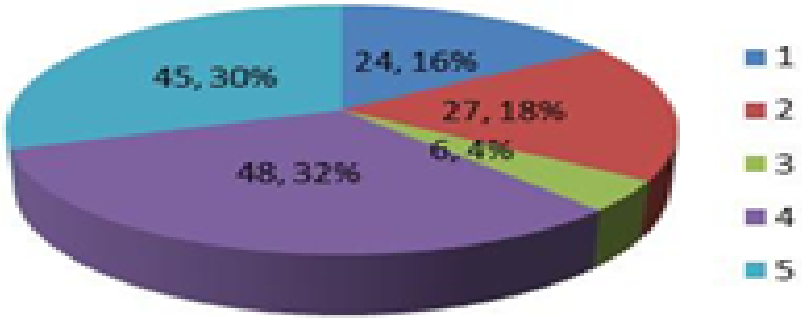
A2:Digitalisationhelps to manage debt**:**



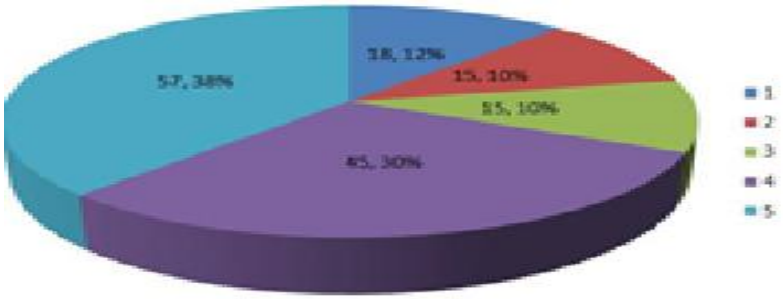
A3:Digitalisation helps to understand Customer Preferences:



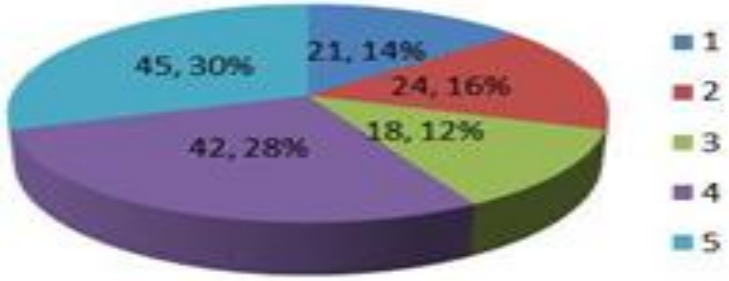
A4: Digitalisationhas helped to eliminate middlemen and improve Management Skills:



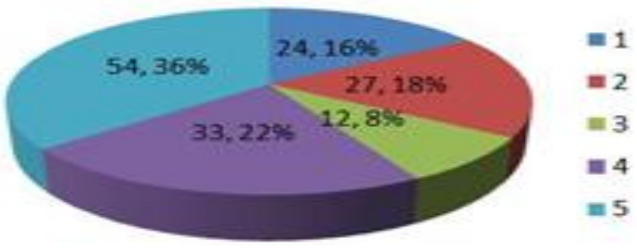
A5: Digitalisation has improved Productivity and performance of my business:



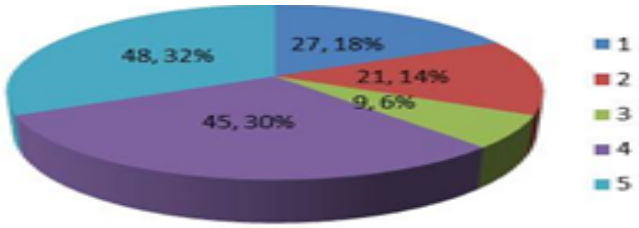
A6: Digitalisation has improved in dealing with management of finances:



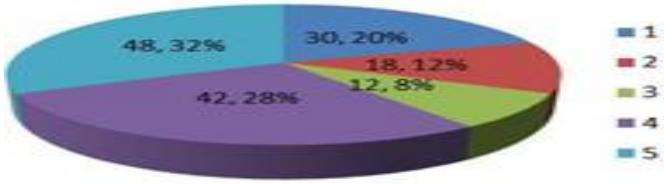
A7: Digitalisation helps in optimum utilisation of resources including inventories:



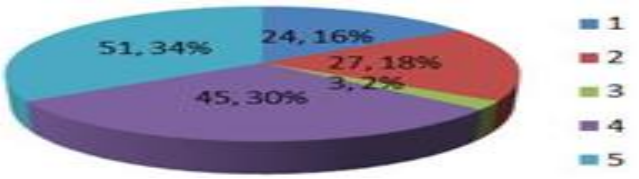
A8: Digitalisation helps in overall of Business expansion:



A9: Digitalisation leads to overall value addition:



A10 Digitalisation results in sustainable growth of business:



4.3 Data-Analysis

All the responses were analysed to calculate mean, standard deviation and Pearson's coefficient of skewness with the help of excel.

Calculation of Mean and Skewness

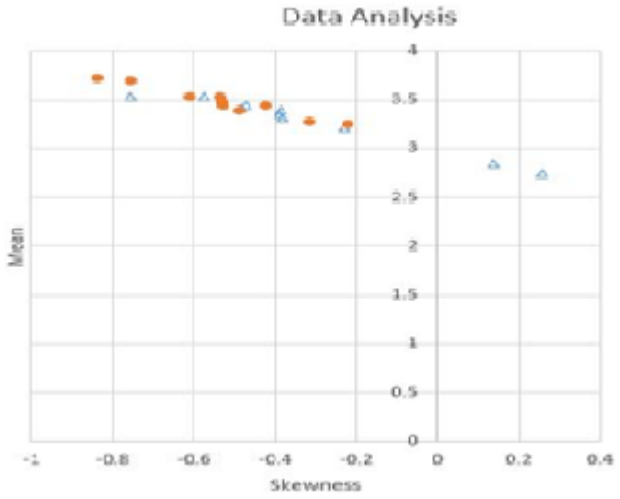
Q_No.	Construct	Skewness	Mean
A1	Digitalisation helps to provide timely information to interpret changes in business environment	-0.575625409	3.54
A2	Digitalisation helps to manage debt	-0.469255886	3.44
A3	Digitalisation helps to understand Customer Preferences	-0.390096691	3.36
A4	Digitalisation has helped to eliminate middlemen and improve Management Skills	-0.38267144	3.32
A5	Digitalisation has improved Productivity and performance of my business	-0.489003267	3.4
A6	Digitalisation has improved in dealing with management of finances	0.137700093	2.84
A7	Digitalisation helps in optimum utilisationof resources including inventories.	-0.534783907	3.54
A8	Digitalisation helps in overall of Business expansion	-0.423238214	3.44
A9	Digitalisation leads to overall value addition	-0.316974521	3.28
A10	Digitalisation results in sustainable growth of business	-	3.7

		0.756072045	
			3.386

Source: Compiled by the researcher.

The analysis of the above data shows that the mean of all the responsesis 3.386. The graphical presentation of the Pearson's coefficient of skewnessis as follows.

Fig 4.3.1 Data Analysis – Graphical presentation



Source: Compiled by the researcher.

The data analysis reveals that there is asymmetry in responses and it is negatively skewed.

5.1 Conclusions and Recommendations

Digitalisation being necessity in current scenario can improve the operation capability and focus on the innovation of business mode and operation mode by establishing the core competencies, to realize the sustainable growth and development of micro-enterprises. Indian Enterprise Development Service (IEDS), will help to achieve the vision of "Startup India", Standup India" and "Make in India". The huge prospects made available by India Government to the microenterprises like ZED (Zero Defect Zero Effect) certification, PMEGP. It is well said that Change is inevitable as we live in is dynamicworld. There are some areas where they were reluctant to use e-resources, due to security issue and other as they are comfortable with a particular method like making payment through cheques, as regard to e-banking transactions like NEFT, RTGS, and IMPS etc. The platform provided by various e-commerce websites like Amazon through cloud computing services will be of immense use to micro-enterprises.The goal of Cloud Computing is to allow users to take benefit from all of these technologies, without the need for deep knowledge about or expertise with each one of them. The Cloud aims to cut costs, and help the users focus on their core business instead of being impeded by IT obstacles.It can be concluded that micro-enterprises will become E-enterprises and M-enterprises and take all such initiatives to see that they can increase their market share by providing customer delight.

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ROLE OF ELECTRONIC ACCOUNTING IN FINANCIAL MANAGEMENT OF COMPANIES AND ITS IMPACT

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Abstract
Traditionally, a large part of working hours at an accounting department have been spent manually saving receipts and documents. Once electronic connections work as they should, for example bank statements and purchase invoices can be added directly into the system in electronic format. It is easy to calculate that processing one purchase invoice in paper through all of its steps (opening and stamping the post, accepting the invoice, sending it to the accounting department, entering the invoice data in the system, posting and payment) may take the customer and accounting department a total of 10–30 minutes.In an electronic world, purchase invoices are in the system with supplier data, invoice rows, dates, bank reference codes and sums ready in place. With one click of a button.
The study aims to understand the use of electronic accounting in the different areas of accounting departmentswhich have started using or are planning on switching over to electronic financial management. The whole industry is in a state of flux, that is constantly changing and it is related to accounting department wanting to make use of more flexible, efficient and modern systems in their work. On the other hand, accounting departments' customers also expect their accounting department partners to provide smoother financial management in real time and in a digital environment. A digital working environment brings both cost and time savings in financial management processes and it also provides more opportunities to organize the work between the accounting department and their customer.
Keywords*: Electronic Accounting, Financial Management, Invoice, Company.*

Introduction – Electronic financial management refers to the efficient financial management of a company using electronic tools. Electronic financial management can be utilized in, for example, sales invoicing, receiving and circulation of purchase invoices, up-to-date and automated accounting, reporting and notifications to the authorities, and sending and receiving customer mails etc.. It enables financial management and follow-up of the company's position regardless of time and place. Financial management significantly boosts operational efficiency, speeds up financial processes and results in savings. Electronic financial management also offers its users extensive tools with which electronic financial management is no longer the privilege of big corporations but it is easy and profitable for small companies also to adopt.Electronic financial management saves time and money [2]. An entrepreneur's time is highly valuable. Electronic financial management is the quickest and most cost-effective way to arrange your company's finances. The time that is freed up can be devoted to core business operations and making a profit. In electronic financial management, all of the company's invoices are processed in electronic manner and accounting transactions for invoices are handled automatically. One can use facilityof electronic financial management services as a cloud service with any terminal, such as a desktop computer, mobile phone, or tablet. With this approach, the company's accounts payable and receivable, along with the financial administration reports, are always up to date and can be reviewed from anywhere and

by anyone as such customer, stakeholders, foreign investors and many others scattered in different parts of the world, at the press of a button.[6]

Objectives of Study-

1. To understand usage of electronic accounting systems by different companies
2. To understand changing impact of electronic accounting on the companies
3. To review the status of companies' performance as compared to traditional accounting
4. To understand significant changes in profit earning due to electronic accounting system on the companies

The benefits of electronic financial management for customers-

1. Electronic financial management is suitable for enterprises of all sizes
2. It is the quickest and most cost-effective way to arrange your company's finances
3. One can use electronic financial management services as a cloud service with any terminal Accounts payable and receivable are always up to date, as are financial administration reports, and can be reviewed from anywhere in the world
4. One can always have an accurate, real-time picture of its own company's financial administration

Advantages of Electronic Accounting System: The main advantages of using aelectronic system accounting program are as follows:

(i) Faster Processing: Electronic systems require far less time than human beings in performing a particular task. Therefore, accounting data is processed faster using aelectronic systemized accounting system.

(ii) Accurate Information: There is less space for error because only one account entry is needed for each transaction unlike repeated posting of the same accounting data in manual system.[3]

(iii) Reliability: Electronic system systems are immune to boredom, tiredness or fatigue. Therefore, these can perform repetitive functions effectively and are highly reliable as compared to human beings.

(iv)Easy Availability of Information:

The data can be made available to different users at the same time. This is called data sharing.

(v) Up-to-date Information: Account balances will always be up to date since the records are automatically updated as and when accounting data is entered or stored.[3]

(vi) Efficiency: The electronic system based accounting system ensures better use of time and resources.

(vii) Storage and Retrieval: Electronic system based systems require a fractional amount of physical space as compared to the books of accounts in the form of journals, ledgers and accounting registers.[5]

(viii) Works as a Motivator: Employees using electronic system systems feel more valued as they are trained and specialized for the job.

(ix) Automated Document Production: Accounting reports like cash book, trial balance and financial statements and even tax filing are generated automatically and are easily accessible just by a click of mouse.[4]

(x) MIS Reports: It is easier to monitor and control the business using the real time management information reports generated by the electronic systemized information systems.[4]

Limitations of Electronic systemized Accounting Systems: The main limitations of Electronic systemised systems are being dependent upon the operating environment they work in. Some of them are listed as follows:

(i) Heavy Cost of Installation: Electronic system hardware needs replacing and software needs to be updated from time to time with the availability of newer versions.[5]

(ii) Cost of Training: To ensure effective and efficient use of electronic systemized system of accounting, newer versions of hardware and software are introduced. This requires special training and cost is incurred to train the staff personnel as specialists.

(iii) Fear of Unemployment: Reflects the feelings of the staff on the introduction of electronic systemized accounting system. The staff fears redundancy and show less interest in electronic systems.[7]

(iv) Disruption in Work: When electronic systemized system is introduced, there might be loss in the work time and certain changes in the working environment.

(v) System Failure: The danger of a system crashing due to some failure in hardware can lead to subsequent loss of work. This occurs when no back-up is retained.[7]

(vi) Time Consuming: In order to avoid loss of work at the time of system failure, there is a need for providing back-up arrangements which is a time consuming process.

(vii) Unanticipated Errors not Known: Unlike human beings, electronic systems do not have the capability to judge or detect unanticipated errors in the system.

(viii) Breaches of Security: The danger of viruses and hacking into the system from outside creates a strong need for security of system. Similarly, the person who has created the specific program can easily defraud by tempering with the original records.[5]

(ix) Health Dangers: Extensive use of electronic systems may lead to many health problems such as eyestrain, muscular complaints, backache etc. resultantly reducing working efficiency as well as increasing medical expenditure.

Objectives of Study-

1. To understand usage of electronic accounting systems by different companies
2. To understand changing impact of electronic accounting on the companies
3. To review the status of companies' performance as compared to traditional accounting
4. To understand significant changes in profit earning due to electronic accounting system on the companies

Methodology of Study- The data collected for the study is secondary sources and these data are from audited records and accounts of the companies. The study has been undertaken to

understand the impact of changing electronic accounting practices with changing economic environment and regulatory environment

Impact on Companies:

1. In general Companies are of opinion that changing electronic accounting practises are helpful in faster processing of transactions and electronic processing of accounts has become indispensable part of their day to day working.
2. The electronic accounting can be helpful only when it is efficiently and effectively implemented by the organised manner in the financial activities of the firm..
3. The Accountants are of view were of the view that changing electronic accounting along with changing regulations and standards like shift of GAAP to IND AS has made job of accountant meticulous and time consuming. (1)
4. Many of financial managers are getting ease of doing their jobs with the updated accounting software like in case of CRM management, GST Accountability, IFRS standardsacceptability and many more.[4]
5. Companies belonging to rural India has got positive impact due to ease of doing business and quick business transactions

Conclusions- The major cause of changing standards of financial accounting and electronic accounting practises is globalisation of the capital markets which has resulted in development of accounting infrastructure in every organisation as it has become mandatory to be well acquainted with changing accounting standards within country as well as in abroad only than any organisation can be able to reap the benefits and face the challenges of economy or international business or any regulatory obstacles in the smooth functioning and profitability of the corporate sector.

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A REVIEW ON STOCK MARKET STRATEGIES & VALUATION MODELS

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Abstract

When it comes to personal finance and accumulation of wealth, of the few avenues most talked about and sought after, especially in the current scenario, is the investment in stock market. People often have an itch to try their hands on stock market before learning some basics of stock investments; this could be taking a blind risk. Buying or selling wrong stocks at wrong times. For this reason it's a good idea for "new investor "to ponder over some strategies of stock picking to safeguard the investment although there is no fool proof system for picking stocks!! For a beginner, safety of principal is an important objective; which calls building, implementing and maintaining a portfolio of securities that best suits the objectives and needs of the investor through investment planning. It is advisable to assess and estimate the stock value based on the certain laid down popular models of stock valuation, to optimise one's return. Stock valuation is one of the most important and most complex operational processes in the stock exchange. Certainly, a common investor may not possess those sound skills and expertise to assess the fair value of the stock. An insight into various models of stock valuation based on dividend, earnings, etc. will help the prospective investor to pick up the right stock suiting to his or her pocket. In the present paper, researcher makes an attempt to highlight few strategies and valuation model to, which the prospective investor can choose to, build his optimal portfolio.

Keywords: *Stock Picking, Intrinsic Value, Market Value, Stock Valuation models*

Introduction: Under the present scenario, when bank fixed deposits, government securities, other small investments saving schemes such as PPF, NSC, Post office Deposits, wherein a common man used to park his savings have lost the charm on the ground of falling interest rates; which barely meet the inflation. An investor is bound to look for other avenues of investment which can optimise one's return. Further, the investments in real estate and bullion market, calls for high amount of investment making it out of the reach of common man. Under the situation, the fascinating world of Stock market is bound to attract the common man looking for investment opportunities to earn an extra rupee and to accumulate wealth. Thus, it is advisable to understand few stock market strategies and valuation models to build an optimal portfolio. In the age of technological advancement any/all information are available at the tip of finger. But skill lies in correctly understanding them and interpreting them according to one's investment objective.

Review of Literature: Noise trader'' theories of **Black (1986) and DeLong et al. (1990a**) suggest, if some investors trade on a ''noisy'' signal that is unrelated to fundamentals, then asset prices will deviate from their intrinsic value. Other recent empirical work also documents stock market anomalies such as market under and over-reaction due to noisy signals by the investors, which means the investors' behaviour do affect the price in the market. **Lux (2008)** opines that psychological factors of noise investor have negative effect on total investment made by arbitrage and other investors' and therefore sentiments do not play a vital role in determining the market behaviour. **Kuzmina (2010)** concluded that stock market consist of three types of investors, (i) rational investor investing on the basis of fundamentals, (ii) investor investing on basis of emotions, and (iii) investor investing on random basis in

vacuum. **Chong, et.al. (2011)** found that gender play an important role in equity selection process. Female investors give higher significance to social factors than male counterpart in their investment decision. **Hong and Stein (1999)** have more formally modelled the role of sentiment or investor behaviour in the market. However, these models are difficult to test directly since they typically involve sources of noise (sentiment), which are difficult to measure. **Cohen and Frazzini (2008)** have explained that with investors' limited attention substantially affect the stock price .The stock prices do not promptly incorporate news about economically related firms and its stakeholders. Market news and industry unrelated news have a strong distracting effect on the investors trading strategy, supporting investor distraction hypothesis.

Lee et al. (1999) have made an attempt to measure to what extent historical stock prices have reflected underlying fundamentals and he calculated the intrinsic value for the Dow Jones Industrial Average (DJIA) from 1963 to 1996 and were able to predict subsequent market returns. **Bakshi and Chen (1998)** relates stock's fair value to firm's net EPS, the expected future EPS growth and the long term interest rates. **Dastgir and Hosseini Afshari (2003)** tried to evaluate the predictability of Gordon, Walter and PV of future cash flows on the stock prices in Tehran Stock Exchange. They realized that those models failed to reasonably predict the stock market prices. **Graham and Dodd [1934, 1940, and 1962]** suggested an intrinsic-value approach to equity valuation. According to them, the most important factor determining a stock's value is its future earning power. The indicated intrinsic value is ascertained by first forecasting the earning power of stock and then multiplying it by an appropriate capitalization factor, Graham, Dodd and Cottle [1962, p. 28]. In 1965 **Fama** found stock price performance resembled a random walk. Fama later developed (EMH) into three sub-hypotheses depending on the information set involved: (1) weak-form (2) semi strong-form and (3) strong-form. Fama's EMH raises serious questions concerning the validity of GDC's earning power theory of value and Williams and Gordon's model.

Significance of the study: In the present scenario when people are reluctant to put their surplus money either in fixed deposits or other small saving schemes in the light of decreasing interest rates, here comes the stock market which has appealed and dragged lakhs of investors in the last one year or so. People have either invested through various mutual fund schemes or directly in the market. Further, learning of some basics of equity valuation model will help the prospective investor in building an optimal portfolio.

Objectives of Study

1. To analyse various trading strategies in the light of investment objective.
2. To study and critically examine various models of determining probable intrinsic value.

Research Methodology : Methodology has been followed based on the objectives.

1. Trading Strategies:

a. Buying & selling strategies: First and foremost is the stock picking strategy, which involves ascertaining stock's intrinsic value. If the intrinsic value is more than the current

share price: it makes sense to buy the stock. Pick up the right stock lest it may not only lead to actual loss but may also lead to opportunity loss. Try picking stocks of companies, where you can say with certitude that this company is going to be a lot bigger and profitable in near future. Now the other equally important factor is when one should sell a stock? Disinvest periodically and book your profit. Remember when you fail to buy a stock at attractive price, all you lose is an opportunity but if you fail to grab an opportunity to sell the stock at an attractive price then you make real losses.

b. Contrarian Trading: Contrarian trading is a type of value investing whereby an investor buys distressed stocks at rock bottom prices with a view to sell them when they start performing well. Such a strategy may seem unreasonable to a novice investor who is trained to invest according to the market trends. The contrarian traders are capable of beating the market if they take action which is different from opinion formed. They also must keep in mind that trends are where the money is, and that price confirmation is necessary for any reversal. Conrad and Kaul (1998) concluded that the long horizon contrarian strategies are more profitable than momentum strategy.

c. News based Trading strategies: Financial markets are particularly efficient when it comes to processing information. Now, the researchers have started analysing the stock price movements based on news sentiments. This theory of efficient market hypotheses suggests that the market is equipped enough to discount all the news and information in the quoted stock price. Nowadays, market information can be accessed easily with the prevalence of electronic markets and decision makers can use such information for trading.

d. Momentum Trading: Past stock returns can be a predictor of future performance. This is what we define as momentum, in which historic stock prices continue moving in their previous direction. Momentum trading strategies are highly risky being imbedded with higher degree of volatility in relation to other trading strategies. Therefore, these traders quite often use stop loss or some other risk avoidance technique to minimize losses in a losing trade. Nevertheless, finance academics have trouble with the acceptance of momentum trading as it contradicts the theories of efficient market and random walk. It is advisable to have a simplified trading strategy for earning excess returns from top-side momentum i.e., buying only previously top performing stocks.

e. Noise Traders: Market predictions are sometimes not at all correct due to the presence of large number of traders who make decisions about their trades without using fundamental data. Such traders are popularly referred as noise traders. As a result, they tend to have poor timing, and they usually follow market trends. They tend to overreact to news about the market. The media's role in providing news has an impact on stock market's volatility and strategies of noise traders. Tetlok (2007). Noise traders follow positive feedback strategies which has a correlation with assets returns. (Long et.al. 1989).

f. Herd Instinct: The type of herd behaviour in focus is market-wide, it arises when investors ignore individual characteristics of stocks and instead follow the performance of the market. The approach of Chiang and Zheng (2010) is used to detect herding in the market. In

institutional herding strategy there has been seen a positive correlation between institutional trading and short term returns. (Dasgupta et. al. 2011). Heard tendency provides profit when markets are rising but when there is correction these types of strategy bear the highest loss.

g. Derivative Trading strategies: The term 'Derivative' stands for contract whose price is derived from or is dependent upon an underlying asset, which could be a financial asset such as currency, stock and market index, an interest bearing security or a physical commodity. Derivative trading in India comprises of 4 basic contracts namely Forwards, Futures, Swaps and Options.

A forward contract is an agreement between the parties whereby one of the parties agrees to buy the underlying asset at a specified price on a specified future date. And the other party agrees to sell the asset on the same date for the same price. A future contract is an agreement between two parties to buy or sell an asset at a certain time in the future at a certain price. But unlike forward contracts, future contracts are standardized and exchange traded. A futures contract may be offset prior to maturity by entering into an equal and opposite transaction. In future contracts, the losses as well as profits for the buyer and the seller are unlimited. A swap is an agreement between two parties to exchange one stream of cash flows against another stream. Unlike most standardized options and futures contracts, swaps are not exchange-traded instruments. Instead, swaps are customized contracts that are traded in the over-the-counter (OTC) market between private parties.

h. Option Trading Strategies: The potential returns from buying options on an underlying asset are much higher and the risk much lower compared to buying futures. This is because for buying an option, the buyer has to pay to the option seller only a relatively small fee, called option premium. The maximum loss for the buyer is amount of option premium paid by him. An option contract may be (1) a Call option or (2) a Put option. Under call option, the buyer of option has the right to buy but is not obliged to buy, a specified quantity of the particular share at the exercise price before or on a specified date. However, the seller (writer) of a call option is obligated to sell the asset to the buyer at the exercise price. Under put option, the buyer of option has the right to sell a particular asset to the option writer at exercise price by a specified date but he is not obliged to sell it. A put option buyer will exercise the option only if the exercise price is higher than the market price.

2. Stock Valuation Models

A. Dividend discount Model: Dividend discount models are designed to compute the intrinsic value of a share of under specific assumption of (i) the expected rate of dividend in the future (ii) growth rate of dividend (iii) appropriate discount rate to work out the present value of future dividend. The value of a share based on different assumption is stated hereunder:

1. Zero Growth Model: In this case, it is assumed that dividend amount will remain constant into the indefinite future. Accordingly its intrinsic value will be $P_0 = D_0 /k$, where P_0 = Intrinsic value of a share, D_0= Current Dividend, k = discount rate

2. Constant Growth Model **(Gordon' Model)**: Under this situation, it is assumed that discount will grow at a certain fixed percentage into the indefinite future. Accordingly its intrinsic value will be $P_0 = D_0 (1+g) / k$, where g= growth rate
3. Multiple Growth Model: This model assumes that extraordinary growth will continue for a finite number of years and thereafter the dividend will grow at a normal growth rate into the indefinite future. Accordingly its intrinsic value $P_0 = \sum D_t / (1+k)^t + D_{t+1} / (k-g) (1+k)^t$

   Where D_t = Dividend for 'n' number of years, D_{t+1} = Dividend beyond 'n' number of years.

Gordon's' model explicitly relates the market value to dividend policy. It is based on the assumptions that the firm has no debt, perpetual life, constant retention ratio, k >g etc. A closer look at the Gordon's model reveals that (Chandra, 2008):

• When the rate of return (r) >k, the price per share increases as the dividend pay-out ratio decreases. This suggests that the optimal pay-out ratio for a growth firm is zero.

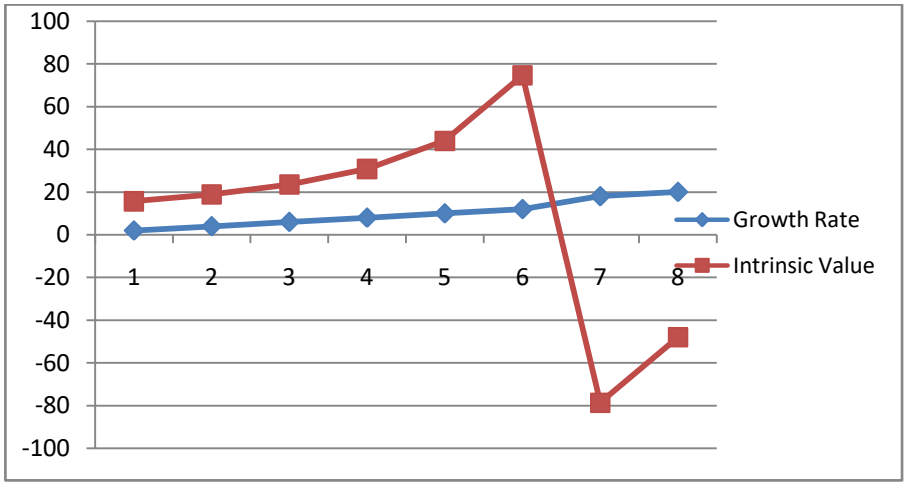
• When r=k, the dividend pay-out ratio variation will not affect the price per share. The pay-out ratio will not impact the share price of a normal firm.

• When r<k, the price per share increases as the dividend pay-out ratio increases. The pay-out ratio for a declining firm is 100%.

The model is a simple and convenient way of valuing stocks but it is extremely sensitive to the inputs. Used incorrectly, it can provide absurd results. Let us understand the intrinsic value of share according to Gordon assuming present dividend ₹.2, Cost of equity 15% under varying growth rates:

Situations	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
G (%)	2	4	6	8	10	12	18	20
P_0 (₹)	15.69	18.91	23.56	30.86	44.00	74.67	-78.67	-48.00

Graph 1: Growth Rate & Intrinsic Value



From the above graph, one can observe that increase in growth rate has resulted into increase in intrinsic value but the moment growth rate increases beyond the cost of equity; intrinsic value declines; providing absurd results. In short, the Gordon growth model is best suited for firms growing at a rate comparable to or lower than the nominal growth in the economy and which have well established dividend pay-out policies that they intend to continue into the future.

B. P/E Ratio Model: The value of stock in this approach is valued based on the P/E Ratio and is estimated as $P_0 = E_1 \times (P_0 / E_1)$ where E_1 = Estimated earnings per share

P_0 / E_1 can be derived from constant growth model as under:

$P_0 / E_1 = D_1 / (k-g)$ where g = growth rate of earnings

Numerous studies have been conducted to empirically relate the P/E to key fundamental and economic variables. However, none of these studies have been successful in selecting the appropriate stock to buy or sell. It's all because the mode of valuation chosen rarely remains constant as the weightage assigned to each factor may change if the market taste shifts or input values changes. In relation to dividend discount model this seems better as it considers the total earnings.

C. Walter's Model: James E. Walter explains how dividend can be used as a tool to maximise the wealth of equity holders. According to him, in the long run, share prices reflect only the PV of expected dividends. So far as retained earnings are concerned, it influences stock prices just because they may be used in future to pay dividend. However, Walters' model does not consider all the factors affecting dividend policy and share prices. Moreover, determination of market capitalisation rate is difficult. Further, Walter ignores taxation, various legal and contractual obligations, management policy and attitude towards dividend policy and so on. The relationship between dividend and share price on the basis of Walter's formula is shown below:

$$\frac{D+(E-D)(Y/k)}{V_c\ k}$$

where

V_c =Market value of equity share, Y =Return earned on Investment

k = Cost of Capital E =Earnings per share D =Dividend per share.

In this case the optimal pay-out ratio for a growth firm is zero. When Y=k, the changes in dividends doesn't impact the price per share. In this case the optimal pay-out ratio for a normal firm is irrelevant. When Y<k the price per share increases as the dividend pay-out ratio increases. The optimal pay-out ratio for a declining firm is 100%. Let us consider the following table showing the value of share according to Walter assuming alternatively different pay-out ratio and different rate of return on retained earnings.

	Div pay out 25%			**Div pay out 50%**			**Div pay out 75%**		
Situations	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**
D	2	2	2	4	4	4	6	6	6

E	8	8	8	8	8	8	8	8	8
E-D	6	6	6	4	4	4	2	2	2
Y	0.15	0.1	0.05	0.15	0.1	0.05	0.15	0.1	0.05
k	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Y/k	1.5	1	0.5	1.5	1	0.5	1.5	1	0.5
	110	**80**	**50**	**100**	**80**	**60**	**90**	**80**	**70**

• If the company has better opportunity to invest funds (Y=15%) in comparison to cost of equity (k=10%), a lesser pay-out ratio will maximise the price of the share. Ideally in such a situation no dividend should be paid.

• If the shareholders have better opportunity to invest funds (k=10%) in comparison to company (Y=5%), then higher pay-out ratio will result in higher price. In such a situation ideally pay-out ratio should be 100%.

• If the company and shareholders have the same opportunity to invest funds (Y=k=10%), the dividend policy will have no effect on the share price.

D. Modigliani and Miller (MM) Model: Modigliani and Miller Hypothesis are in support of the irrelevance of dividends. MM argue that firm's dividend policy has no effect on its value of assets and is, therefore of no consequence. According to them, According to MM, Capital markets are perfect, investors behave rationally, and there is no tax. MM's argue that dividend policy does not affect ether the market price or the wealth of the shareholders. If the firm pays dividends, it is forced to borrow money equivalent to the amount of dividend paid; thus wiping out the advantage by borrowing, which in turn would finally reduce the profits and the value of share. Market price of a share after dividend declared on the basis of MM model is shown below:

$P_0 = (P_1+D_1) / 1+k$

P_0 = Existing market price of the share, P_1 = Market price at the end of period 1

D_1 = Dividend to be received at the end of period 1, k = Cost of Equity Capital

Let us consider the following example:

Situations	**1**	**2**	**3**	**4**	**5**	**6**
P_1 (₹)	60	72	95	54	50	41
D_1 (₹)	2	2	2	2	2	2
1+k	1.15	1.15	1.15	1.15	1.15	1.15
P_0 (₹)	53.91	64.35	84.35	48.70	45.22	37.39

The above data reveals that MM's Model simply works out the PV of future expected cash flows considering the terminal value of the stock and the amount of dividend, discounted at an appropriate rate. In situation 1 above price of ₹.53.91 is nothing but the PV of market price and dividend at the end of a given period. This is as good as discounted cash flow technique. But how far the assumption of making payment of the dividend at the yearend hold good?

Conclusion: The empirical research on stock market is more or less based on assumptions, which in true sense difficult to put into practice. Further, the estimations adopted in various models are questionable as discussed. Nevertheless, to have a fair judgement on financial

behaviour reflected in the historical data, we need to properly use the available standards. You will succeed in the stock market only if you are serious, always on watch, willing to devote sufficient time and strictly follow the principles of investments. Things keep changing-sometimes for the better and sometimes for the worse. As a prudent investor you should never love or hate any stocks. Ultimately one needs to earn great profits regardless of the fact whether it is made from blue chips or tiny stocks.

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CUSTOMER RELATIONSHIP MANAGEMENT (CRM) IN DIGITAL AGE: A SURVEY ON ACADEMIC LIBRARY SERVICES

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Abstract

For more than a decade, academic libraries have been under the pressure to change the way of their operations and management to cope up with digitization. Customer Relationship Management is a key to enhance the success ratio of the academic libraries. A comprehensive CRM requires coordinated efforts of library administrator, support staff and other components of the institution. The present paper is an attempt to find out the factors affecting CRM, problems related with CRM and the strategies to enhance the effectiveness of CRM in Kalyan city and nearby suburbs.

Keywords: *CRM, Academic Libraries, Digitalization*

Introduction: Digital Era has revolutionized all aspects of education including the services provided by the academic libraries. The greatest challenge for library personnel is to satisfy the digital learnershaving over occupied minds with lots of information drawn from various technical tools. The need is felt to research out new strategies to retain and improve the customer database and to focus on meeting their high expectations in order to ensure the survival in this volatile competitive environment. The present paper is an attempt to revise the ways of CRM adopted by academic libraries in the suburban colleges and also to suggest the modes of improvement or additions in the same. CRM is a widely-implemented strategy for managing organizational interactions with customers. It involves the processes of finding, attracting, and retaining new customers, nurturing andretaining those the organization already has, enticing former customers back into the fold, and reducing the costs of marketing and customer service. The overall goals of CRM are to create customers' satisfaction, trust, loyalty, and retention.

Importance of CRM in academic libraries: The academic libraries have an urgent need to provide more proactive services and integrate the CRM strategy for improving its services. Although there were CRM practices found insome academic libraries such as the study of customers' attitudes and needs,the creation of customers' profiles, and the provision of several options for communicating with the learners. However, most of these practices are related to the librarytraditional services such as circulation, inter-library loan, and currentawareness service. Application of CRM in libraries will add the values of library services. Itcreates confidence and satisfaction among users and will in turn increase thenumber of users and at the same time draw back former users to come on aregular basis. It will highlight the pertinent problems faced by the learners and once these problems are known, the library administrators and staff can jointly make efforts to solve the same.

Review of Related Literature: The concept of Customer Relationship Management is based on thephilosophy of customers and marketing developed for relationship building between the producers and the customers(Kotler, 2003). Gronroos (2000) defined CRM in service marketing as a process ofcommunicating between customers and an organization's service inorder to attract and maintain the library users. Chen &Popovich (2003) suggested that the

key factors for CRM are people,technology, relation and process. However, all four strategies andimplementation processes, customer centric business process, enterprise-widestrategy, technology-driven process, and cross-functional integration must bepropelled. As against the above four strategies, Combe (2004) proposed four different items for driving forth CRM: culture,leadership, people, and technology. After this, various academicians from India and foreign countries have come forward to put forth various factors that are responsible for the success of CRM. Buttle (2004), for instance, stated that there are 4 important factorsaffecting the chain values of CRM, namely, leadership and organizationalculture, people, data and information technology, and process.According to Nykamp (2001), process of customer management is the mostimportant factor supporting the introduction of CRM in organizations. Theprocess commences from getting to know customers and building goodrelationships with customers based on the behaviors of target groups. Librarymanagement is also playing most vital role for building a good relationshipamong information providers and information seekers through focusing byCRM in academic libraries.Zablah, (2005)affirmed that customer management process cover recording and registeringcustomers' account, analyzing for better understanding, providing services tolibrary customers, implementation towards expected customers, continuousinteraction with customers, and arrangement of different activities. Nowadays information technology and communication are used as the toolfor organizational communication, knowledge management, and strategies(Laudon, &Laudon, 2002). Likewise, CRM technology is the importantstrategic tool of an organization to attain success in CRM application(Stafyla, 2003) owing to the basicstructure of information technology and information from customers'databases (Torres, 2004). Primarily, the customer management strategyrequires a center to store all customers' news and information. This centermust have efficient information technology architecture that is adjustableaccording to the changing environment (Buttle, 2004).

Methodology of the Study: CRM is more evolution than revolution. Thus achieving the full potential ofeach user relationship should be the major goal of every academic library.Therefore a survey was conducted on 100 library users of various colleges of Kalyan and nearby suburban areas. The respondentswere selected on convenience random sampling method. Their feedback about the library services, process, relation and management was collected and recorded for analysis and findings.

Objectives of this Study

1) To identify the factors affecting CRM in academic libraries
2) To study the problems of digital learners in academic libraries effecting CRM
3) To suggest the various strategies for effective CRM in academic libraries

Scope and Limitations of the study: Due to constraints of time and cost, the scope of the study was limited to colleges of Kalyan and nearby suburbs. However the same study can be conducted in Thane district by future researchers to highlight the problems of library users even in the rural areas.

Factors affecting CRM in academic libraries: The factors affecting CRM can be broadly classified into five categories:

1) Knowledge and understanding of library staff about CRM and leadership of library administrators: Perception and awareness of service quality focusing on customer relationship is a key to library success. Therefore it becomes imperative for the support staff to have the knowledge and understanding of CRM. The library administrators or the librarian must have the clear vision and mission about using CRM strategically in developing library services.

2) Organizational culture and communication: Organizational culture plays an important role to create a team for effective CRM. The roles and responsibilities of all the members of the team must be very clear. The communication between the library staff and the users, the staff and the administrator and amongst the staff must be direct and open. Cross library functional integration must be practiced to ensure coordination and support of various functions that spells out the success of CRM

3) Customer management Processes: There should beupdated and perfect digital system of recording and registering customer's profile. On the basis of their profiles, customers' analysis can be done as the basis of their classification. This process will further help to plan the services to be provided to the learners and with continual interaction their expectations can be known. The overall result would be customer oriented activities.

4) Technology for supporting customer management: CRM cannot be efficiently done without the help of information and communication technology. Data mining, database management system, knowledge management system, service force automation system and library automation can prove to be the weapons for enhancing CRM. Social media can also be effectively used.

5) Channels for library services and communications: Direct channels working traditionally in the form of circulation services can be continued. However indirect channels including emails, WhatsApp groups, facebook, personal web, library web etc. can also be used.

Problems of digital learners in academic libraries effecting CRM: Academic libraries like every other field face new challenges every day. Being a valuable source for higher education students, librarians face a constant struggle in making sure their facilities are fully functional, easily accessible and are operating to the best of their abilities to fully help the learners' of digital era. The survey revealed that the learners of digital age have high expectations from the academic libraries. The response of learners can be rightly understood from the following lines quoted by the student secretary of one college, "Academic libraries must prove the value they provide to the academic enterprise. They are no longer working as the sole provider of free information resources on college campuses but they have to work as the coordinators of knowledge management in the physical as well as in the digital form."Users assuming that the availability of online alternatives and resources provided by Google and other internet sources have very high expectations form the academic libraries in order to satisfy their research

needs.Collection management in the digital age was another problem highlighted with regards to CRM. The fast changing digital resources cannot be made available every now and then due to budget constraints. Even certain learners highlighted the problems relating to institutional policies and priorities. The learners are not ready to search the required material in the physical books. They require e-books for their notes. They want idea of intellectual freedom or freedom to read at time they are ready. Also the expectation of learners to get help from highly skilled library staff is unrealistic. Maintaining perfect database of learners and informing them for all new developments require sufficient infrastructure and human resource.

Various strategies for effective CRM in academic libraries

1) Skilling and reskilling practices: The library support staff must be continuously trained i.e. skilled and reskilled to satisfy the needs of digital learners. Proper database management system and proper communication through various social networking tools can prove to be favourable by changing the learners' attitude about the libraries.

2) Integration of library functions with other departmental functions: Library functions must be integrated into the main system and other departmental functions. This will help to share the responsibilities of satisfying the digital learners among the library staff and the other departments. Online feedback system can prove to be an effective tool for maintaining the performance of the library staff and the other departments.

3) Sharing of services: In order to deal with cost factor, the shared services such as library management systems, management of digital resources and shared cataloguing can be undertaken. Sharing in acquisition of resources particularlythose in the digital form can help to do away with the grudges of digital learners.

4) Communication through social media: The digital users of the library can be communicated through social media. Their constant demands can be recorded and after checking the authenticity of the demanded resource can be made available to them in the form of e-books or journals accessible through sharing services.

5) Pressure on Publishers: The librarians during the survey expressed their frustration about the publishers' policies on pricing and accessibility. So it is suggested that the suburban libraries need to work together and pressurize the publishers to promote innovative thinking on new models and routes to content. This can help the readers by providing them access to library services 24/7.

Conclusion: As a learning center, Library is always at the heart of campus. Finding out various ways to optimize operations, maximize resources, enhance services and serve customers at the right time has become the crucial responsibility of library administrators. Assessment of users' needs and wants is the core of library service and development. Therefore the librarians as well as the library staff must be consciously focused on understanding the digital learners' expectations. They should realize their responsibility as knowledge workers, providers and creators and not just as the information depository. The creation of new knowledge is another major challenge in this digital age.

Now the time has come to utilize the important tools of CRM while providing information services to the users in academic libraries. Without appropriate CRM, library may misunderstand their readers' service requests. This will create the gaps between the expected and the actual service which can prove to be an opportunity for other private libraries. A strong CRM system in academic libraries could be implemented through rationalized resource sharing and allocation, building a strong relation between library staffs and users and proper resource management.

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EMERGING TRENDS OF DIGITAL TECHNOLOGY IN FINANCIAL SERVICES

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Abstract

Technology is upending workflow and processes in the financial services. Tasks once handled with paper money, bulky computers, and human interaction are now being completed entirely on digital interfaces. Almost every type of financial activity - from banking to payments to wealth management and more - is being re-imagined by start-ups, some of which have garnered blockbuster investments. From artificial intelligence to cryptography, rapid advances in digital technology are transforming the financial services landscape, creating opportunities and challenges for consumers, service providers, and regulators alike. This paper reviews developments in this new wave of technological innovations, such as Bitcoin and Blockchain Technology, Cyber Security in Financial Services fintech and Artificial Intelligence in Financial Services and assesses their impact on an array of financial services

Keywords*: Bitcoin, Blockchain, Fintech, Artificial Intelligence, Financial Services*.

Introduction: Financial Services is a term used to refer to the services provided by the finance market. Financial Services is also the term used to describe organizations that deal with the management of money. Examples are the Banks, investment banks, insurance companies, credit card companies and stock brokerages.These are the types of firms comprising the market, that provide a variety of money and investment related services. Financial services are the largest market resource within the world, in terms of earnings.Financial Services can also be termed as, any service or product of a financial nature that is the area under discussion to, or is governed by a measure maintained by a Party or by a public body that exercises regulatory or supervisory authority delegated by law. Today, nearly every financial activity is being reimagined in some way, from banking, to lending, to wealth management. Tasks and transactions that once involved human interaction and paper money have overwhelmingly moved into the digital world, and new players are emerging to disrupt the traditionally staid industry. The coming year promises only more of the same.[6] Here are the some trends that are currently revolutionizing the financial services landscape:

1) Bitcoin and Blockchain Technology: Bitcoin is digital cash. It is a digital currency and online payment system in which encryption techniques are used to regulate the generation of units of currency and verify the transfer of funds, operating independently of a central bank. The terminology can be confusing because the words Bitcoin and blockchain may be used to refer to any three parts of the concept: the underlying blockchain technology, the protocol and client through which transactions are effected, and the actual cryptocurrency (money); or also more broadly to refer to the whole concept of cryptocurrencies. It is as if PayPal had called the Internet “PayPal,” upon which the PayPal protocol was run, to transfer the PayPal currency. The blockchain industry is using these terms inter- changeably sometimes because it is still in the process of shaping itself into what could likely become established layers in a technology

stack. Bitcoin was created in 2009 (released on January 9, 2009) by an unknown person or entity using the name Satoshi Nakamoto. The concept and operational details are described in a concise and readable white paper, "Bitcoin: A Peer-to-Peer Electronic Cash System."7 Payments using the decentralized virtual currency are recorded in a public ledger that is stored on many—potentially all—Bitcoin users' computers, and continuously viewable on the Internet. Bitcoin is the first and largest decentralized cryptocurrency. There are hundreds of other "altcoin" (alternative coin) cryptocurrencies, like Litecoin and Dogecoin, but Bitcoin comprises 90 percent of the market capitalization of all cryptocurrencies and is the standard. Bitcoin is pseudonymous (not anonymous) in the sense that public key addresses (27–32 alphanumeric character strings; similar in function to an email address) are used to send and receive Bitcoins and record transactions, as opposed to personally identifying information. Bitcoins are created as a reward for computational processing work, known as mining, in which users offer their computing power to verify and record payments into the public ledger. Individuals or companies engage in mining in exchange for transaction fees and newly created Bitcoins. Besides mining, Bitcoins can, like any currency, be obtained in exchange for fiat money, products, and services. Users can send and receive Bitcoins electronically for an optional transaction fee using wallet software on a personal computer, mobile device, or web application. The technology underlying Bitcoin and other virtual currencies is known as the blockchain.Theblockchain is the public ledger of all Bitcoin transactions that have ever been executed. It is constantly growing as miners add new blocks to it (every 10 minutes) to record the most recent transactions. The blocks are added to the blockchain in a linear, chronological order. Each full node (i.e., every computer connected to the Bitcoin network using a client that performs the task of validating and relaying transactions) has a copy of the blockchain, which is downloaded automatically when the miner joins the Bitcoin network. The blockchain has complete information about addresses and balances from the genesis block (the very first transactions ever executed) to the most recently completed block. The blockchain as a public ledger means that it is easy to query any block explorer for transactions associated with a particular Bitcoin address—for example, you can look up your own wallet address to see the transaction in which you received your first Bitcoin. The blockchain is seen as the main technological innovation of Bitcoin because it stands as a "trustless" proof mechanism of all the transactions on the network. Users can trust the system of the public ledger stored worldwide on many different decentralized nodes maintained by "miner-accountants," as opposed to having to establish and maintain trust with the transaction counterparty (another person) or a thirdparty intermediary (like a bank). The blockchain as the architecture for a new system of decentralized trustless transactions is the key innovation. The blockchain allows the disintermediation and decentralization of all transactions of any type between all parties on a global basis [3]. The blockchain is like another application layer to run on the existing stack of Inter- net protocols, adding an entire new tier to the Internet to enable economic transactions, both immediate digital currency payments (in a universally usable cryptocurrency) and longer-term, more complicated financial contracts. Any currency, financial contract, or hard or soft

asset may be transacted with a system like a blockchain. Further, the blockchain may be used not just for transactions, but also as a registry and inventory system for the recording, tracking, monitoring, and transacting of all assets. A blockchain is quite literally like a giant spreadsheet for registering all assets, and an accounting system for transacting them on a global scale that can include all forms of assets held by all parties worldwide. Thus, the blockchain can be used for any form of asset registry, inventory, and exchange, including every area of finance, economics, and money; hard assets (physical property); and intangible assets (votes, ideas, reputation, intention, health data, etc.).

2) Cyber-security in financial Services Cyber-security will be one of the top risks facing financial institutions Financial services executives are already depressingly familiar with the impact that cyber-threats have had on their industry.Cyber-security is the leading challenge to the adoption of IoT(Internet of things) technology because insecure interfaces increase the risk of unauthorised access.

Here are some of the concerns:

• **Attack surface**: Hackers can gain entry to a corporate network through an IoT device.

• **Perimeter security**: IoT technology relies on cloud-based services, so it will be challenging to implement effective perimeter defenses.

• **Privacy concerns**: The pervasiveness of IoT data collection coupled with advanced analytic capabilities could potentially result in consumer privacy violations.

• **Device management**: Many IoT devices currently do not support implementation of strong security controls, and maintaining a security baseline will only get harder as IoT devices proliferate.

Unfortunately, it is not likely to change for the better in the coming years, due to the following forces:

• Use of third-party vendors

• Rapidly evolving, sophisticated and complex technologies

• Cross-border data exchanges

• Increased use of mobile technologies by customers, including the rapid growth of the Internet of Things

• Heightened cross-border information security threats

Cyber-security is already important, and it will become even more significant for institutions and their regulators in the future. The challenge will be to balance safety with customer convenience. For fullscale providers who are trying to maintain visibility across channels, this is harder than it looks. But there are guidelines which can help financial institutions identify and prioritise threats, quickly detect and mitigate risks and understand security gaps. With a risk-based framework, companies can communicate and collaborate as necessary, decide how to design, monitor and measure their cyber-security goals, and keep their data safe. According to a Cybersecurity Market Report, a projected $1 trillion will be spent on cybersecurity between now and 2021. With the increase of hacks in the last year, this number is likely going

to become tangible. In 2018, the industry will see many financial service giants invest more money in robust processes and solutions that aim to potentially decrease cyber risks[4].

3) Fintech Financial Technology, nowadays better known under the term 'fintech', describes a business that aims at providing financial services by making use of software and modern technology.

A new wave of technological innovations, often called "fintech," is accelerating change in the financial sector. Fintech leverages the explosion of big data on individuals and firms, advances in artificial intelligence, computing power, cryptography, and the reach of the internet. The strong complementarities among these technologies are giving rise to an impressive array of new applications touching on services from payments to financing, asset management, insurance, and advice. The possibility now looms that entities driven by fintech may emerge as competitive alternatives to traditional financial intermediaries, markets, and infrastructures. The widespread adoption of new technologies offers advantages but also poses risks. Fintech may spur efficiency gains in the financial sector, offer better and more targeted products and services, and deepen financial inclusion in the developing world. However, it may also pose risks if its application undermines competition, trust, monetary policy transmission, and financial stability.

EMERGING FINTECH INNOVATIONS For centuries, technological progress has been an important force in the transformation of finance. Innovation in the financial sector has a long history ranging from the development of double-entry book keeping, to the establishment of modern central banks and payments systems, and the more recent introduction of complex asset markets and retail financial products. Change has accelerated in the new millennium. New payment tools have emerged (such as digital wallets), and new service providers have entered the market for financial services (including internet, retail and telecom firms). Recent years have witnessed a rise in automation, specialization, and decentralization, while financial firms have found increasingly efficient and sophisticated ways of leveraging vast quantities of consumer and firm data. Fintech firms have attracted substantial investment in recent years, while public interest has grown significantly. Most firms have remained small—reflecting their knowledgebasedbusiness model—but investment in them has risen substantially. Total global investment in fintech companies reportedly increased from US$9 billion in 2010 to over US$25 billion in 2016. Venture capital investment has also risen steadily, from US$0.8 billion in 2010 to US$13.6 billion in 2016.2 Market valuations of public fintech firms have quadrupled since the global financial crisis, outperforming other sectors. Meanwhile, public interest in the sector seems to have grown exponentially[2].

IMPLICATIONS OF FINTECH FOR CROSS-BORDER PAYMENTS The area of cross-border payments is especially ripe for change, and could benefit from new technologies. Services exhibit significant shortcomings, as illustrated in the first part of this section. These stem in part from technological limits, and in part from a highly concentrated market structure, itself also a function of technology. What might the future hold, then? The second part of this section looks toward different scenarios of technology adoption—principally based on DLT—

and considers the implications for service attributes, market structure, and regulation. The fact that cross-border payments are considered a separate area of payments—and a very large one—may be surprising.This section emphasizes that cross-border payments are inherently different from domestic payments. In a nutshell, the latter are settled in standard ways by the domestic banks and the central bank, while the former require ad-hoc arrangements, often between commercial banks.

The future could be different, as suggested by a simple analogy. Before the internet, sending (snail) mail domestically was fundamentally different from sending mail internationally. Pricing was significantly different, the infrastructure was different (air as opposed to land transport— thus the ubiquitous "air mail" stamp), and the handling of cross-border mail required international agreements on payment sharing, and standards on packaging, tracking and handling, as well as addressing other matters. In the age of the internet, instead, there is no distinction between a message going to a domestic or foreign recipient; both take a click. A message is a message; might a payment just be a payment in the future?

4) Artificial Intelligence in Financial Services ATMs are robots. They are very simplistic, purpose-built robots – but they provide consistent, convenient, low-cost service and customers have grown to trust them. The same principles will apply to other, more sophisticated financial services applications. There have been astonishing advances in robotics and AI, machine learning and pattern recognition in recent years. Over the next five years, we will see a shift from standalone uses to full integration into a company's business-as-usual activities. We are already seeing alliances between leading incumbent financial services and technology companies, using robotics and AI to address key pressure points, reduce costs and mitigate risks. They are targeting a specific combination of capabilities such as social and emotional intelligence, natural language processing, logical reasoning, identification of patterns and self-supervised learning, physical sensors, mobility, navigation and more. And they are looking far beyond replacing the bank teller[5]

Here are some of the capabilities shaping these sophisticated machines:

• Cognition: The robot's ability to perceive, understand, plan and navigate in the real world. Better cognitive ability means robots can work autonomously in diverse, dynamic and complex environments.

• Manipulation: Precise control and dexterity for manipulating objects in the environment. With improvements in manipulation, robots will take on a greater diversity of tasks and use cases.

• Interaction: The robot's ability to learn from and collaborate with humans. Progress here – such as support for verbal and nonverbal communications, observing and copying human behaviour, and learning from experiences – means robots will increasingly be able to work alongside humans.

Financial institutions to rapidly ramp up their efforts to understand and develop a vision for their use of robotics and AI. They will need to find and integrate more industrial engineers into their talent plan. And they will need to learn from industries such as manufacturing and technology that have used robots extensively for decades.

Conclusion: This Paper examines some of the disruptive changes in financial services due to rapid technological advances. Cyber Security in Financial Services still is a challenge.Fintech firms have the potential to significantly change the landscape by attenuating these imperfections, and transforming existing cost structures. They are

providing innovative products and services that respond to users' needs for trust, speed, low cost, security, usability, and transparency.Financial institutions to rapidly ramp up their efforts to understand and develop a vision for their use of robotics and AI.Blockchain technology could result in a radically different competitive future for the financial services industry.

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INTERNET OF EVERYTHING AND INTERNET OF THINGS SUPPORTED BY5G WIRELESS TECHNOLOGY

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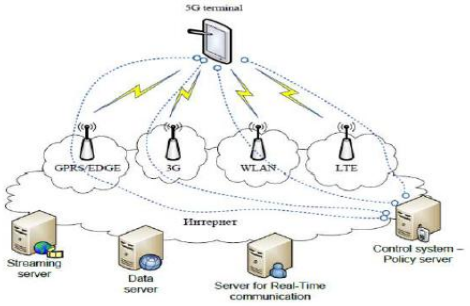
Abstract
5G is 5th generation wireless system. It is up coming and most challenging 5G wireless technology which has been expected in 2020.5G is being developed for existing Internet of Things (IoT) and also for providing platform for future IoT applications. The IoT and Internet of Everything (IoE) is main foundation for the development and architecture of 5G network paradigm. 5G provides 10 times better performance in terms of end-to-end delay, capacity, bit rate and lowest latency. 5G require ultra low latency. The examples applications having low latency can be controlling of robot or Intelligent Traffic System. All such application needs high reliability of signal and low end-to-end delay. It requires Ultra Reliable Low Latency Communication (URLLC) which has probability of more than 99.99% within 5G. This paper introduces new term called Internet of Everything (IoE) and the study of IoT architecture and new applications of IoT. It also highlights the issues in research of designing IoT based application that can efficiently merge with the 5G Wireless Technology.
Keywords: *5G, IoT, IoE, URLLC, Wireless Technology.*

Introduction: At present there are different wireless mobile technologies such as 3G mobile network, LTE(Long Term Evolution)or 4G, WiFi (IEEE 802.11 wireless network), WiMAX(IEEE 802.16 wireless and mobile network) as well as sensor network like Bluetooth,ZigBee. Some technologies are based on circuit switching and some are packet switching. Now all mobile networks are IP based networks, it means that all data transmit or receive via IP(Internet protocol) on network layer. 4G technology available more than 1Gbps bit rate and network is based on IP. Next generation mobile networks will need to fit in Next Generation Network (NGN). 4G is the present of wireless technology and 5G is a future of wireless technology. The paper tells about the architecture of 5G network which is highly advanced. Services providers implemented advance technology to get value added services [1-3].

Overview of Design of 5G Architecture

5G mobile system is fully based on IP model for mobile network. Figure shows the architecture of 5G system.



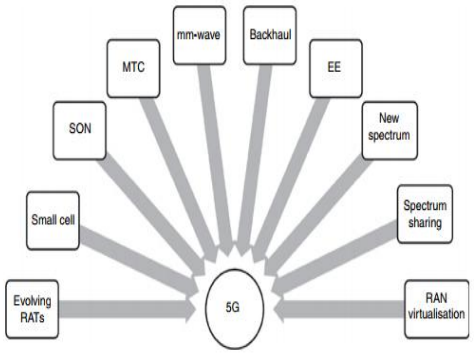


Figure1: Functional Architecture Of 5G Figures 2: Ten pillars of 5G

The system having main user terminal and number of independent, autonomous various radio access technologies. Each radio technology connected with outside internet world through IP link. The IP technology is designed in such a way that it ensure that data will be delivered to appropriate routing of IP packets. Suppose data send from one node of client side to other node of server who is somewhere on Internet.

Core Technology Master core design operated into parallel multimode which included 5G mode as well as all IP networks. It has facility to controls all network technologies of RAN and different Access Network(DAT). This master core technology having many advantages like it is very compatible and manages all new development which is based on 5G,less complicated, more efficient and more powerful. The world Combination Service Mode is one of the feature of 5G technology and any services can be opened in this mode. Second benefit of this technology is any new services can be easily added through parallel multimode services. Example : An expert car mechanic can easily examine a car breakdown in remote area and instruct the car owner or local mechanic about the temporarily solution so that the car can be brought to the nearest car repair shop. The work can be monitored in real time over video inspection, chat or voice and multimedia conversation.

Challenges of 5G Challenges in 5G technology are divided into two types:

Technical Challenges	**Common Challenges**
Inter-cell Interference	Multiple Services
Efficient Medium Access Control	Infrastructure
Traffic Management	Communication, Navigation and Sensing
	Security and Privacy
	Legislation of Cyber law

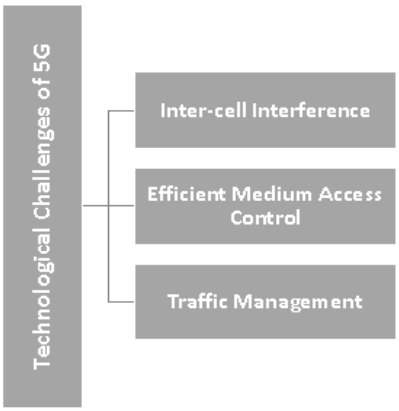


Figure 3: Technical challenges

Figure 4: Common Challenges

5G Use cases Figure shows some expected 5G services and these new services and use cases are the vision for new wireless technology name as 5G. Use cases are required main features:

1) throughput or capacity 2) number of equipment
3) low cost 4) latency 5) reliability

Figure 5: 5G uses cases

Various Uses Cases

Smart and Efficient Telemetry

- The energy industries depend heavily on the way the grid is designed and how efficient its metering is deployed.
- A smart grid network will ensure the distribution is covered over a large area.
- A smart and secure metering system ensures the revenue generation and collection is efficient.
- M2M devices can be deployed in the smart gird and the smart meters.

Mobile Broadband : High mobility with broadband is main use case which is driving the developments in 5G. This is going to the key driver of the 5G usage and popularity.

Very high data transfers and with cloud processing will be the key differentiator in 5G as data services usage will be more than voice service usage. Data is important for 5G because 5G system has not provide voice services. simply data is used for communication. More and more devices will get connected to the internet. Many of applications will need real time connectivity to transfer the real time information and notifications to the users and data storages.

Cloud storage: This is another basic use case that is driving the growth of uplink data rates. Just few months back the data content from the Internet was mostly downloaded. There was hardly any data that was uploade. As the 5G network will be extensively used for uploading data from remote to the cloud.

Entertainment: Online gaming and video streaming is required more capacity

Entertainment will be very essential on smart phones and tablets everywhere, including high mobility environments such as trains, cars and airplanes. In current networks, the first such use cases are enabled with Nokia's Liquid Applications and in the future we will see a wide variety of augmented reality usage, including scenarios where content caching in the base station is difficult.

Automotive: In automotive sector, high mobility and high capacity required which can be provided by 5G mobile network. There are many use cases in these sectors. Example, when driver drives car,whatever he saw in front mirror that information has to be display, Other example is at night identifies the objects and tell the information about the distance and movement of that object. Using safety systems, it will reduces the accident cases and allow drivers to drive more safely.Next step in automotive industries will be self driven cars or remotely controlled cars. This technology required ultra reliable and fast communication between cars, self driving cars and environment.Technical requirement for self driving cars are low latencies, ultra high reliability

Smart Society: Smart Society is nothing but smart cities and smart homes. These can be built by wireless sensor network.Many sensors having low cost, low power, low data rate.

Task to 5G will to manage the connected devices.

Smart Grids

- Smart grid connects the typical sensor. They collect digital information and react according to that information.
- Thisinformation is use for improving efficiency, reliability.

Health

- Telemedicine is new concept which helps eliminate distance limitations and make good changes in medical services.
- It is also save lives in critical conditions or in emergency situation.
- By using wireless sensor, we can monitor remotely and heart rate and blood pressure can monitor.

Industrial

- In industries , wires are replacing wireless links
- New requirements are low delay and low error that need to address fifth generation mobile communication.

Logistics

- These are important use cases. It required location based information.
- They required low data rate but need wide range of coverage and reliable location information. [4-10]

IoT Architecture Every object having unique IP address and every object connect to each other through Internet. This is the requirement of IoT.

Characteristics of IoT

- Ability to send and receive data
- Ability to interact with other devices
- Ability to perform any functions without interaction of human-to-human or human-to computer.

Three basic components are use to develop IoT:

1) Edge 2) Network 3) Core

The "Things" are sensors or smart electronics devices. Edge is part where connected "Things" are managed and the information gathering and sensing takes place. The devices have embedded intelligence which links them to IoT cloud in the core through Network. The Network may be 4G, 5G, WiFi, Bluetooth, ZigBee for transmitting information. The applications and databases are usually hosted in IoT-cloud. These may be provided by the core operator or by vendor of IoT devices. Each IoT devices is registered in the core and is provided with a unique number/ address. This is necessary to identify the services and applications in core. The devices are authenticated and authorised in the core. The data collected is also extracted and processed in the core. The core also has rule engines to convert the device messages to route the messages to different devices and to different applications and different services. Cloud manager stored all information about "Things" and that information serves to other parties. Sensors and electronics devices are browsing all information as well as function depending upon requirement and also download new functions and data. The Core sends control commands and stores and updates information to "Things". The core is communicated with connected "Things" and "Things" are communicate with the core. In this two way communication done in the core.[11-16]

IoT Challenges As the Internet of Things is widely inclusive term catching tremendous scope of potential application territories. Following challenges will be disused here :

1) **Delivering Value to The Customer:** IoT service provider understands about the solution what is impact on efficiency, customer satisfaction and guaranty of productivity. This whole cycle need extraordinary retrospection. In this way .it is a challenge for IoT experts to make sense of the key execution makers to gauge and enhance through an IoT arrangements.
2) **Hardware Compatibility Issues:** Sensors, PLCs are capture data. These sensors are connected to IoT to transmit or receives information to cloud. Enterprises has to recognise the equipment, hardware and existing linked machines. At the point there are heritage machines that don't have the said PLCs and sensors included, the IoT implementation challenge become more critical. So before implementation of IoT ,they should understands associatively and identifying hardware devices.

3) **Data Connectivity Issues:** Some connectivity issues occur in some areas. That areas where data connectivity is having challenges to implement IoT such as how to device are connected to IoT gateway and cloud and generation of data format. Before implementation of IoT ,they should define correct combination of protocols.
4) **Incorrect Data Capture Difficulties:** If incorrect data gets recorded, results analysis becomes incorrect and cannot take appropriate decision.
5) **Analytics Challenges:** The success of IoT solution vastly depends on the data analytics engines. The huge amount of data generated needs to be processed in the data engines at near real time so as to have quick reactions, analytical and predicting capabilities. Hence the IOT solution is not mere connecting devices but also implementing data solutions that has enough capacity to analyse, data crunch and present the data predictions on the presentation platform. Data analytics and easily retrival data storage are hence the most challenging critical building blocks for an IOT solution.
6) **Data Security Issues:** IoT service provider has to take care of data and ensure that their information is going to safe. Comprehensive governance mode is taking care of security issue. In that they provide secure access to reports and information. When service provider started to IoTimplementation ,there will be phase name as planning that defines the data related security policies.

Internet of Everything IoE is noting but network make the connection between People, Process, Data and Things.

People: Associating people in more pertinent and valuable ways.

Process: Transmitting data from one machine to another machine at a specific time.

Data: Using maximum advantage of facts and statistics into more useful information and further used for decision making.

Things: For intelligent decision making portable devices, flash memory devices and objects are connected to the Internet and each other. This is called Internet of Things (IOT).

Conclusion: The IOT applications are the most prominent use cases of 5G.This paper presents a holistic and futuristic view of the convergence of IoT, data analytics, data storage, cloud services and networking technologies with the arrival of 5G mobile broadband networks. The proposed use cases represent futuristic needs for interworking of infrastructure, medical, personal, vehicular, entertainment, personal or social requirements with help of 5G technology.The 5G technologies shall offer huge bandwidth, very less latency, handle huge data processing capabilities and would have infinite data broadcast capabilities. The Fifth generation technology will interconnect the entire world without limits. This technology is expected to be rolled out in 2020. The main concern that needs to be addressed is the security and privacy of devices, network, data, processed data, storage of information and its access and distribution. We believe that the existing data encryption solutions will have to be upgraded significantly due to the huge flow of data transfers that would happened between devices, machines and storage network.

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USE OF DIGITAL TECHNOLOGY IN MATHEMATICS EDUCATION

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Abstract

Mathematics is one of the important subject in students curriculum, mathematics is in almost every field music, fashion designing, manufacturing, architecture, Accountancy, medicine, Law, actuary, economics, geosciences, finance, communications, computer science, physics etc. Many entrance exams like MBA, MCA, UPSC, MPSC, C.A., NET-SET, exams conducted by Staff Selection Commission, exams conducted by IBPS , engineering, actuarial science, C.A. etc. all these exams have mathematics in their syllabus which students find difficult. Also students who have opted mathematics as a subject in their school/college course finds mathematics difficult. Digital technology helps them to improve in learning mathematics, they develop their conceptual and geometrical understanding and it gives deeper approach in learning mathematics. This paper gives introduction to digital technology its advantages in Mathematics Education, Learning mathematics through digital technology is a motivation for poor learners in mathematics, they can overcome difficulties in learning mathematics and they can do better.

Introduction: Digital technology in mathematics education means the use of all kind of digital tools and materials for maximizing the learning experiences in mathematics. Rather than routine ways of teaching which is off course beneficial for good students digital technology helps average and poor learners in mathematics via software's, animations, internet resources, video based learning, e-learning,mobile learning, interactive whiteboard learning etc. With these way slow learners in mathematics do not only able to understand the concepts but they also perform well in exam and able to apply in other sciences, they are able to understand central theme of the subject. They start thinking on their own and develop skills of problem solving in mathematics. Integrating abstract concepts with the geometric notions makes extending students ideas to the fullest. Visualization brings curiosity in the learning of mathematics. They ask questions once the geometry behind the problem is clear, teacher student interaction starts and teacher is also happy that poor learners in mathematics are able to understand and perform better. That becomes a motivation for the teacher as well for teaching in the class. In Mathematics there is one answer but there are many ways to get that answer, everyone can discover own path to get that answer which makes mathematics as a fun that's the adventure in the subject, that's the creative part of mathematics, we miss this in the way mathematics is taught, in many schools and colleges only one way to solve the problem is shown and student think there is only one way to do it, they blindly memorize the steps.. A good mathematics student can make complex deductions from little information .people with mathematical qualifications, especially those with skills in the use of digital technologies are on priority in jobs. Mathematics is there in almost every field, Many professional courses or even civil services entrance exams has mathematics in their syllabus where creativity of the student is tested but due to its abstractness poor learners in the subject always lack in the understanding and knowledge of the subject, , Digital technology can bring interest and enthusiasm in young students and help them do well in cracking these entrance exams. In this paper we will see introduction to digital technology in mathematics education, its advantages and challenges in using it.

2. Objective of the study

The objective of the present study is

To find out the use of digital technology in mathematics education

3. Methodology

This present study is based on secondary sources like books, Articles, Journals, Thesis, University News, Expert opinion and websites etc.

4. Digital Technology in Mathematics Education Mechanical calculating machines developed by Pascal, logarithms by Napier , difference engine by Babbage ,Colossus by Newman and Turing's Bombe for crypto-analysis at Bletchley Park are a few examples of computational tools which have been fundamental to the evolution ofdigital technologies to support mathematical developments, 1970's introduction of simple four function calculator then evolution of computers, computer algebra systems, laptops, handheld technology devices like smart phones, tablets, audio books, dynamic geometry packages, video based learning, internet resources, mail chats for discussions have changed mathematics teaching and learning. There are various types of technologies currently used in classrooms. Among these are:

i)**Computer Algebra System**: Many theorems and problems in mathematics have very abstract ideas which student fid difficult CAS helps to understand those ideas, which improves students problem solving skills. Students enjoy the power and versatility of computeralgebra and are encouraged to become reflective, deep learners.CAS helps in the visualizations of 2D and 3D plot. A better approach is to consider alternatives,experiment, conjecture and test, then analyze the results. CAS solves complex computations easily, if more routine computation is done on a computer more

time is available for concentrating on concepts, motivation, applications and

Investigations.

ii)**Internet Resources**:Wide range of internet resources available for teachers and students, on the internet. Massive open online courses offers opportunities for mathematics learners to improve their knowledge.MOOC's uses multimedia formats and short videos. Many online tools like Khan Academy are available on internet; students can benefit a lot from them. They can study materials given on the websites of good institutes in mathematics around the world.They can discuss problems in mathematics with anyone around the globe. Internet resources enable students to visualize mathematical concepts.There are many biographical historical resources available on internet which helps students to understand history and biography of mathematics and mathematicians which motivates students for further studies in mathematics. many professional societies webpage's are there which provide information on membership, events, career and employment, professional development, and often, online resources. Some societies also conducts online mathematics competitions, which "seeks to increase interest in mathematics and to develop problem solving ability through a series of friendly mathematics contests

iii)**Mobile- Learning**: Portability,availabilility,access to the internet and its wide acceptance amongst youth has made mobile learning as a new tool of learning mathematics.Mobile

learning has effective on students 'participation in learning Mathematics. With the help of mobile devices students can learn mathematics anywhere any time. They are used to having access to multiple and instantaneous sources of information.It gives alternative to computers or laptops and campus lectures many good institutes around the world has video lectures on their websites which students can learn and study from great mathematicians around the globe.Also mobile devices are cheaper than laptops or computers. Use of mobiles can increase motivation amongst students for learning mathematics. Even teachers can carry lesson plan in their mobiles instead of carrying papers with them.

iv) **e-learning** : e-learning improves the way we learn mathematics-learning in mathematics has major impacts on many aspects of teaching-learning systems.e-learning helps a lot to an interested students in mathematics because in campus they may not get good material to study but even if they get good material a good mathematics student is not satisfied with that and they use to search more and more material on it and via e-learning they get good material on internet and they study it in more deep stage. E-learning is very flexible we can learn anywhere any time. Even teachers can be anywhere and do teaching anytime.e-learning gives extra help to mathematics learners that makes understanding complex concepts-learning increase student's access to information ideas and interaction that explores mathematics in depth.

v)**Interactive Whiteboards**: An interactive white board allows multiple visualizations, multimedia presentations,animation.Interactive whiteboards can be used to develop a particular mathematics concept and to improve mathematical knowledge. WBs connect a computer to a data projector and a large touch-sensitive board that displays the image projected from the computer and allows direct input and manipulation through the use of fingers or styli. The Interactive whiteboards potentialities to enhance the quality of interaction, promotes group activities in mathematics. This way of teaching mathematics over the routine way helps poor or average learner in mathematics to understand and perform better mathematics.

vi)**Video based learning**: Video based learning in mathematics education can impact on teaching and learning mathematics which encourage teachers for flipped classroom where lecture is being uploaded online and watched by students and homework Is done inside the classroom together with the teacher.This is student centric learning which is more effective.Flipped classroom is not the instructional videos on their own. Time for teaching mathematics courses is not sufficient here flipped classroom plays a important role, it helps to complete syllabus in time. As students can pause the video in between and they can even repeat the video it helps the slow learners understand the topic.In India National Programme on Technology Enhanced Learning(NPTEL) which is an initiative by seven Indian Institutes of Technology and IISC for creating course contents in engineering and science has given many video courses, where leading Indian mathematicians have given their lectures any student from any corner of India can learn from these video courses. Also huge numbers of videos are available on YouTube students can study at home and understand better.

vii)**Digital Games**: The field of educational games and serious games has been growing significantly over thelast few years. The digital games are being provided as tools for the classroom and have a lot of positivefeedback including higher motivation for students.

viii) **Social media:**Social media is now a vital part of our life.Social media provide a range of tools that can be used to support innovative teaching practices and promote learning. In colleges teachers and students form whatsapp groups and they discuss homeworks and other mathematical problems in the group. It also helps in information exchange related to mathematics and nowadays it is a easiest way of communication. Also on Face book people poses mathematical problems and peoples can discuss and share their ideas.

ix) **Software's**: Computer algebra systems, Geogebra, Sagemath, Deltamelt, Mathbuntu, Scilab, Octave, Gnuplot, Pari, Maxima,GapSpss, R etc.

Software'scan be used as powerful assistants to perform the symbol manipulations and computations in algebra as well as calculus.

x) **Virtual Classroom**: A virtual classroom provides the opportunity for students to receive direct instruction from a qualified teacher in an interactive environment. Students can ask their doubts ask questions to the instructor. Web conferencing is possible which allows to interactwith teacher and a student. Also these lectures can be recorded and uploaded on server which allows playback of any lecture which is extremely useful for students.

5. Advantages of using Digital Technology in Mathematics Education

1**.** Develops critical thinking and problem solving skills amongst the students.

2. It increases student's curiosity and imagination.

3.Students concentrate on understanding rather than memorizing the steps

Industries require professionals to work with them digital technology enhances their professional skills as well aslogical thinking.

4. Helps teacher to interact with students.

5. Students become active, engaged and empowered participants starts conversation from which learning emerges.

6. Students can study beyond the syllabus.

7. Prepares teacher for the use of their skills in the real classroom situation and also make students for their future occupation and social life.

8. Students can develop valuable research skills at a young age.

9.helps to to create exciting environment in a classroom that brings interest in students.

10. Helps slow learners to improve and perform well in the subject.

11. Can explore problems related to real life situation and can apply mathematics in real life.

12. Helpsto improve students attitudes towards Mathematics which motivate students for higher studies in the subject.

13.It helps teacher to plan his/her lesson in a more advanced and effective ways.

14. It will help teachers to develop innovative, challenging and exploratory teaching modules.

15. Researchers do not need to spend more time on tedious computations rather
They can spend more time in analyzing and the computation part can be
easily be done using these tools.
16.Helps to develop student centric education.
17. People from other disciplines not having sound mathematical knowledge
Can very easily solve mathematical problems which they come across.
The benefits of using Digital technology in mathematics teaching are enormous.
18. It gives greater flexibility with respect to location and timing.
19. Prepares students for the future.
20. Promotes independent learning amongst the students.
21.It can kill anxiety amongst learners in studying mathematics.

6. Challenges and difficulties in using Digital Technology in Mathematics Education

Even though there are many benefits of using digital technology in mathematics education there are some challenges and difficulties. Through my experience and discussions with teachers and students from other colleges I am listing some of the challenges and difficulties.

1.Lack of internet or slow connectivity.
2.No limited access to computersoft wares.
3. Lack of adequate technical support.
4. Teachers are not trained about the usage of digital technology.
5. Decline of students' paper-and-pen skills.
6. Most of the Digital Technology tools are too costly and hence not affordable to
College students and teachers.
7. Classrooms are not equipped with relevant hardware's which is required to
Integrate teaching using Digital Technology.
8.May distract student's attention while using digital technology.
9.Implementing and then maintaining technology is costlyparticularly as systems can quickly become out of date.
10. Safety for students and teachers is a key challenge with prevention of cyber-bullying, the hacking ofpersonal information, access to illegal or banned materials.

7.How to overcome these challenges

1. Along with routine teaching methods use of digital tools is to be encourages in mathematics education.
2. Good internet speed and connections should be provided in schools and colleges
3.Digital technology tools should be provided to teachers to make bright future of students
3.Teacher and student should also take care of cyber safety while using digital tools
4. Teachers should be trained about how to use digital technology
5. Required budget should be provided to schools and colleges to avail digital technology facility, and each year budget should be increased.
6.Technology changes very fast schools and colleges cannot buy digital tools and devices again and again effective tools and devices should be chosen in order to save the funds.

7.Teacher has to feel free and without any restrictions in the teaching environment. Only these feelings will foster the teacher to learn and develop further.

CONCLUSION: Mathematics occupies a honorable position in the society,Transition from the "traditional" learning of" chalk and talk" and "teacher-oriented pedagogy" to Digital technology oriented learningis required**.** Digital technology helps the teacher to update the new knowledge, skills to use the new digital tools and resources Digital technology can reduce complex computations and allow students to concentrate on conceptual learning. Students enjoy studying mathematics using new technology, it makes math as fun which brings interest in the subject. It avails a facility of learning mathematics anytime anywhere using handheld devices and internet resources. Now Mumbai university has started online marking scheme which is very faster than earlier manual assessment so digital technology is saving teachers time as earlier teachers had to report at the university "central assessment program" Much emphasis these days is placed on student-centered learning and less on the teaching but teaching and learning are equally important. It is necessary to first understand the learning process and then design teaching and learning activities to achieve these. Only then will students become deep learners. We should understand opportunities offered by Digital technologies and help students in achieving their goals. As students often point out to us it is veryexciting, enjoyable and productive to use such tools in class. They are keento use computers, so the environment becomes more conducive for learning.Students' natural curiosity can be utilized to its fullest potential because theyare keen to explore and discover. Digital technology should support the learning and curriculum and can not substitute good teaching. Traditional teaching methods must be supported with modern tools for helping slow learners in mathematics. It does not imply a reduction in the standardof education or of necessary subjects, but it is vital that the curriculum is carefully considered and that passive teaching is replaced in favor of new methods which promote active participation of students. Students dream of having good jobs to achieve this dream they must clear entrance exams which includes mathematical questions, but students always have fear regarding mathematics in their mind but digital technology helps them to understand mathematics in a more organized way, which clears their fundamental concepts and these students can clear those entrance exams and achieve their goals.

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: The Significance of Educational Technology in Teaching Learning process

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Regina M. MistrettaINTEGRATING TECHNOLOGY INTO THE MATHEMATICS

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IMPACT OF GST ON EDUCATION SECTOR

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Abstract

Education is the primary requirement of a nation ,it acts as weapon in itself for any country and its growth and development of economy. The education industry of our country is undoubtedly one of the largest worldwide. Our country has more than 1.4 million schools where more than 227 million students receive their education. The country also hosts more than 36,000 higher education institutes. The government encourages for further development in the education system incessantly. Education sector is also not left untouched with major tax reform-Goods & Service Act,2017. The paper uses an exploratory research technique to study the impact of GST on Education Sector.

Keywords*: Education Sector, GST, Impact.*

Introduction: Education is one of the major sector for any economy. The education of country's youth will decide how the economy of that country will flourish. Education promotes understanding, vision, creativity and productivity of people which helps in advancement of a country. The education industry of our country is undoubtedly one of the largest worldwide. Our country has more than 1.4 million schools where more than 227 million students receive their education. The country also hosts more than 36,000 higher education institutes. The government encourages for further development in the education system incessantly. In India, education is provided both by public as well as private sectors. The ratio of public schools to private schools in India is 7:5. The country also provides free and compulsory education till the age of 14 in the government schools. Presently about11millionstudentsareintheHigherEducationsystem.This representsjust11%of theof the17-23 year old population.The governmenthopestoincreasethistoatleast21%by 2018. WiththeemergenceofIndiaasaknowledge-basedeconomy,humancapitalhasnowbecomeitsmajorstrength.

PolicyRegime

- 100%FDIineducationallowedthroughautomaticroute.
- A high-poweredadvisorybody-NationalKnowledgeCommission(NKC)setup
- NKChasrecommendedthatthenumberof universitiesincrease fromthepresent370to1500by 2015,consideredahighlyambitioustarget,butinadequatetomeetdemandforquality education
- Forhighereducation,anexpenditureof USD37.13billionhasbeen projectedtoachievetheproposedobjectivesduringthe12th Five YearPlan(2012-17)

TheOpportunityforPrivate Participation

Governmentresource allocationisinadequatetomeetitsowntargets (30%GERby 2020)leavingenough scopeforprivateparticipation.

TheEleventhFiveYearPlan(2007-12)allocationfortechnical and highereducationhasbeenraisedby almostninefoldto~USD18.8 billionfrom~USD2.1billionintheTenthPlan

PresentScenario

Education in Indiais presently covered as one ofthe priorities of the Government andassuch isallowedtax reliefbothin directandindirecttaxes.Sofar asindirect taxesareconcerned,educationisconsideredasaserviceandassuchitissubject tolevyofservicetax.Nootherindirecttaxis levied.Forthepurposeofservicetax, education hasbeen distinguishedfrom coachingor trainingwhich facilitates the education. Presently,educationalservicesareexcludedfromthelevyofServiceTaxandarein'NegativeList'under section66D(i)which arerelatedtodeliveryofeducationas'a part' of the curriculumthat hasbeenprescribed forobtaining a qualification prescribed by law. Conduct ofdegree courses by colleges, universities or institutionswhich leadto grant ofqualificationsrecognized by law are alsoin negativelist.Similarly,vocationaltraining isalsoout oftaxnet.However,training or coaching imparted by coaching institutes would, however, not be covered in this exclusionassuchtrainingdoesnotleadtograntofarecognizedqualification.Such servicesareliabletoservicetaxbutsubjecttoexemptionunderNotificationNo.25/2012-ST dated20.06.2012videentryno.9and9A.

It is the country's moral responsibility to provide quality education to all at low cost. And therefore , the education industry is also kept in either the zero or minimum tax bracket . However, private higher secondary schools might be an exception .

Goods and Service Tax in India:

GoodsandServicesTaxisacomprehensivetaxleviedonsupply of goods andservicesacrossIndia.GST isa*Destination basedConsumption*tax,andthetaxableeventis*Supply* asagainsttheexisting taxableeventsofsale,manufactureorprovisionofservice. TheDualGST which wouldbe implemented inIndiawill subsumemanyconsumptiontaxes.Theobjectiveistoremovethemultiplicity oftaxleviesthereby reducingthecomplexity andremovetheeffectofTax Cascading.The objectiveistosubsumeallthosetaxesthatarecurrently levied onthesaleofgoodsorprovisionofservicesby eitherCentralorState Government.

The most important thing is that educational services and services related to the education or higher education provided to the students is covered under the GST exempt list. The educational institutions that have been granted the exemption from GST are pre-schools and higher secondary educational institutes – both private and Government.

Under GST regime, some products shall become more expensive and some product shall be cheaper. For instance, school bag under old system was subject to 12.5% tax whereas under GST, it is subject to 18%, again ball pen and exercise book under old system were taxed @ 18.68% and now they are subject to 12% tax bracket and hence become less expensive

Review of literature:-

- Empowered Committee of Finance Ministers (2009) introduced their First Discussion Paper on Goods and Services Tax in India which analyzed the structure and loopholes if any in GST
- Vasanthagopal (2011) in the article GST in India: A Big Leap in the Indirect Taxation System discussed the impact of GST on various sectors of the economy. The article further stated that GST is a big leap and a new impetus to India‟s economic change.
- Kumar (2014) studied in the article Goods and Services Tax in India: A Way Forward background, salient features and concluded with the positive impact of GST on present complex tax structure and development of common national market.

Objective of the study:- The paper uses an exploratory research technique based on past literature from respective journals, reports, newspapers and magazines covering wide collection of academic literature on Goods and Service Tax. According to the objectives of the study, the research design is of descriptive in nature. Available secondary data was extensively used for the study. The objectives of the paper are:

1. To study about applicability of Goods and Service Tax in the Education Sector.
2. To study about impact of GST on the Educational Institutions.

Applicability of GST

Tax Exemptions:

Under GST, services provided by educational institutions, have been kept away from the GST taxable categories. Education institutions by definition here, mean any of the following:

- Pre-school up to higher secondary or equivalent
- Education which part of a curriculum, aimed at the obtaining of a qualification, as recognized by law
- Education which is part of approved vocational courses

Education-related services that are exempted:

- Curriculum/course materials
- Assessment/examination fees
- Student administrative services, such as registration, academic transcripts, issuing/replacing student cards, late fee payments etc.
- Excursion/field trips related to the course /curriculum (Food provided etc. are not exempted)

Services provided to students/faculty/staff:

- Transportation of students/faculty/staff
- Catering, including any mid-day meals scheme sponsored by the Government;
- Security/cleaning/house-keeping services
- Services relating to admission/conduct of examination (up to higher secondary)

Certain services provided by IIMs that are exempted:

- 2 year full-time residential PG programs in Management for Post Graduate Diploma in Management (admissions via CAT)
- Fellowship programs in Management

- 5 Year Integrated Programs in management studies (excludes the Executive Development Program).

Education provided by institutions/corporations below are also exempted from GST:

- National Skill Development Corporation set up by Indian government
- National Skill Development Corporation approved sector skill councils
- National Skill Development Corporation approved assessment agencies
- The national skill development programs approved by NSDC
- A vocational skill development program approved under national skill certification and monetary reward scheme
- Any scheme implemented by NSDC with training partners

Services/supplies not exempted from GST:

1. Higher Education Institutions and Private Institutions: The exemption under GST has been granted for pre-schools till higher secondary education. Since universities and other advanced educational institutions have not been mentioned in the exception list, 18% GST is expected to be levied on this. Higher education in the private segment will end up being more costly and in turn, competition for admissions in government schools/colleges/foundations will increase. There will be a 3 to 5% of the obligation jump on the administration costs that will over the long haul impact the common man. The middle class families who obtain education loans or put their life-long savings into educating their wards at reputed institutions will be facing the inconvenience.

2. Coaching Institutes As clearing competitive exams and entrance exams seems impossible without taking professional coaching, coaching institutes form an integral part of education. GST has raised the tax rate to 18% from 14% for these coaching institutes. The parents whose children are about to start coaching for IITs and other competitive examinations will be facing the inconvenience.

3. Cost of Organizing Events When foreign entities organize any educational or training events in India which are attended by professionals, individuals and overseas participants would be taxed under GST. Apart from the exemption, the private education is likely to get expensive up to 2 or 3% after GST rolled out in India. Even if the lowest tax slab of 5% is applied, the chances are high to get it expensive according to the research and analysis of all the provisions of the bills introduced. The GST slab rate of 5% is considered as lowest and thus, the government is requested to frame the laws in such a manner that the tax rate and input tax credit allowed in the education industry can share a load of taxation further improving the conditions.

Impact of GST:

- TherateoftaxislikelytogoupBy3-5%asitisexpectedthatGSTmaybe levied@18-20%.IfcoachingisconsideredasanessentialService,alower GSTrateisnotruledout.
- Although services provided by higher educational institutions are not taxed but services to those institutions are subject to GST . Excise books, note books, crayons etc shall be taxed at 12% and pens, school bags etc shall be taxed at 18%.

- Again, services or supplies provided by third parties like academic instruments, computers, sports articles and equipments, food and accommodation provided for excursion etc are not beyond the purview of GST. However, two year full time residential post graduate programs in management offered by IIMs through Common Admission Test (CAT) and Fellow Program in Management of the same Institutes are kept out of the circumference of GST.
- **Composite and Mixed Supply :**Boarding schools provideserviceofeducation coupled with other services like providing dwelling units for residence and food. This may be a case of bundled services if the charges for education andlodging andboarding areinseparable. Theirtaxability willbe
- determinedintermsoftheprincipleslaiddowninsection2(30)read with section 8 of the CGST Act, 2017. Such services in the case of boarding schools arenaturally bundledand supplied in the ordinary course of business. Therefore,the bundle of serviceswill be treated asconsistingentirelyoftheprincipalsupply,whichmeanstheservicewhich formsthe predominant element of such a bundle. In this case sincethe predominant natureis determinedby the serviceof
- education,theotherserviceofprovidingresidentialdwellingwillnot be considered for the purpose of determining the tax liability and in this case the entire consideration for the supply will be exempt
- The clarity on scholarship and discounts is yet to come. Their administrative job is going to become tedious after GST .
- Every coaching will have to register state wise even if they have several franchisee branches in many states of the country, which calls for the separate registration for every state. They will have to file more returns per year which will be quite a cumbersome job to them.
- Theprocedureforalltheinvoices/receiptstowardsinwardandoutward supplies will
- becomecumbersome as each one of them willhave tobe uploadedinthesystem.
- ThereisaprovisionforGSTauditiftheturnoverismorethanRs.1crore.
- The procedure for taking credit of input taxes will become simple andseamlesswhichwill have apositive impact.

Conclusion: Education is fundamental to the nation building process. Right toEducation is now a fundamentalrightofeverychildinIndia. GST Law recognises this and provides exemptiontoeducational institutions,providing educationuptohighersecondaryschoolor equivalent,from the levy of GST. Auxiliary services received by such educational institutions for the purpose of education up to Higher SecondarylevelisalsoexemptfromGST. Otherservicesrelated to education, not covered by the exemption, would be taxed at a standard rate of 18% with full admissibility of ITCfor such taxable servicesincaseswheretheoutput serviceisnotexempt. However, it is hoped that GST implementation shall overcome the teething troubles which normally come into the way of any new system is introduced. The Government should keep in view that private promoters of education in the country shall be

motivated when they are allowed more tax exemption as an incentive. It may be rational to state that Government resources are limited and it has to prioritize its allocation on the basis of necessity. Talking about the positive side, the process of taking ITC or input tax credit will become simpler after GST implementation Education is a necessity and not a luxury and therefore Education Sector and allied services should be made fully exempt from the purview of GST in order to make education affordable by all and less expensiveHence, it can be concluded that the new tax regime presents a mixed bag for the education sector

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EFFECTS OF MOBILE PHONE USAGE ON LEARNING PROCESS

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Abstract

Learning is a process of acquiring new or modifying existing knowledge. It is a two way process where the learner has to be involved in give-n-take of knowledge, but the greatest hindrance to the learning process is distraction. In today's times a major cause of distraction in the learning process is the handheld mobile device. Though as a human we should control the machine, recent trends show that the mobile controls human beings. This control and addiction of mobile phones is seen more in the youngsters who no longer use it a mere two way communication device, but more as an entertainment and social connectivity device. In my study I have tried to study the effect of mobile use on the learning process amongst college going students. The scope of this study is limited to selected students from a commerce college in Mumbai. The data collected has been analyzed to bring out a connection between mobile use and positive & negative effects on learning process. Similar studies have already been carried out all over the world on large scale. This paper is an effort to find if the impact of mobile phone usage on learning in commerce students is similar to what has been observed the world over.

Introduction: Mobile phones which were introduced as a communication device became a status symbol and today are more of a fashion statement. While a feature phone was used for making phone calls and SMS messing with the advent of smartphone it is being used for entertainment, information and social connectivity. The dominance and growth of mobile phones in life of Indians can be gauged from the figures given by TRAI (Telecom Regulatory Authority of India) which states that India is the second largest telecom network in the world. Whereas there were mere 71 million subscribers in April 2004, by April 2017 they have reached 1,199 million and keep growing at almost 0.5% every month.. Internet usage is also growing with nearly 7 out of 8 subscribers accessing internet from their mobile phones. As per an independent survey by Ericsson in 2015 out of the total subscribers nearly 31% were in the age group of 15 to 25 years. Learning is the process of acquiring new or modifying existing knowledge, behaviors, skills, values, or preferences.Though traditionally a two-way process, what a student does is actually more important for their learning than what a teacher does. Hence learning activities are what students actually do in a class/course to learn. Today we are living in the age of distraction and lack of focus is one of the biggest hindrances to the learning process. Almost every student carries a mobile phone to college along with books and takes pride in being multi-taskers without realizing the harm itcauses.In an Indian household almost every item is social, except for the mobile, which qualifies as the first personal, protected and private item of possession. Due to which students in their late teens form an attachment with mobile phones and cannot function without their cellphone. While most of the educational institutions do not allow use of mobile phones, students still carry it sighting reasons like substitute for an expensive laptop, downloading study material and notes, using educational apps, taking photos, contacting peers and instructors, etc. But the same mobile phone can cause many problems like disturbing the class, recording without permission,

cheating in exams, etc. The growth in coverage and affordability of mobile telephony services has resulted in more students using and being dependent on mobile phones. In this study an attempt has been made to examine the effects and their extent that the usage of mobile phone causes to the learning process both in and out of the classroom. ***Literature Review:*** Aoki and Downes (2004)[1]focused on the behavioral and psychological aspects of cell phone usage among college students. The study tried to find the trends in usage by the youth "why college students in the U.S. use the cell phone what they think of the technology and how they use it." They identified several factors like necessity in modern times, cost efficiency, safety and dependency as reasons behind why a technology is adopted. Castells,Mireia, Qiu and Sey (2004)[2] extensively looked into the rise of the mobile youth in a cross cultural perspective. Their stated hypothesis was that "there is a youth culture that finds in mobile communication an adequate form of expression and reinforcement." The researchers cite evidence for the emergence of collective identity resulting from peer-grouping based on networked sociability. T. Tripura Sundari (2015)[3] in her research studied the effects of mobile phone use on academic performance of college going young adults in India. The researcher has analyzed positive and negative effects of mobile phone on learning achievements. Jeffrey and Titsworth (2013)[4] examined the impact of mobile phone usage, during class lecture, on student learning. The researchers had found a major difference in information grasped by students using mobile phone and those not using a mobile during the same lecture. The literature review shows that the usage of mobile phone has a significant societal influence. The technology is shaping attitudinal changes regarding public and private space of mobile phone users. Mobile phones can be a helpful academic tool, or a hurtful academic disruption depending upon the attitude and use pattern of the student owner. In my study I have tried to analyze the effects mobile phone usage has on the learning ability of students who due to various influences fail to realize the distraction that a mobile phone causes.

Method of Study: Due to various constraints the study has been kept small in scale covering data collection from 150 students only. The data was collected from respondents of a commerce college located in heart of South Mumbai. Data collection was done by adopting two methods to get an in-depth cause effect analysis. First 150 students were randomly selected from under graduate and post graduate sections. Special care was taken to select students from all classes from first year UG to last year PG so as to cover the entire spectrum of age group regarding whom the study was to be made. Out of the total 150 respondents 89 were males and 61 were females. The respondents are all students from Commerce stream pursuing graduation and post-graduation. Most of the respondents come from lower middle class and middle class families from localities like Kurla, Mumbra, Nagpada, Kumbharwada, etc. Some respondents earn and learn due to their lower financial background. A majority of respondents were from families where they were the first generation to receive college education. The data was collected first through a questionnaire prepared with 15 questions to cover all the aspects of the study. After collecting the data around 25 respondents were randomly selected and personally interviewed to get an analysis of the reasoning behind their

response.For cross reference analysis some data was also collected from the college library and Unfair Means Committee. The study is limited to study the effects of use of mobile phones on learning process of UG and PG students of commerce stream from a college. The study is a first attempt to study the relationship between the above factors and also other factors related to mobile usage.

Data Analysis and Interpretation: Out of the total 150 respondents only 9 (including 7 females) didn't carry a mobile to college, which proves that mobile phone is no longer a luxury item but a necessity created due to various factors like peer pressure. Out of the students who didn`t use a mobile phone, girls were not permitted due to their orthodox family backgrounds. The following data was collected in response to the question regarding the number of years for which the respondents were using mobile phones.

Years of use	0-3	4-6	7-9	10 & above	Total
No. of Students	77	34	15	05	141

Considering that the students are pursuing UG or PG course, from the above data it can be stated that most of them have started using mobile phones in college. It also indicates to the possibility that the students take the ban on use of mobile phones in schools more seriously as compared to college.Out of the 141 respondents using and carrying mobile phone only 07 students are using a basic feature phone. Out of the remaining 134 smart phone users the ones who were interviewed admitted that they find it more attractive due the entertainment features like camera, apps, movies, music, etc. They also admit that using a feature phone in college makes them feel out of place due to peer pressure of staying in touch through Facebook, Whatsapp, etc.In response to the question regarding the funding or source to buy the mobile phone 42 students stated that they bought it from own funds, only 05 students had got it from their employers whereas the majority of 94 students had got it through their parents. In a related question nearly 75% of the students who got their phones from self or parent's source admitted that they had convinced their parents that the mobile will be useful for their education. So while most of the parents fell to the reason that their ward will be using the mobile for their education, some of them have given it to their kids (especially girls) as a safety tool which can be used to call parents in the case of an unforeseen emergency.Out of the 141 respondents carrying a mobile phone to college 58 admitted about accessing social media while in class, 41 admitted that the they respond to messages & chats in class and only 5 admitted to taking calls during lectures. These students admit that their attachment with the mobile phone has reached an addiction level due to which they respond to the messages/ chats even in lectures since they can`t control the urge. 92 students agreed to the fact that they feel distracted by the mobiles in a classroom when the instructor is teaching. Some of these students feel distracted by their own mobile phones while others feel distracted by the ringing or buzzing of other`s mobile. Even though the students admit to the distraction caused they are not eager to give up their mobile phone which is evident from the response to the question

regarding mobile free classrooms. The students admit that they feel uncomfortable without their cell phones around. When asked about having classrooms equipped with mobile jammers only 43 students agreed to be comfortable studying in such classes. The remaining 98 students said that they won't be comfortable studying in such classrooms which shows the level to which the addiction of mobile phones has reached. Students are ready to learn with disturbance but not ready to stay aloof from these devices. Hence one end of the learning process is not attentive during the lectures.While only 41 students agreed to the fact that they are tempted to use the mobile phones as a tool to cheat in exams, the data collected from the college Unfair Means Committee paints a different picture. The committee data shows that there has been an increase of students using mobile phones to cheat in exams is increasing over the years. In spite of warnings students are found to be in possession of mobiles during exams and with innovations like smart watches, Bluetooth devices, etc. it has become more difficult to monitor students during examinations.Another important aspect of the learning process is textbooks, notes and reference material which the students use to revise or recollect the information given during lectures. But mobile phones have had a drastic effect on this also. 64 students (nearly half of the respondents) agreed that they don`t take down notes which the teacher dictates or illustrates on board. These students prefer taking images of the same from other students who have taken it down diligently or images of the board after the lecture. This clearly shows that the students prefer to take the easier route out instead of putting efforts to learn. In response to another question 88 students agree that due to image sharing on smartphones thru various chat applications they get the notes before examination even without attending college on regular basis. The students feel that their efforts are reduced due to this without realizing that they are missing out on the personal give-n-take of knowledge in classrooms. The technology of image transfer has also had an effect on use of textbooks and reference books by students. 92 students have agreed to the fact that mobiles have reduced their dependency on textbooks since all the material required for studying is now available on mobiles. This fact is supported by the data available from college library which shows that students visit to library and use of reference text books has reduced. Students use the mobile phone to study by using the images without realizing the effects it has on their health like hampering eyesight, etc. They have to realize that it's more comfortable reading a book then constantly reading from the mobile screen. Another bad influence in on the student`s language and vocabulary, due to constant use on chat lingo and abbreviations on mobiles which the students end up using same during exams also.Out of the 141 respondents 110 agree to using their mobile phones to surf educational sites and using apps with educational content. If the students are actually doing the same it is an good sign since they can gain valuable knowledge for overall learning. 109 agree that the mobile is a useful tool in the learning process, which can be true if the students realize the positive potentials that a mobile has to influence their learning. Only using the mobile as a communication and entertainment device will not assist in the learning process.

On cross question analysis of the data some additional points were also observed:

1. Students using feature phones were more likely to take down notes in lectures and also depended on text books as compared to smartphone users.
2. Students also felt that the mobile which was a means to stay in touch with their friends has actually invaded their studying time also with constant messages and calls from the same friends.
3. In the recent times with falling prices of smartphones and availability of cheap mobile internet, students have started using mobiles for entertainment more like surfing nets, watching videos etc. which has reduced their study time.
4. Students are also show a tendency to shift mobile operators if they find network issues in places where they spend more time, which explains why the students are so adverse to the idea of classrooms with mobile jammers.
5. Even though in the questionnaire students state that they use the mobile for surfing educational content, on personal verification it is observed that most of the students who convinced their parents with the argument seldom use the phone for educational purpose.

Conclusion: Many research studies all over the world have focused and proved that the rampant use of social networking, texting and chatting on mobile phones has an adverse effect on academic performance of the students. In my study also the finds are similar, that the college students are badly under the influence of mobile technology. It is no longer a device for them an inseparable part of them. This proximity to the device is hampering their involvement in the learning process. The learning process is always a two way process where the learner has to acquire knowledge, skills etc. either from the teacher or books. But the rampant use of mobile phones is causing a distraction for the students which deviates them away from learning. . In this study I have not enumerated the effects which mobiles have on the other person involved in the learning process i.e. the teacher. But he/she too is disturbed and distracted due to mobile phones.While some students have realized the potential damage that it causes, efforts need to be taken to make the other students aware about the same. Enforcement of strict mobile policies is possible in classroom but once out of the class students again immediately reach out for their mobiles. Hence efforts will have to be taken to divert the students away from the mobile not only in the class but also outside since learning process is not limited only to the classroom.The study carried out for this paper was very limited and restricted to students from only one college but the interferences drawn after analysis are similar to the ones drawn in similar researches, with slight variations due to economic and academic factors

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A STUDY ON ORGANIZATIONAL CULTURE AND JOB SATISFACTION

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Abstract

The purpose of the present study is to provide a review of the relation between organizational culture and the levels of job satisfaction experienced by employees. Organizational Culture is the newest prospective in organizational theory. Its environment all over the India is changing rapidly. In order to ensure more productivity and also to cope up with the new expectation of teaching staff it has become general need among the managerial cadre to provide a suitable culture according to new policies. To match the above said demand with the environmental changes of the busniess, the organizations must have to be clear in their vision and perception equally towards their teaching staff. "Organizational Culture" is taken as the most challenging factor for a successful organization and standardized workplace.Job satisfaction acts as a mirror that shows the staff overall hard work and their job performance especially by emotions, attitudes and behaviors. As per psychological field, it has taken as hypothetical and applied study and linked to the key outcomes with attitudinal variables, absenteeism, employee turnover, and job performance. It has considered as the most important researched topics in industrial / organizational psychology.

Keywords*: Organizational Culture, Job Satisfaction*.

INTRODUCTION: Business environment all over the world is changing very fast owing to speedy up of the process of globalization making it obligatory for the business to become quality and cost conscious. Moreover due to new policy changes and a new set of expectations of the employees it has become a general need among the managerial cadre to develop a culture suitable to the employee requirements in order to ensure higher productivity. To cope with that changing environment, the business shall have to be equally dynamic with clear vision and perception. The most important building blocks for a highly successful institution and an extraordinary workplace is "Organizational Culture". Moreover job satisfaction reflects an employee's overall assessment of their job particularly their emotions, behaviors, and attitudes about their work experience. It has theoretical and practical utility for the field of psychology and has been linked to important job outcomes including attitudinal variables, absenteeism, employee turnover, and job performance. Thus it is one of the most heavily researched topics in industrial / organizational psychology.

OBJECTIVE:

There are the following objectives of study.

• To study the concept of organizational culture and job satisfaction in detailed.

•To explore the types of organizational culture.

• To study the features of organizational culture.

• To study the sign and ways to enhance the job satisfaction level.

RESEARCH METHODOLOGY: In this paper an attempt has been taken to studyon Organizational Culture and Job Satisfaction. The paper is based on secondary data. The secondary data was collected from various published sources like reports, magazines, journals, newspapers and Internet etc. It is referred paper.

MEANING OF ORGANIZATIONAL CULTURE It is a system of shared assumptions, beliefs and values which governs how employee works in organizational environment. These shared values have a strong impact on the people of the organization and show how they dress, behave, and perform their jobs. For every organizations smooth working and for maintaining, a unique culture is developed, which provides guidelines and boundary line for the behavior of the members of the organization.

Organizational culture is indescribable. It is a hand which shows the path to the employees for the better well-being and more satisfaction. Everybody's philosophy and deed influences entire organization. A successful organization totally depends on its culture, which is invisible.

Davis (1984) defines culture as: "*The pattern of shared beliefs and values that give members of an institution meaning, and provide them with the rules for behaviour in their organization."*

It may be defined as:*"organization cultural is related with how employees recognize the five basic characteristics, i.e., individual, self-government, structure, rewards & consideration and conflict."*

Types of organizational culture Clan Culture

The working environment is friendly. The leader is like a mentor, team builder. It makes long-lasting relationship between bosses and subordinates.

Adhocracy culture

In this the working environment is dynamic and creative.in adhocracy the employees take and risk and the leader is innovator. In this organisation the bonding material is experiments and innovation. The long term aim is to create long human resources.

Market culture

This culture is based in result oriented and work is done to complete the work. It is focuses on the market competitor. Reputation and success is most important for leader. The organisational style is based on competition.

Hierarchy culture

This is formalized and structured work environment. Procedures decide what people do. Values derive efficiency, timeless, consistency and uniformity. It measures quality improvements strategy by error detection, process control, systematic problem solving.

Features of organizational culture

Attention to detail: Defines how much important a company allocation to precision and details in the workplace.

Outcomes oriented: Paying more attention to results rather than processes.

People oriented: Define how much should be the management focus on tis people as associates or as work machines.

Aggressiveness: Every organisation formulates the level of aggressiveness with which their employees work.

Innovative and risk taking: This feature defines how much room business allows for innovation. Places where you take a risk, the chances of returns are higher. Same goes for innovation.

Team orientated: Synergistic team helps giving better results as compared to individual efforts.

Stability: Some organisations are focused on making themselves and their operations stable rather than looking at unselective or unsystematic growth.

MEANING OF JOB SATISFACTION The job satisfaction concept founded by Hoppock in 1935. This term is of most significant from the standpoint of employee morale. It refers to normal attitude of an individual towards the work. The dominant needs of a person are fulfilled by the job he does and the consistency to his expectations and values, then only the job would be satisfying. Feeling of a person is related towards the job one has and motivation of the work is based on the behaviors of the job, so the both the things are not the same but mostly they are taken as the same.

It may be defined as: *"work satisfaction is considered as a delightful and positive state emotions resulting from the judgment of one's toil or work experience."*

Moreover, satisfaction of an employee's depending on work environment. In the long run research has measured that how employees see their organization, the feature of the organizations culture whether they like it or not , they are least bothered regarding team work motivation or rewords innovations.

Signs of High Employee Job Satisfaction

Opportunity for Growth
Exceptional Compensation Package
Boss is a Mentor
Company or Organization is Solid
Morale is high
Tools and Resources
Innovation
Corporate Values
Ethics and Integrity

Ways to Enhance Job Satisfaction

CONCLUSION: Organizational culture plays a very important role to discover the organization's capability, success and prolonged existence. It also gives more importance to improve and create its brand image and brand promise. Organizations basic assumption is also by its environment and balance between relationship that perceived. Good organizational

culture provides a good working environment to working staff and also motivates them to work hard for themselves growth as well as institutional growth. Hence this study is going to give significant to the sense of pride, self-satisfaction, stability, social recognition, level of performance, discipline which will be developed among the employees with the help of organizational culture. Due to increased keen competition and different workforce departments have created a greater need for organizational culture and have develop into an essential source for the organization's growth.

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EFFECTIVENESS OF SOCIAL NETWORKING PLATFORM FOR YOUNGSTERS IN MANAGING STRESS AND ANXIETY: A SURVEY IN ULHASNAGAR CITY

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Abstract

Social media has shown an enormous effect especially on young generation. Various tools of social networking have proved to be effective in managing stress and anxiety. The virtual presence of friends and followers has helped to motivate at the times of achievements and ease the grief at the time of failures. So the present paper is an attempt to find out the effectiveness of social networking platforms in managing stress and anxiety among the youngsters in the age group of 18-23. The study was limited to the city of Ulhasnagar however the findings can be extended to research the other areas for survey.

Key Words: Stress management, social media, youngsters

Introduction: Social networking platform has proved to be the buzzword in the modern era. Not a single tool of communication was as successful ever as social media. It works through different tools and each tool has its own features and characteristics. With various facilities like communicating, texting, image sharing and video sharing social media has become a powerful tool of networking the world. Being cost friendly and user friendly, the internet users have shown an upward graph among all age of peoples throughout the world. Due to such powerful weapons, the world has shrinked into a global village where a very small piece of information reaches to masses on the click of buttons on smart phone. As every coin has two sides, so is the impact of social media with its positives and negatives. This impact becomes imperative to be researched upon when it comes to the young minds.Maximum time of the young generation is spent on Whatsapp, Facebook, Twitter, LinkedIn and other networking sites sharing same interests, viewing or participating in discussions that lead to thought process and debates on the news articles, latest updates about the fashion world or the new gadgets in the market. The impact adds to the worry when it comes to the negative side.The increasing number of social media users makes it necessary to think about the possible effects of such an effective technology.

Review of Literature: Social media has exploded as a category of online discourse where people create content, share it, bookmark it and network at a prodigious rate. Because of its ease of use, speed and reach, social media is fast changing the public discourse in society and setting trends and agenda in topics that range from the environment and politics to technology and the entertainment industry (Asur and Huberman, 2010). In the last ten years, the online world has changed dramatically, thanks to the invention of social media, young men and women now exchange ideas, feelings, personal information, pictures and videos at a truly astonishing rate. Seventy-three percent of wired American teens now use social media websites (Oberst, 2010). Martn, (2008) & Lusk, (2010) share the same concept of social media. To them social media is the use of Facebook, Blogs, Twitter, My Space and LinkedIn for the purpose of communication, sharing photos as well as videos. The increased use of Social Networking Websites has become an international phenomenon in the past several years. What started out as a hobby for some computer literate people has become a social norm and way of life for people from all over the world (Boyd. 2007). Teenagers and young

adults have especially embraced these sites as a way to connect with their peers, share information, reinvent their personalities, and showcase their social lives (Boyd, 2007). Facebook, for example has over 500 million members and it is still growing and approximately 85% of undergraduate students are Facebook users (Schneider, 2009). These numbers are expected to grow since Facebook users will continue to grow. And this is not only true for Facebook, numbers for YouTube users closely follow as well (University of New Hampshire, 2009). Social networking websites provide tools by which people can communicate, share information, and create new relationships. With the popularity of social networking websites on the rise, our social interaction is affected in multiple ways as we adapt to our increasingly technological world. The way web users interact and talk to each other has changed and continues to change. Social networking websites have affected our social interaction by changing the way we interact face-to-face, how we receive information, and the dynamics of our social groups and friendships (Asur and Huberman, 2010).

Objectives of the study

1) To study the most favorite form of social media tool among the respondents

2) To evaluate the effectiveness of social networking platforms for youngsters in managing stress and anxiety.

Methodology: For the purpose of study primary data was collected from 100 respondents including 60 females and 40 males selected from Ulhasnagar city by convenience random sampling method by survey method. The due care was taken to select the respondents within the age group of 18-23 years.

Hypothesis :H_0: There is no significant relationship between the gender and the usage of social media in hours per day

$H_{1:}$ There is a significant relationship between the gender and the usage of social media in hours per day

Testing of Hypothesis: To find out the relationship between gender and the usage of social media in hours per day

Observed frequency table:

No. of hours	Male	Female	Total
1-2 hours	9	12	21
2-4 hours	13	27	40
more than 4 hours	18	21	39
Total	40	60	100

Expected frequency table:

No. of hours	Male	Female	Total
1-2 hours	8.4	12.6	21
2-4 hours	16	24	40
more than 4	15.6	23.4	39

hours			
Total	40	60	100

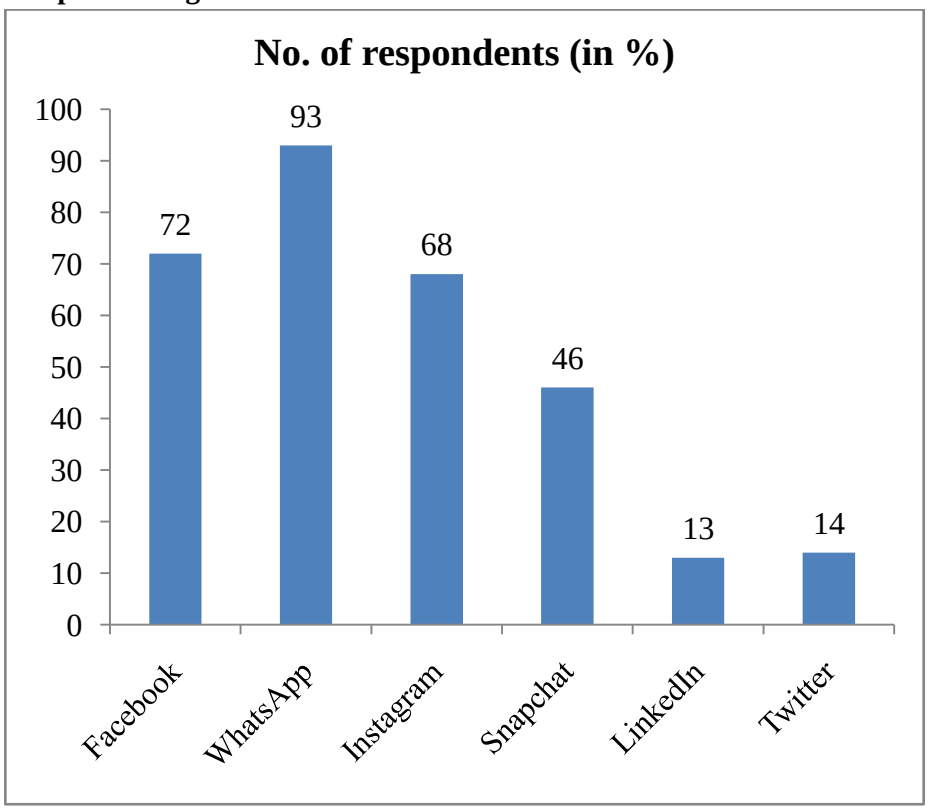
Therefore, chi-square value is**0.0443**, which means p value is less than 0.05. This shows that H_0 is rejected and $H_1$is accepted.Thus, we can say that there is a significant relation between gender and the usage of social media in terms of hours per day.

Findings and discussions of the research

1) It was found that 100% selected sample used smart phone for the purpose of using internet.

2) The responses given for the favorite form of social media used for the maximum time of the day, the responses were as follows:

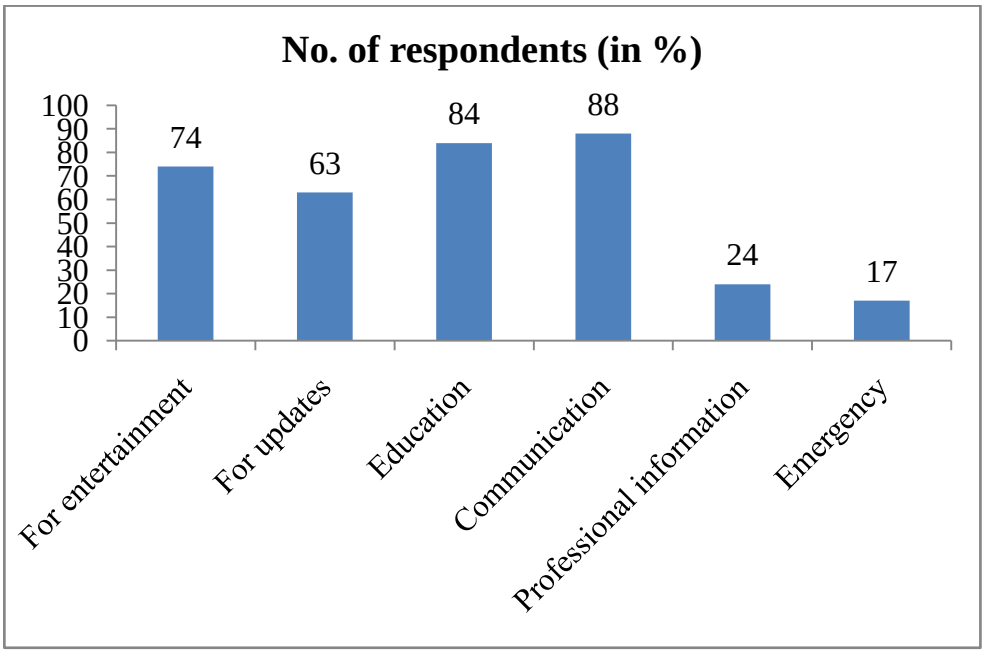
Fig. 1.1 Graph showing the favorite form of social media



From the above graph, it can be seen that the maximum respondents opted for WhatsApp (93%), followed by Facebook (72%), Instagram (68%) followed by Snapchat, LinkedIn and Twitter. This shows that WhatsApp as a networking tool has made its special place in the life of young generation.

3) The data related to the usage of social media for various reasons revealed that:

Fig. 1.2 Graph showing the various reasons for using social media



The above graph shows that 26% sample felt it as time wasting tool, 37% denied using its necessity for any updates, 16% did not agree for its role in education, 12% felt it not necessary for communication. However the above data shows that the young generation does not consider social media as a powerful tool for sharing professional information or to tackle emergency situations.

4) When inquired about the impact of social media as a brand influencer, 84% respondents agreed saying that once used it helps to promote the brand of people as well as product. It is working as a brand enhancer. The number of virtual friends and distant relatives communicating through such media increases. It has increased the communication during birthdays and festivals thereby reconnecting the old relations and adding the new virtual relations.

5) 81% respondents nodded the role of social media in making possible the school reunions. This helps to provide new platforms for enhancing the volume of business and its popularity.

6) 76% respondents agreed that the social media is an effective tool for managing stress and anxiety. According to them, during exam times especially social media helps to ease the tension by way of images or positive thoughts shared by the networking people around.

7) 94% respondents asserted that social media is a successful tool for education as several PowerPoint presentations and notes are shared among the students and teachers in a group thereby clearing the doubts relating to the exams.

8) According to 68% respondents, virtual presence of family and friends on social media though not fully substituting the physical presence at least helps to boost up their confidence level.

9) 100% respondents agreed that the social media helps to create awareness about various social and political issues. Thus it increases the capacity and quality of youngsters to react for the evils prevailing in the society.

10) 88% respondents highlighted the negative impact of social media on health and social life.

11) Expecting instant feedback by the impatient youngsters as highlighted by 73% respondents make the social media a negative tool. It increases the cases of stress and other related diseases. The youngsters are made technology addicted where they expect instant results.

However the negative impact highlighted from the study includes:

1) 57% respondents believed that social networking sites shows unwanted information that creates confusion in young minds.

2) 71% respondents asserted that irrelevant and anti-religious post and links create hatred among peoples of different communities

3) 62% respondents believed that it is a time waster

4) 76% believed that it creates anxiety and affects the health badly

5) 53% respondents stated that being social is also a stress in itself as every activity is watched and commented by the people.

Conclusion: Technology in itself is neither a boon nor a bane. It is the usage that makes it so. Therefore the paper concludes in a positive note that these social media tools including WhatsApp and Facebook etc. can have a positive impact on the development of the users. The young respondents can use such technology to influence their brand name and in future for the product. Their mental health can be enhanced due to more popularity. At the time of failures, more and more support system is generated due to such fast media. Thus to leverage the mental health and well-being information in a natural setting, social media has proved to be really useful.

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RECENT TRENDS IN MARKETING

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***Abstrac*t**

Marketing is a managementprocess through which goods and services move from concept to the customer. It includes the coordination of four elements called the 4 P's of marketing:
(1) identification, selection and development of a product,(2) determination of its price,
(3) selection of place, and(4) development and implementation of a promotional strategy.
For example, new Apple products are developed to include improved applications and systems, are set at different prices depending on how much capability the customer desires, and are sold in places where other Apple products are soldIn order to promote the device, the company featured its debut at tech events and is highly advertised on the web and on television.

Section 1 Is an overview of the generic aspects of marketing

Section 2 Elucidates the Ps of Marketing Mix

Section 3 Enumerates the types of marketing

Section 4 Concludes the paper with the types of marketing strategies

Section 1: Marketing is based on thinking about the business in terms of customer needs and their satisfaction. Marketing and selling are two different concepts because Selling concerns itself with the tricks and techniques of getting people to exchange their cash for your product. It is not concerned with the values that the exchange is all about. And it does not, as marketing invariable does, view the entire business process as consisting of a tightly integrated effort to discover, create, arouse and satisfy customer needs. In other words, marketing has less to do with getting customers to pay for your product as it does developing a demand for that product and fulfilling the customer's needs.Continuous exposure to advertising and personal selling leads many people to link marketing and selling, or to think that marketing activities start once goods and services have been produced. While marketing certainly includes selling and advertising, it encompasses much more. Marketing also involves analysing consumer needs, securing information needed to design and produce goods or services that match buyer expectations and creating and maintaining relationships with customers and suppliers.

Marketing is anything a company does to acquire customers and maintain a relationship with them.

Section 2

Marketing Mix

The P's of marketing are **PRODUCT, PLACE, PRICE AND PROMOTION**.

Product refers to an item or items a business intends to sell. When producing/ manufacturing/ examining a product, questions should be asked such as, what product is being sold? What differentiates the product from its competitors? Can the product be marketed with a secondary product? And are there substitute products in the market?

Price refers to how much the product is likely to cost. When establishing price, considerations needs to be given to cost the unit cost price, marketing costs and distribution expenses.

Place refers to distribution of the product. Considerations include whether the product is going to be sold through a physical store front, online or made available through both distribution channels?

Finally, **Promotion** refers to the integrated marketing communications campaign. Promotional activities may include advertising, personal selling, sales promotions, public relations, direct marketing, sponsorship and guerrilla marketing. Promotions are likely to vary being dependent on what stage of product life cycle the product is currently in. Marketers must be aware that consumers associate a product's price and distribution with its quality, and would be prudent to take this into account when devising the overall marketing strategy.

With the growth of the services sector, marketers realized that services cannot be marketed in the same way as the products. Certain characteristics of services posed serious problems for marketers who realized that services marketing must be done differently and not with the same marketing mix variables. Service characteristics like intangibility inseparability, heterogeneity and perishability.

To cope with these challenges, service marketers suggest additional **3 Ps** – **Process, Physical Evidence and People**. The process is aimed at solving the heterogeneity or variability problem associated with the services by providing a service blueprint. The physical evidence solves some of the problems associated with the intangible nature of services. The physical evidence in terms of service environment, equipment, personnel and so on attempts to tangibilize the intangible.

The final P – People – gives lot of attention to the service providers because they are, strictly speaking, part of the service provided. They can influence the perceived service quality in a big way.

Types of Marketing-There are numerous marketing methods which are prevalent in today's economy, but five of them are dominating the world market as a whole;

Digital Marketing-Digital marketing, or direct digital marketing, is a type of marketing in which a business uses only electronic means to advertise their products and services. This type of marketing can be implemented through television, the internet (newsletters, or other emails), and even electronic billboards. Not only does this save a company in mailing costs, it also ensures that more people will be exposed to their products. Digital marketing has erupted from television commercials to the internet, then from the internet to phones and other portable digital devices such as the iPad, Kindle, etc.

Brands can now be direct sellers, content producers, bloggers, tweeters and even friends without having to rely on media to deliver those messages. Consumers can seek out those brands, connect with them through social networks, tweet about them, and instantaneously let all their friends know what they think about them or what they plan to buy.The goal of digital marketing is to utilize these numerous devices, often via the Internet, to connect segments of users with relevant businesses. Marketers will use a variety of methods to target and reach out to users to grab their attention and begin the process of selling to them.

And thanks to the increased use of these digital devices, businesses around the globe are increasingly making digital marketing their primary focus:

- 71% of companies plan to increase their digital marketing budgets this year
- On average, 60% of a marketer's time is devoted to digital marketing activities, fuelling demand for digital marketing skills
- One third of businesses are planning to introduce a Digital Transformation program and one third already have
- Digital content creation and management now claim the second-largest share of digital marketing budgets
- 28% of marketers have reduced their traditional advertising budget to fund more digital marketing
- 73% of B2B marketers use video as a content marketing tactic, and 7% of marketers' plan on increasing their YouTube marketing

One of the things that separates digital from traditional marketing is the capabilities of modern technology. Digital marketers are focused primarily on targeted, measurable activities. They want to zero-in on the "right" audience and measure the results of their efforts. In the past, targeting looked like taking out a regional TV ad or running an ad in a niche magazine, but today's technology allows for a much more refined, measurable approach.For example, a digital marketer today can run a Facebook advertisement targeting only 20-year-olds interested in the band Coldplay. They can see every view, like, comment, and click and then use a tracking pixel to see exactly what people do after they click on the ad. This data can then be used to create ads that perform better

Internet Marketing:Like its relative digital marketing, Internet marketing uses electronic means to advertise to the public. The difference between the two is strictly Internet driven. Internet marketing employs email, banner ads, those annoying pop ups, etc. The internet is an ever-growing market of seemingly limitless advertising space, and it continues to grow with evolving subsections of marketing such as affiliate marketing.

Also called online marketing, it is the process of promoting a brand, products or services over the Internet. Its broad scope includes email marketing, electronic customer relationship management and any promotional activities that are done via wireless media.It also combines the technical and creative aspects of the World Wide Web such as advertising, designing, development and sales. Moreover, Internet Marketing also deals with creating and placing ads throughout the various stages of customer engagement cycle.

Affiliate Marketing: Affiliate marketing is a type of marketing in which online advertisers and merchants share revenue with online salespeople or website owners through a compensation model that is based on certain performance measures such as Pay by Click, sales, registrations, or a model that combines any of these forms.

Multi-Level Marketing: Multi-level marketing**,** is a type of marketing in which consumer products are generally sold by individuals either in consumer's homes or in a designated area of meeting. For instance, Avon, Tupperware, and Mary Kay are all forms of legitimate multi-level marketing. Multi-level marketers set their own hours and can earn money based on sales.

Global Marketing:Global marketing is a form of marketing in which various international business allies form relationships and develop networks on a global scale. They work closely with one another's home countries, their government officials, and the industry competitors to gain and develop a target market. In this type of advanced market, stakeholder benefits outweigh that of the company's personal organizational objectives. In this case, stakeholders would be employees, the society in which a business is entering, the companies' respective governments, etc.

Global marketing refers to marketing activities by companies that emphasize the following:

1. Reduction of cost inefficiencies and duplication of efforts among their national and regional subsidiaries
2. Opportunities for the transfer of products, brands, and other ideas across subsidiaries
3. Emergence of global customers
4. Improved linkages among national marketing infrastructures leading to the development of a global marketing infrastructure.

4 Types of Marketing Strategies :There are different types of marketing strategies available. Picking up a marketing strategy includes analysing the needs of your business, your target audience and specifications of your products.Marketing strategies have made it much easier to promote products and services. They also limit the strategy to target audience ensuring the proper advancement of the business.

The two main types of marketing strategy are:

- 1. Business to business (B2B) marketing
- 2. Business to consumer (B2C) marketing

Following are the different types of marketing strategies available

Paid advertising: This includes multiple approaches for marketing. It includes traditional approaches like TVCs and print media advertising. Also, one of the most well-known marketing approach is internet marketing. It includes various methods like PPC (Pay per click) and paid advertising.

Cause marketing:Cause marketing links the services and products of a company to a social cause or issue. It is also well known as cause related marketing.

Relationship marketing: This type of marketing is basically focused on customer building. Enhancing existing relationships with customers and improving customer loyalty.

Undercover marketing: This type of marketing strategy focuses on marketing the product while customers remain unaware of the marketing strategy. It is also known as stealth marketing.

Word of mouth: It totally relies on what impression you leave on people. It is traditionally the most important type of marketing strategy. Being heard is important in business world. When you give quality services to customers, it is likely that they'd promote you.

Internet marketing: It is also known as cloud marketing. It usually happens over the internet. All the marketing items are shared on the internet and promoted on various platforms via multiple approaches.

Transactional marketing:Sales is particularly the most challenging work. Even for the largest retailers, selling is always tough especially when there are high volume targets. However, with the new marketing strategies, selling isn't as difficult as it was. In transactional marketing the retailers encourage customers to buy with shopping coupons, discounts and huge events. It enhances the chances of sales and motivates the target audience to buy the promoted products.

Diversity marketing: It caters diverse audience by customizing and integrating different marketing strategies. It covers different aspects like cultural, beliefs, attitudes, views and other specific needs.

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2015	Media Marketing	*Nicholis Erik*	WatchfirePrus

DIGITAL TECHNOLOGY IN EDUCATION

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Abstract

Digital technologies are now embedded in our society. Focus has shifted from whether or not to use them in teaching and learning, which technologies can be used for what specific educational purposes and then to investigate how best can be used in embedded across the range of educational context in institutions.Research says technology is best used as a supplement to normal teaching rather than as a replacement for it. This suggests some course caution in the way in which technology is adopted or embedded in institutions.Digital technology in education system is a wide topic. It includes methods of teaching and learning using technology. This paper is focussing on e-learning and digital classrooms. The purpose of this paper is to build a digitalised educational basis and to turn the textual information into practical and valuable knowledge for students. Benefits of digitalization in methods of teaching and challenges faced due to this transition of traditional to advanced teaching are also discussed.

Introduction: *"A lot of what makes a great learning experience is not about the content, but is about the way content is taught."* - Bransford, Brown and Cocking, 2000.

We live in age of digital technology, in which information is everywhere and it is plenty full. Each nugget of information goes unrealised if it doesn't reach its intended audiences.

Today's generation of students are growing up in a digital world. In this digital world, use of smart devices has become popular and internet has broken the restrictions on time and space and become a learning tool.Students can access more information than ever before; they are increasingly mobile and globally connected. This increased use of technology in education has generated considerable innovation and debate over advantages and disadvantages.

The emergence of digital technology develops educational opportunities with teachers and learners beyond the classrooms, school, college or university.

Objectives:

- ✓ To support the students to become industry engaged professionals with the digital competencies required to excel in their future careers.
- ✓ To empower students academically by providing them with the 21st century learning tools.
- ✓ To support staff in the development of digital literacy and capabilities to evaluate and introduce new technologies into their teaching practice.
- ✓ To increase opportunities for face to face interactions between teaching staff and students.
- ✓ To expand the reach of academic programs locally, regionally and globally.
- ✓ To inspire and support life-long learning.
- ✓ To enable remote access to tutorials workshops and other activities.

Hypothesis:

- ➢ Student is a good digital citizen.

- Digital innovations in teaching and learning can be undertaken seamlessly with the library and sustainable within learning platform.
- Digital learningbuilds a culture of innovation across academic community.
- It provides flexible and personalized learning opportunities to allow students to have more control of their progression through their degree.
- Laboratories, libraries, workshops and teaching facilities are equipped with digital technologies.

What is digital learning?

Digital learning is any type of learning that is facilitate by technology or by instructional practice that makes effective use of technology.

A digital learning strategy is mainly a combination of ***online learning (or e-learning) and digital classroom.***

- ***E-Learning*:**E-learning is learning utilizing electronic technologies to access educational curriculum outside of a traditional classroom. In most cases, it refers to a course, program or degree delivered completely online.

One should realise that e-learning is a transition from classroom to online learning means shift teacher centric to learner centric learning.

Benefits of e-learning:Time and money saving:

Online learning happens and easily hence it saves money that costs to traditional forms of learning. It also saves lots of training time that consumes in travelling, arranging course materials and accommodation.

1. **Flexible learning:**E-learning has broken the restrictions on learning time. Educational courses only operate within normal institutional hours but e-learning allows students to study at their own convenient time.Unlike classroom teaching, with online learning students can access the content an unlimited number of times. This is especially required at the time of revision when preparing for an exam.
2. **Mobile Learning:**E-learning allows a mobile learning environment- *Anywhere! Anytime! Anyhow!*Students can access the content during travelling outside the classrooms.
3. **Individual learning:**It also provides individual learning to a student who finds difficulties to learn in groups. They want personal teaching at their own pace and e-learning provides them that individual teaching.
4. **Helpful to remote areas:**It can make higher education possible in rural and remote areas where colleges and educational institutions are less available.

Examples of e-Learning:

Khan Academy: Khan Academy is a non-profit educational organization created in 2006 by educator Salman Khan with a goal of creating a set of online tools that help educate students. The organization produces short lectures in the form of YouTube videos. Its website also includes supplementary practice exercises and materials for educators. All resources are available to users of the website.Website: www.khanacademy.org

1. **NPTEL :**NPTEL is an acronym for National Programme on Technology Enhanced Learning which is an initiative by seven Indian Institutes of Technology (IIT Bombay, Delhi, Guwahati, Kanpur, Kharagpur, Madras and Roorkee) and Indian Institute of Science (IISc) for creating course contents in engineering and science.

Website: http://nptel.ac.in

2. **Ted-Ed:**Ted-Ed is full of educational videos on a variety of general education topics that can be accessed for free. Not only are there motivational speakers on Ted, there are also topical videos, often less than ten minutes each that are full of important information.Website: https://ed.ted.com

3. **Codecademy**:One of the most exciting developments in the tech world is the number of people who are learning to write code. Codecademy allows students to select their goal/learning objective and then recommends the proper course for that student.

Website: https://www.codecademy.com

- ***Digital classroom*:**The digital classroom refers to the technology enabled classroom where student learning and interaction with the instructor and peers is fully supported through strategic use of Information and Communication Technologies (ICT).Digital classroom brings the concept of "show me and I understand". This method of teaching helps students to break out of their shells and become good communicators.

Few examples of digital classroom tools/websites:

1. **Desktop or laptop:**In a digital classroom a desktop or laptop acts as the central system that stores information and also essential for managing lessons. With the help of projector, the preloaded lessons can be maximized into a big screen and can be taught with ease.
2. **Smart boards** are interactive whiteboards that use Touch technology to detect input such asscrolling, right mouse-clicks or keyboard detect input. The whiteboard accepts touch input from a finger, pen or other solid object.
3. **Graphic tablets;**Tablets and e-readers are very popular with students. These devices not only encourage reading but also gives students the option to the refresh their lessons at any given time.
4. **Big interactive LED/LCD panels:**Digital learning involves 2D and 3D animations, graphics, audio and video presentations for every subject and a smart classroom; that is digitally equipped with big interactive LED or LCD panels can better project is graphics representations.
5. **Multimedia Pens/stylus:**These handy tools can be used to create artwork or to add more precise text or drawings to an image or diagram.
6. **Audio/video tools:**Audio video tools and other digital collections and resources are increasingly engaging. Example: YouTube.
7. **E-portfolios** are online collections that allow teachers and students to demonstrate their skillsand interests to audiences.

8. **Learning Management Systems:** LMS are systems that allow to present instructional materials (text, audio, video etc.); interact with students, facilitate peer-to-peer interaction.
9. **Blogs:**Blogs are means to narrate work online. Many web bloggers are exploring the flexibility of their tools for a wide range of user. Instructors use them to communicate with their students; researches track their progress and communicate with peers around the world.

Challenges:E-Learning requires good reading and writing skills. The ability to efficiently read and interpret instructions is a critical skill in e-Learning. Most activities and communications are also written so it is important for students to be comfortable with ability to express them through writing.Few challenges are discussed below:

1. **Availability of resources/facilities:**Both institution and student face this problem. Most institutions do not have IT infrastructure that can support large-scale eBooks and digital curriculum distribution. Most of the developing countries still struggles to have access first internet that can support large data downloads required for digital books.
2. **Adaptation of digital technology in teaching and learning:**The biggest resistance to technological change is the people. The teachers, administrators, librarian and parents are all stuck on old ways of learning. The challenge lies in trying to get them to adapt digital ways of learning.
3. **Content curation:**In order to have full effect of digital learning in institution, the vast amounts of content on the web must be stored and presented in a meaningful and organised way around the specific theme. This process consumes time and effort that are often the reason for the increase in implementation costs.
4. **Technology upgradation:**Digital curriculums are not one time investments. The curriculum needs to be constantly upgrading the platforms as and when technologies change.

Conclusion: The use of technology is usually more successful as a supplement rather than a replacement for usual teaching. Technology is not introduced into a vacuum. It is therefore important to identify carefully what it will replace or how the technology activities will be additional to what learners would normally experience.To be a successful e-learner, a student must believe that meaningful, high quality learning can take place without a traditional classroom. When properly designed and executed, e-learning is a highly effective and rewarding learning environment.

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MAKE IN INDIA OPPORTUNITY AND CHALLENGES

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Abstract

The Make in India initiative was launched by Prime Minister in September 2014 as part of a vast set of nation-building initiatives. Launching to transform India into a global design and manufacturing hub, Make in India was a timely response to a critical situation: by 2013, the much-hyped emerging markets bubble had burst, and India's growth rate had fallen to its lowest level in a decade. The promise of the BRICS Nations (Brazil, Russia, India, China and South Africa) had faded, and India was tagged as one of the so-called 'Fragile Five'. Global investors debated whether the world's largest democracy was a risk or an opportunity. India's 1.2 billion citizens questioned whether India was too big to succeed or too big to fail. India was on the brink of severe economic failure. To start a movement, we need a strategy that inspires, empowers and enables in equal measure. Make in India needed a different kind of campaign: instead of the typical statistics-laden newspaper advertisements, this exercise required messaging that was informative, well-packaged and most importantly, credible. The Make in India initiative has been built on layers of collaborative effort. DIPP initiated this process by inviting participation from Union Ministers, Secretaries to the Government of India, state governments, industry leaders, and various knowledge partners. Next, a National Workshop on sector specific industries in December 2014 brought Secretaries to the Government of India and industry leaders together to debate and formulates an action plan for the next three years, aimed at raising the contribution of the manufacturing sector to 25% of the GDP by 2020.

Keywords: Make in India, Growth, Foreign Direct Investment, Opportunities and Challenges.

Introduction: Make in India is an international marketing campaigning slogan coined by the Prime Minister NarendraModi on 25th September 2014, to encourage the companies around the world to invest and manufacture their products in India. He has launched this ambitious campaign with an objective to turn the country into a global manufacturing hub. To achieve a manufacturing led transformation, India would need to undertake a structured and planned approach in review manufacturing, gain global competitive advantage and gain global leadership. In order to succeed in this campaign, it was important to be open to capital and expertise from all over the globe and implementation of GST will make India one market and strengthen overall programme. Doing business in The India today is much more difficult than elsewhere, but the government wants to change this. In order to make this initiative a great success, we need to be at par with the modern world as far as usage of modern technology is concerned and we need to have more clarity, maturity and intensity on quality aspects of our products. India's youth population is both a strength and threat. In order to bring the huge chunk of unemployed youth power in to employment stream, India needs to create millions of jobs every year.The logo for Make in India campaign is an elegant lion, inspired by the India's National emblem Ashoka Chakra and designed to represent India's success in all spheres. The wheel denotes the peaceful progress and dynamism - a sign from India's enlightened past, pointing the way to a vibrant future. The prowling lion stands for strength, courage, tenacity and wisdom - values that are every bit as Indian today as they have ever been. The campaign

was dedicated by the Prime Minister to the eminent patriot, philosopher and political personality PanditDeenDayalUpadhaya who had been born on the same date in 1916.

NEED FOR THE STUDY: Our Nation too needs to develop its infrastructure in order to militate its presence in the global picture and to match the rising demands and the living standards of its citizens. The most easy and important way to keep pace with the environment for a country is to develop its manufacturing sector. When more global and local players will invest in a country, it will boost the trade and economic growth, develop its infrastructure and generate more employment opportunities for its citizens. Hence the present study is on Impact of Make in India Campaign.

OBJECTIVES OF THE STUDY :

1. To study the overview of Make in India campaign.
2. To study the Make in India campaign main focus areas.
3. To study the initiatives taken by companies and various growth cycles of Make in India.
4. To study the effect of foreign direct investment in Indian manufacturing.
5. To study the major challenges, opportunities of Make in India initiative.
6. To offer useful suggestions in the light of findings.

RESEARCH METHODOLOGY : The present study is based on secondary data. The data has been extracted from various sources like research articles, publications from Ministry of Commerce, Government of India, various bulletins of RBI and authenticated websites.

MAKE IN INDIA CAMPAIGN MAIN FOCUS AREAS: The focus of Make in India programme is on creating jobs and skill enhancement in 25 sectors. The following are the major areas: Automobiles, Electronic System, Ports and Shipping, Automobiles Components, Food Processing Railways, Aviation Entertainment, Roads and Highways, Biotechnology, Leather, Renewable Energy, Chemicals ,Media and Entertainment, Space Construction, Mining, Textiles and Garments, Defense, Manufacturing ,Oil and Gas, Thermal Power, Electrical Machinery, Pharmaceuticals ,Tourism and Hospitality, Wellness,

Information Technology (IT) and Business Process Manufacturing

- In February, 2015 Huawei opened a new research and development (R and D) campus in Bengaluru, Invested 170 million to establish research and development centre.
- In April, 2015 Air Bus Company will manufacture its products in India and invest 2 billion US dollars. In February Marine Products Export Development Authority interested in supplying shrimp eggs.
- In May, 2015 Tata JLR (Jaguar Land Rover) moves its production of the Land Rover Defender to its in Pune facility in India.

PILLARS OF MAKE IN INDIA: Manufacturing in India is the main vision of the government and leads to national development. The initiative is built on four pillars which are as follows:

New Processes: :The government is introducing several reforms to create possibilities for getting FDI and foster business partnerships. This reform is also aligned with parameters of World Bank's Ease of Doing Business index to improve India's ranking on it. Make in India

recognizes ease of doing business as the single most important factor to promote entrepreneurship. A number of initiatives have already been undertaken to ease business environment. New Infrastructure: The government intends to develop industrial corridors and build smart cities, create world class infrastructure with state of the art technology and high speed communication. New Sectors: This campaign has identified 25 sectors to promote with the detailed information being shared through an interactive web portal. It has also increased the FDI to 100% in Defense and Pharmaceutical. New Mindset: This initiative intends to change by bringing a paradigm shift in the way Government interacts with various industries. It will focus on acting as a partner in the economic development of the country along with development in corporate sector.

MAJOR CHALLENGES OF MAKE IN INDIA: India needs funds to build industries, which in turn need infrastructure. This requires more finance which itself is a major challenge. India's banking systems are not in a position to lend many funds to industries, unless their balance sheet is cleared. If the government pumps more funds to bank, that leads to less investment in infrastructure.

- India can start manufacturing in India, but they cannot create more jobs because robots may take over the manufacture worldwide and still stay competitive.
- Many companies like Maruti, Nokia, Ford and Hyndai have had strikes and protests in India at their manufacturing plants in the past two years alone. India has labour laws and organized unions that can hinder smooth expansion.
- India lagging behind in imparting skills training to workers. Dearth of vocational education facilities and lack of training facilities are the key challenges of India's industrial landscape.
- Long term global competitiveness in industry required huge investments in research and development, but Indian companies have been slow to embrace research and development.
- India should be more focused towards novelty and innovations in small and medium sized industries. The government has to chalk out plans to give special scope and privileges to these sectors
- India's Make in India campaign will be constantly compared with Chin's Make in China campaign.
- India should constantly keep up its strength so as to outpace china's supremacy in the manufacturing sector.

OPPORTUNITIES OF MAKE IN INDIA: Aiming to make in India as its export hub, home appliances manufacturer Bosch and Siemens today announced company's first manufacturing plant in the country.

- The South East Asian region is expected to start operations by the second half of 2014.
- Japan's largest consumer electronics exporter is now seriously evaluating to come and make in India opportunity

- The Make in India campaign seems to have come at perfect time. Many giant foreign companies have already expressed their interest in setting up manufacturing facility in India.
- Switzerland based chocolate maker Barry Callebaut is looking at setting up a manufacturing unit in India as part of its global expansion plans to cash in on the 3,000crore domestic market.
- The economic impact of manufacturing in India will go beyond direct employment. It will create jobs in the services sector and allied services.
- Improving logistics infrastructure such as port-to- inland connectivity, cargo airports etc.

FINDINGS OF THE STUDY:

- Make in India will bring a drastic change in the fields like automobiles, aviation, biotechnology, defense, media, thermal power, oil and gas and manufacturing sector
- The job opportunities are multiples and opened the doors without any limitations.
- Through continuous foreign investments, the progress of the Indian economy can be made sustained.
- The challenges and threats for the human resource sector will be refined in the sectors of the economy.
- This initiative creates great awareness about the growing technology.

SUGGESTIONS: The extra impetus by the government on initiatives like skill development has been proposed to provide essential support to make in India to thrive. We should manufacture goods in such a way that they carry zero defects and goods with zero effect that they should not have a negative impact on the environment. Reforms like bringing more sectors under the automatic route, increasing the FDI cap and simplifying theprocedural delays has to be initiated.

CONCULSION: Manufactured has emerged as one of the high growth sectors in India. The Make in India campaign helps to place India on the world map as a manufacturing hub and give global recognition to the Indian economy. India's ranking among the world's 10 largest manufacturing countries has improved by three places to sixth position in the coming years. The proposal of making in India will boost manufacturing the electronic manufacturing market in the country. This in turn will focus on electronic manufacturing and plans to set up electronic clusters across various towns and cities.

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APPLICATION OF ZHOU'S DIFFERENTIAL TRANSFORM METHOD FOR SOLVING DIFFERENTIAL EQUATIONS TO SOLVE INDUSTRIAL PROBLEMS

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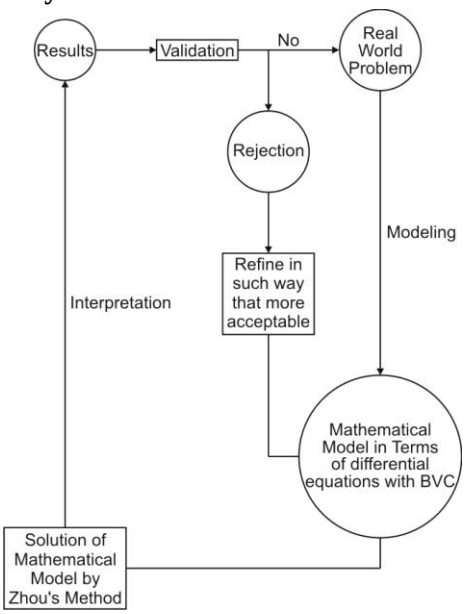
Abstract

In this paper we present Zhou's Differential Transform Method for solving the initial value problems involving first order ordinary differential equations. Which may Homogeneous or Non-homogeneous Differential Equation? We introduce concept of differential transform method and applied it to obtain solution of three numerical examples for demonstration. The results are compared with exact solution these results are accurate & easy to apply. The only part is formation of differential equation form data of industry.

Key Word : *Ordinary differential equations Zhou's Method, initial value problems, industrial problems.*

Introduction : The purpose of this paper is to see how equation & industry are related in different dimensions & how to obtain solution of industrial mathematical problems by using Zhou's differential transform method.There are many organisations which are solving Industrial Problems. One of the I.A.I.A.M. (Indian Association Organisation of Industrial Applicable Mathematics) There are many researchers and scientists are working with such type of organisation. In recent years removing same of previous paper.

Industrial Mathematical Model Ready for Prediction



The purpose of this paper is to employ the DTM method on examples of ordinary differential equation of first order and compared with result obtain by exact solution by using complimentary function & particular integral. In recent years,Bizar J. used for Riccati differential equations (1), Opanuga on numerical solution of systems of ordinary differential

equations by numerical analytical method (2), Chen used DTM to obtain the solutions of non-linear system of differential quotations (3), DTM was first proposed by Zhou & proved that DTM is an iterative procedure for obtaining analytic Taylor's series solution of differential equations DTM is useful to solve ordinary diff equations & boundary value problems (4), Ayaz F has used DTM to find the series solution of system of differential equations (5), Duen Y use DTM for Burger's equation to obtain the series solution (6), Bert W. has applied DTM on system of linear equation and analysis of its solutions (7), Chen C.L. has applied DTM technique for steady non-linear beat conduction problems (8), using DTM Hassan have find out series solution and that solution compared with DTM method for linear & non-linear initial value problems & proved that DTM is reliable tool to find numerical solution (9), Khaled Batiha has been used DTM to obtain the Taylor's series as solution of linear, non-linear system for ordinary differential equations (10), Montri Thangmoon has been used to find numerical solution of ordinary differential equations (11), Edeki, A semi method for solutions of a certain class of second order ordinary differential equations.

1. Basic definitions & properties of DTM method :

$v(t)$ can be expressed by Taylor's series, then $v(t)$ can be represented as

$$v(t) = \sum_{k=0}^{\infty} 0 \frac{(t-ti)^k}{k!} V(k)$$

$v(t)$ is called inverse of $V(k)$

$$\therefore v(t) = \sum_{k=0}^{\infty} 0 \left[\frac{(t-ti)^k}{k!} \right] V(k) = D^{-1} V(k)$$

$$v(t) = \sum_{k=0}^{\infty} 0 \left[\frac{(t-ti)^k}{k!} \right] V(k) + R_{n+1}(t)$$

by Taylor's Series

$$V(k) = \frac{1}{k!} \left[\frac{d^k v(t)}{dt^k} \right] \text{ at } t = t_0$$

2. Fundamental Theorems on DTM :

Theorem 1 : If $p(t) = n(t) \pm s(t)$

then $P(k) = N(k) \pm S(k)$

Theorem 2 : If $p(t) = \alpha(t)$

then

$\alpha\ n(t)$

$P(k) = \alpha P(k)$

Theorem 3 : If $p(t) = \frac{dn(t)}{dt}$

then

$$P(k) = (k+1)N(k+1)$$

Theorem 4 : If

then

$$P(k) = (k+1)(k+2)(k+2)N(k+2)$$

Theorem 5 : If

$$p(t) = \frac{d^s n(t)}{dt^s}$$

then

$$P(k) = (k+1)(k+2)(k+3)...(k+s)N(K+s)$$

Theorem 6 : If $p(t) = t^s$

then

$$P(K) = \sum_{i=0}^{k} 0\ S(l)P(k-l)$$

Theorem 7 : If $p(t) = t^s$

then

$$P(k) = \delta(k-s)$$

$$\delta(k-s) = \begin{cases} 1 \text{ if } k = s \\ 0 \text{ if } k \neq s \end{cases}$$

Theorem 8 : If $p(t) = e^{\lambda t}$

then

$$P(k) = \frac{\lambda^k}{k!}$$

Theorem 9 : If $p(t) = (1+t)^s$

then

$$P(k) = \frac{S(s-1)..(s-k+1)}{k!}$$

Theorem 10 : If $P(t) = (1+t)^s$

$$P(k) = \frac{W^k}{ki} \sin\left(\frac{\pi k}{2} + \alpha\right)$$

then

Theorem 11 : If $p(t) = \cos(wt + \alpha)$

then

$$P(k) = \frac{W^k}{ki}\cos\left(\frac{\pi k}{2} + \alpha\right)$$

Ex. 1)An amount of invested money is said to draw interest compounded continuously if the amount of money increases at a rate proportional to the amount present. Suppose $ 1,000 is invested and draws interest compounded continuously where the annual interest rate is 6%.

a)How such money will be present 10 years after the original amount was invested?

b)How long will it take the original amount of money to double?

Sol. $\frac{dp}{dt} = \frac{pr}{100}$

Exact solution is $p(t) = 1822.10$ at $t = 10$

$$(k+1)P(k+1) = \frac{6}{100}P(k)$$

$K = 0, 1, 2, 3, ...$

$$P(1) = \frac{6}{100}P(0) = \frac{6}{100} \times 1{,}000$$

u = 0 $P(1) = 60$

u = 1

$$2P(2) = \frac{6}{100}P(1)$$

$$2P(2) = \frac{6}{100} \times 60 = \frac{36}{10}$$

$$P(2) = \frac{18}{10} = 1.6$$

$$3P(3) = \frac{6}{100}P(2)$$

$$P(3) = \frac{1}{50} \times 1.8$$

$$= \frac{18}{500}$$

$$4P(4) = \frac{6}{100} \times P(3)$$

$$P(4) = \frac{6}{400} \times \frac{18}{500}$$

$$5P(5) = \frac{6}{100} \times \frac{108}{2{,}00{,}000}$$

$$P(5) = \frac{6}{500} \times \frac{108}{2{,}00{,}000}$$

$$= \frac{648}{10{,}00{,}00{,}000}$$

$$= \frac{108}{2,00,000}$$

$$P(t) = 1,000 + 60t + \frac{18}{10}t^2 + \frac{18}{500}t^3 + \frac{108}{2,00,000}t^4 + \frac{648}{10,00,00,000}t^5 + ...$$

at

$t = 10$

$= 1,000 + 600 + 180 + 36 + 108 \times 2,00,000 + ...$

$= 1,000 + 600 + 180 + 36 + 5.40 + 0.648 + ...$

$= 1,822.10$

when $P(t) = \$2,000$ it will take $t = 11.52$ years.

Ex. 2)Application of Newton's law of cooling in medical field.

A body of temperature 80 F, 90 F is placed in a room of constant temp. 60 at $t = 0$ at the end of 5 minutes the body has cooled to a temperature of 80^0 F.

a)Find temperature of body at the end of 10.

b)When will be the temperature of body be 70^0 F.

Sol. By Newton's Law

$$\frac{dT_1}{dt} = -k(T_1 - T_2)$$

$$T_1 - T_2 = e^{-kt+Co} = Ce^{-kt}$$

$$T_1(t) = T_2 + Ce^{-kt}$$

$$90 = 60 + 30e^{-kt}$$

$T(5) = 70$ to determine k?

$$80 = 60 + 30e^{-sk}$$

so that

$$K = \frac{1}{5} ln \frac{3}{2} = 0.08109$$

$\therefore K =$

The requested solution gives temp. of body at any time t is

$$T(t) = 60 + 30e^{-0.08109t}$$

Exact solution (a)

$$T_1(10) = 60 + 30e^{-0.08109(10)}$$

$$= 73.33F$$

(b)

$$70 = 60 + 30e^{-0.08109t}$$

$$t = \frac{1}{0.08109} ln3$$

$$\cong 13.55 \min.$$

Solutions by differential transform method.

$$\frac{dt_1}{dt} = -k(T_1 - T_2)$$

$$(k+1)T_1(k+1) = -K[T_1(k) - T_2\delta(k2)]$$

$k = 0, 1, 2, 3, ...$

$k = 0$ $\quad T_1(1) = -0.08109[T_1(0) - T_2\delta(0)]$

$$= -0.08109[90 - 60]$$

$$= -0.08109 \times 30$$

$k = 1$ $\quad T_1(1) =$

$$2T_1(2) = -0.08109[T_1(1) - 0]$$

$$T_1(2) = 0.08109 \times \left(\frac{0.08109 \times 30}{2} \right)$$

$$T_1(2) = (0.08109)^2 \times 15$$

$k = 2$ $\quad 3T_1(3) = -0.08109T_1(2)$

$$T_1(3) = -(0.08109)^3 \times \frac{15}{3} = (0.08109)^3 \times 5$$

$k = 3$ $\quad 4T_1(4) = (0.08109)T_1(3) = +(0.08109)^3 \times 5$

$$= \frac{5}{4}(0.08109)^4$$

$$T_1(t) = T_1(0) + T_1(1)t + T_1(2)t^2 + T_1(3)t^3 + T_1(4)t^4 + ...$$

$$T_1(t) = 90 - 30(0.08109)t + 15(0.08109)^2 t^2 - 5(0.08109)^3 t^3 + \frac{5}{4}(0.08109)^4 t^4 + ...$$

$$t = 10$$

$$T_1(t) = 73.33$$

Similarly at $t = 13.55$ $\quad T_1(t) = 70$

Ex. 3)Application to Chemical Industry.

A tank initially contains 100 gal. of pure water. Starting at time $t = 0$ a brine containing 4 lb of dissolved salt per gallon flows into the tank at the rate of 6 gal/min. The mixture is kept uniform by stirring and the well-stirred mixture simultaneously flows out of tank at the same rate.

a)How much salt is in tank at any time $t \geq 0$.

b)How much salt is present at the end of 50 min.

Sol. $\frac{dx}{dt} = \text{In} - \text{out}$

$$\frac{dx}{dt} = 24 - \frac{6x}{100}$$

$$x(0) = 0$$

$$\frac{dx}{dt} = 24 - \frac{3x}{50}$$

$$\frac{dx}{dt} = \frac{1{,}200 - 3x}{50}$$

$$= \frac{3(400 - x)}{50}$$

$$\frac{dx}{400 - x} = \frac{3}{50} dt$$

$$x = 400 + ce^{-et/50}$$

$$x = 400(1 - e^{-3t/50})$$

$$t = 50$$

$$x = 400\left(1 - e^{-3\times\frac{50}{50}}\right)$$

$$= 380.085173$$

ByDTM

$$(k+1)X(k+1) = 24\delta(k) - \frac{3}{50}X(k)$$

$$k = 0,\ 1,\ 2,\ 3,\ 4,\ .....$$

$k = 0$ $\quad X(1) = 24 - \frac{3}{50}\cdot 0$

$$= 24$$

$k = 1$ $\quad 2X(2) = \frac{-3}{50}X(1) = \frac{-3}{50}\times 24 = \frac{-72}{50}$

$$X(2) = \frac{-36}{50}$$

$k = 2$ $\quad 3X(3) = \frac{-3}{50}X(2)$

$$X(3) = \frac{36}{2{,}500}$$

$k = 3 \qquad 4X(4) = \frac{-3}{50} \times (3) = \frac{-3}{50}\left(\frac{36}{2{,}500}\right)$

$$X4 = \frac{-3}{50}\left(\frac{36}{2{,}500}\right) \times \frac{1}{4} = \frac{-27}{1{,}25{,}000}$$

$$X(t) = X(0) + X(1)t + X(2)t^2 + X(3)t^3 + X(4)t^4 + ...$$

at $t = 50$

Conclusion : In this work we applied DTM for first order ordinary differential equation, it reduces the computational difficulties of other traditional methods (Laplace Transform). DTM is best for solving initial value problems of first order. Industrial problems banking natural growth, chemical industry problems can be easily solved.

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INFORMATION RETRIEVAL AND DE-DUPLICATION FOR TOURISM RECOMMENDER SYSTEM

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Abstract
A tourist can find several interesting objects they wants to visit during their trip. With all this information, the tourist could have a problem that they cannot find out the best objects for them. A tourism recommender system helps the tourist to find personalized suggestions depending on their interests. Recommender systems are useful not only when users are overwhelmed by a large number of options to consider but also when they do not have enough domain specific knowledge to take their decision.Various web pages will be scrapped and duplicates will be resolved using map-reduce function. Only unique objects will be presented to the end user. A tourist can specify their location,time and duration ofvisit and their preferences about different types of objects and events. Based on the created profile system can find interesting objects for the end user.
Keywords—Scrapping, Mapper-Reducer, Recommender System.

INTRODUCTION: Information Retrieval and De-duplication for Tourism Recommender System is the system which recommends the tourist interesting objects on the basis of tourist profile. Tourist profile consists oflocation, time and duration of visit and their preferences about different types of objects andevents. On the basis of tourist profile, recommendation system search suitable information from different web portals and extract the data with the help of scrapper. For extracting data importer connected to the several web pages using scrapper algorithm. Each scrapper downloads the content of the web pages, and the necessary information,normalizes data for our system and sends it to the Merger. While extracting data sometime we get duplicate data which reduces the quality of our system. This problem can be overcome by using de-duplication technique.De-duplication is the process of merging duplicate data and gives only unique data to therecommender system. De-duplication is achieved by using Map-reduce technique.De-duplication improves our recommendations and object information quality.

PROPOSED SYSTEM : System is a semantic recommender for tourists. A tourist can specify location, time and duration of visit and preferences about different types of objects and events.Based on the created tourist profile, the recommender identifies interesting objects for the given user. For each found object a ranking score is

found. The objects that the user probably likes have a higher score and vice versa. A planning mechanism organizes the objects and events into a trip timetable.

To calculate the final list of recommended objects, the following processes are involved:

- Scrapper
- Mapping based on ontology
- De-duplication
- Recommendation

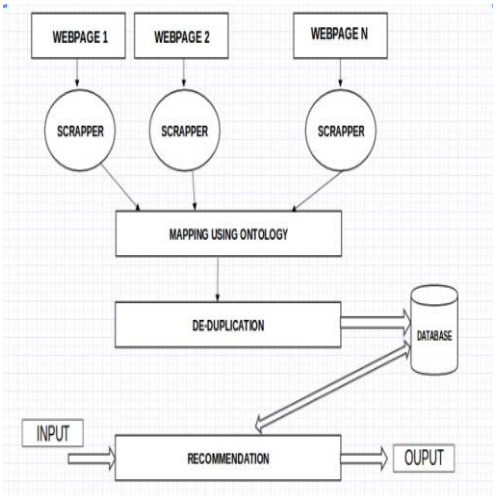

Fig-1. System Architecture

Scrapper: Data scrapping is done with the help of jsoup parser and API. Jsoup is a java library for working with real world HTML. It provides very convenient API for extracting data.The importer can connect to several web pages using manually created scrapper algorithms. Each scrapper downloads the content of the web pages, finds the necessary information.Web scrapping is a technique use to extract large amounts of data from websites whereby the data is extracted and saved to a local file in your computer or to a database in table (spreadsheet) format.

Mapping Based on Ontology: The data objects which are scrapped from the websites need tobe mapped according to the attributes.This is done by mapping the attributes of the objects with the help of ontology.

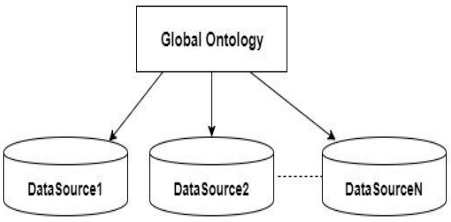

Fig-2. Mapping Based on Ontology

Global Ontology- Analyze knowledge of a domain. Understand the structure of the information. Reuse knowledge of a domain. Analyze a structure of data sources and semantic relations. Understand the semantic relations of data sources. Reuse integrated semantically meaningful data. Transformations of ontologies feature to data integration systems

requirements.Besides, ontology-based model is used to solve semantic and syntax conflicts of the heterogeneous data sources.

De-duplication: Data de-duplication is a specialized data compression technique for eliminating duplicate copies of repeating data. By retrieving information from different website yields in duplicateobjects. From the recommendation point of view, having duplicate objects in the proposed schedule reduces the quality of our system. Some sources do not have full information about an object. Different source may have some information about the object which was missing in the first source etc. So, merging duplicate objects may improve the quality of the system.

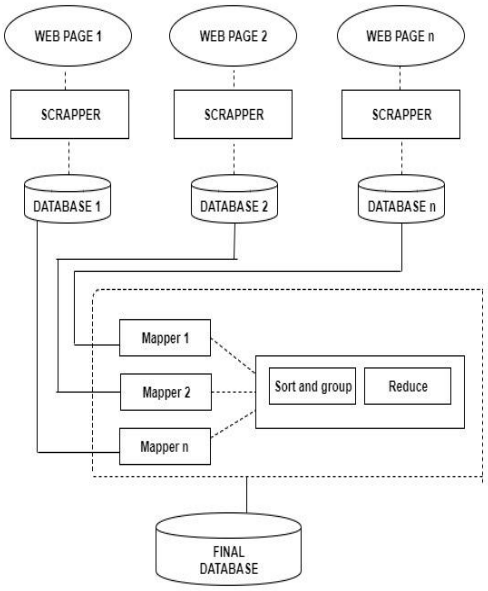

Fig.2.De-dupliaction

Recommendation: The recommendation process starts when the user opens the web page and defines their interests by using a dropdown approach for adjusting individual references. The Events slider is opened and its sub sliders are shown. Every topic in the user profile matches a type in tourism objects properties. The user can also specify the start date and time of visit, visit duration and preferred travelling method. After the tourist selected their interests, theystarts the overall recommendation process. The user profile is sent to the planner, which is responsible of returning a personalised recommendation for the given profile. The planner uses all the relevant data from the memory database. All the objects in the requested city which also are opened during user's visit will be processed. Based on the object types, location, opening time and some other properties, different trip timetables are created for the user.

III. FUNCTIONAL REQUIREMENT: Functional requirements specify the main technical functionalities and specifications that the system should incorporate.

Reduce duplication of data: Scrapping data from several websites,compare the results then using map-reduce function to merge the collected duplicated data and then unique data is represented by applying reducer function.

Choice of Preferences: The user inputs the likings about the place to visit and the system analysis the dataset and suggests the favorable places to visit.

Appropriate suggestions: Based on the inputs given from the user the system suggests the places to visit with 98% accuracy.

IV.CONCLUSION: This paper gives an overview of tourism recommender system which recommends the tourist for selecting best location which is suitable for their profile. Paper described the information gathering process with the help of scrapper algorithm which extracts information from different websites and then applying manually tuned de-duplication algorithm on duplicate information to improve quality of system. From there system improve accuracy of duplicate detection. Finally as a output system provide recommendation which suggests the user best object or location which is suitable for tourist profile. This recommendation system is useful for tourist who

does not have domain specific knowledge to take their decision.

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A STUDY ON THE LEVEL OF AWARENESS OF RIGHT TO EDUCATION AS A FUNDAMENTAL RIGHT IN THE CITY OF MUMBAI

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Abstract

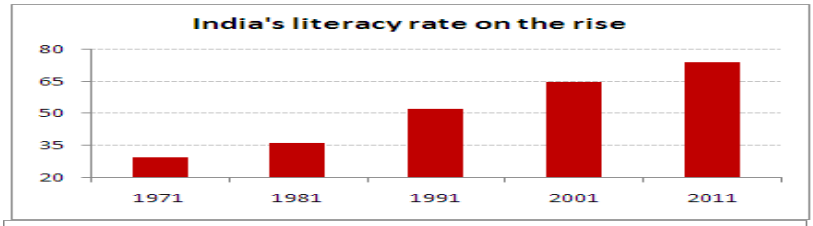
The concept of education has been in existence since times immemorial and can be traced to our rich ancient scriptures such as the Vedas, Puranas & even our epics such as Ramayana & Mahabharata. Education has been the hallmark of the progress of mankind. Having said that, a country which fails to provide this great instrument of progress to its citizens, is bound to bear the perils of illiteracy i.e. poverty, unemployment, uncontrolled population, etc, because all these are part of a vicious dark circle and education helps the country to progress from this darkness to light since education brings enlightenment about what is right and what is wrong Although Education is recognized universally and also in our own country as the medium for the progress of mankind from darkness to light, in context with the constitutional provisions prevailing in our country about the right to education, and the more recent action of making the Right to Education as one of the fundamental rights granted to every citizen, the researcher felt the need to check about the awareness level of people about this right to education being a fundamental right of every citizen. The researcher's premise was that although all recognize the need for education, very few are aware that it is a fundamental right

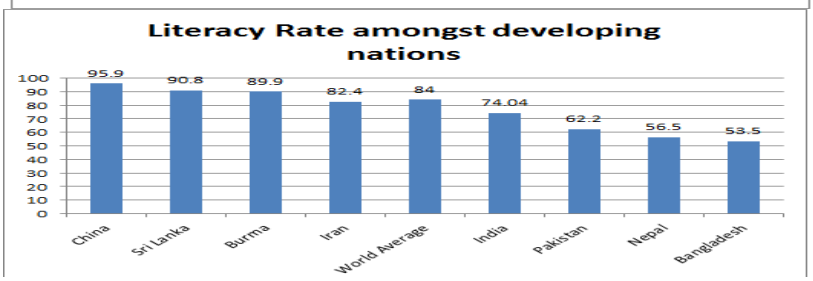
Keywords*: Education, Right to Education, Fundamental Right*

Introduction:"….The only service to be done for our lower classes is to give them education, to develop their lost individuality…..If the poor boy cannot come to education, education must go to him."[7]

Swami Vivekananda: Education, as we all know, opens the doors to unending potential since it enriches us with knowledge in a systematic and structured manner, which helps the human brains to assimilate the subject matter in an organized manner and bring about the mental development. In the words of *Martin Luther King Jr.* "Intelligence plus character – that is the goal of true education". The concept of education has been in existence since times immemorial and can be traced to our rich ancient scriptures such as the Vedas, Puranas & even our epics such as Ramayana & Mahabharata. Education has been the hallmark of the progress of mankind. Having said that, a country which fails to provide this great instrument of progress to its citizens, is bound to bear the perils of illiteracy i.e. poverty, unemployment, uncontrolled population, etc, because all these are part of a vicious dark circle and education helps the country to progress from this darkness to light since education brings enlightenment about what is right and what is wrong.Sadly, India as a country has been lagging behind in this field as compared to the majority of the countries around the world. A look at the 2011 census by the Indian Government shows that even though the national level literacy rate has increased from a mere 52% in 1991 to 66% in 2001 & further to 74% in 2011, India still lags way behind as compared to the developed nations. Even in comparison with other not so developed nations, Indian statistics make for poor reading.

[7] Swami Vivekananda, *A letter written from Chicago to H.H.,* the Maharaja of Mysore on June 23,1894





Constitutional Provisions on Education as a Fundamental Right of every child

Education is one of the basic elements for the success of democratic system of any government. Education provides human dignity to a person, to develop himself as well as contribute towards the development of his country. Keeping in mind the importance of education, our constitution framers had issued many Directive Principles of State Policy in Part IV such as ***Article 41 – Right to work, to education & to public assistance in certain cases, Article 45 – Provision for childhood care & education to children below the age of fourteen years & Article 46 – Promotion of educational & economic interests of Scheduled Castes, Scheduled Tribes & other weaker sections***.Although the provisions have existed in our constitution, their awareness and implementation have left lots to desire for. Understanding the importance of the ill-effects of illiteracy on the nation's development, in the year 2002, after 52 years of the enforcement of the Constitution, the Parliament of our country has made right to education as part of the fundamental rights granted to the citizens of India vide the 86th Amendment Act, 2002. This Amendment inserted Article 21A & clause (k) in Article 51A which places Fundamental Duty on the parents and substituted Article 45, which read as below:

Article 21A – Right To Education – The State shall provide free & compulsory education to all children of the age of six to fourteen years in such manner as the State may, by law, determine

Article 45 – Early Childhood care & education to children below the age of six year

Article 51A (k) Fundamental duties of the parent or guardian – It shall be the duty of every citizen of India, who is a parent or guardian to provide opportunities for education to his child, or as the case may be, ward between the age of six & fourteen years.Having being guaranteed the right to education as a fundamental right, it is imperative for all citizens to ensure that the obligations imposed by these constitutional provisions are duly enforced to ensure the positive and rapid development of our nation.

Review of Literature: Mehrotra Santosh (2011), in his paper has examined the cost of achieving the right to education, and asks whether India can fill the financing gap that must be filled if the right is to be realized. The paper notes the very considerable increase in central and state government allocation implied by the Act, and finds that there will be difficulties in finding the resources, given the large fiscal deficit occasioned by the global economic crisis & goes on

to suggest a series of measures that can be taken so that the right to schooling is no more denied or delayed

Woodhead Martin, Frost Melanie, James Zoe (2013), in their paper based on cases studies in Andhra Pradesh, India have explored the concept whether growth in private schooling contributes to education for all? The paper debates about the potential role for low-fee private schooling in achieving 'Education for All' goals in India. From the case studies it depicts that children from rural areas, lower socioeconomic backgrounds & girls continue to be under represented. It observes that while access gap decreased, gender gap seems to be widening.

Alston Philip & Bhuta Nehal (2005), based on a case study of India, consider the evidence of the qualitative impact that human rights discourse, and the constitutional entrenchment of economic and social rights, can have on the attainment of social goods such as education. The paper reviews the history of the amendment to the Indian Constitution in 2002 which made elevated education to the status of a "fundamental right." The paper asks whether the inclusion of a justiciable right to education for children 6 to 14 made a concrete difference.

Gupta Deepti & Gupta Navneet (2012), in their paper present the development and present scenario of higher education in India by analyzing the various data and also identify the key challenges that India's higher education sector is facing. This paper also presents the key initiatives by the government and recommendations to meet these challenges

Research Problem: Although Education is recognized universally and also in our own country as the medium for the progress of mankind from darkness to light, in context with the constitutional provisions prevailing in our country about the right to education, and the more recent action of making the Right to Education as one of the fundamental rights granted to every citizen, the researcher felt the need to check about the awareness level of people about this right to education being a fundamental right of every citizen. The researcher's premise was that although all recognize the need for education, very few are aware that it is a fundamental right.

Objectives of the Study

1. To understand the perception of the general public about education
2. To find out the level of awareness of people in general about the Right to Education being a fundamental right granted to citizens of India
3. To suggest appropriate measures which can be taken at various levels to spread the awareness of Right to Education as a fundamental right & its implementation

Research Design: The study is both descriptive and exploratory in nature and both primary and secondary data analysis has been undertaken to understand the full context of the subject matter. The researcher has attempted to satisfy the objectives of the study by way of gathering primary data using a structured questionnaire and analysing the responses using graphical tools.

Scope of Study: The study was undertaken in the city of Mumbai.

Sources of Data: Primary Data was gathered from a cross-section of people belonging covering students, teachers, people in private service & also a few government employees by way of a structured questionnaireSecondary Data was obtained from various government publications, journals, books & internet

Sampling: The sample size was restricted to 100 nos. Convenience sampling method was used.

Limitations of the Study

1. Due to limitations of logistical, time & cost difficulties, the size of the sample has been kept very small
2. Also due to the above difficulties, the geographical location for collection of samples has been restricted to North Mumbai only

Data Analysis

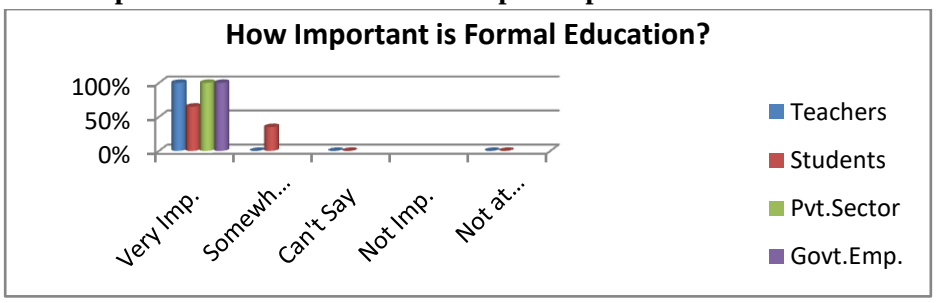
Table 1
Gender wise classification of respondents

	Teachers (25)	Students (25)	Pvt. Sector (35)	Govt. Emp. (15)
Male	20%	60%	55%	60%
Female	80%	40%	45%	40%

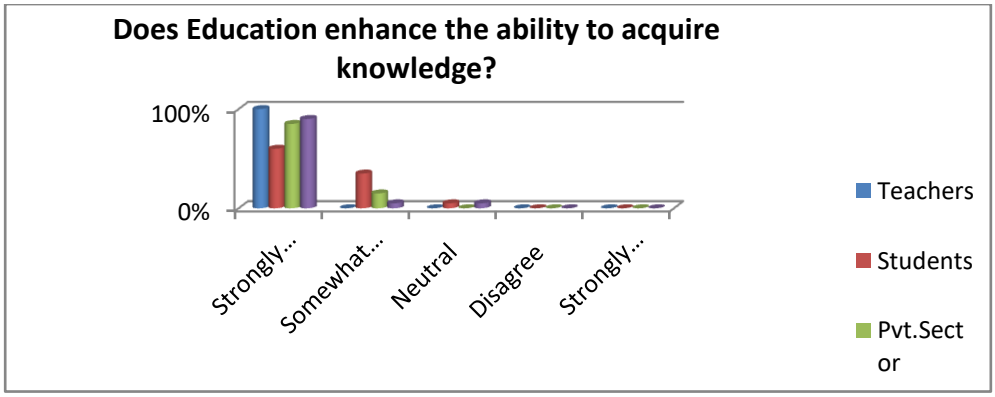
Table 2
Age wise classification of respondents

	Teachers (25)	Students (25)	Pvt. Sector (35)	Govt. Emp. (15)
Below 25 yrs	0%	85%	17%	0%
Above 25 yrs	100%	15%	83%	100%

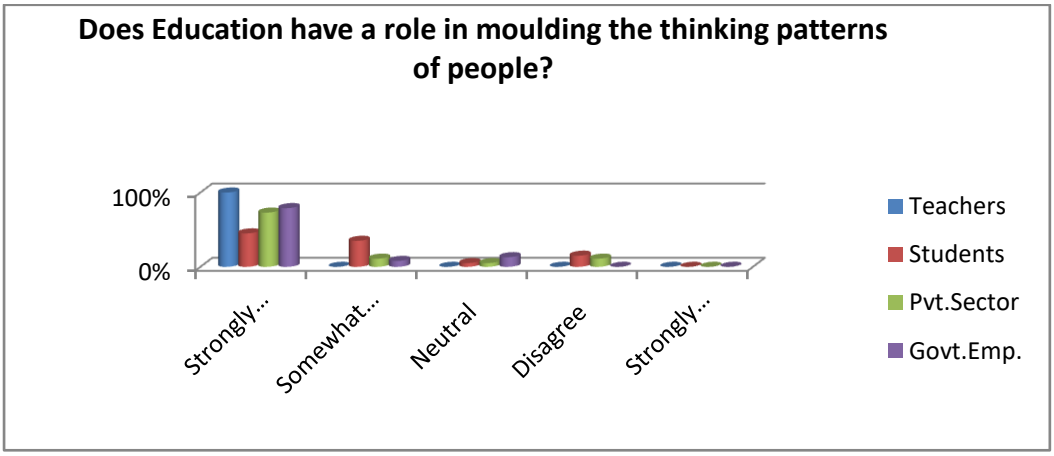
Graph 1. How important is formal education as per respondents



Graph 2. Does Education enhance the ability to acquire knowledge?

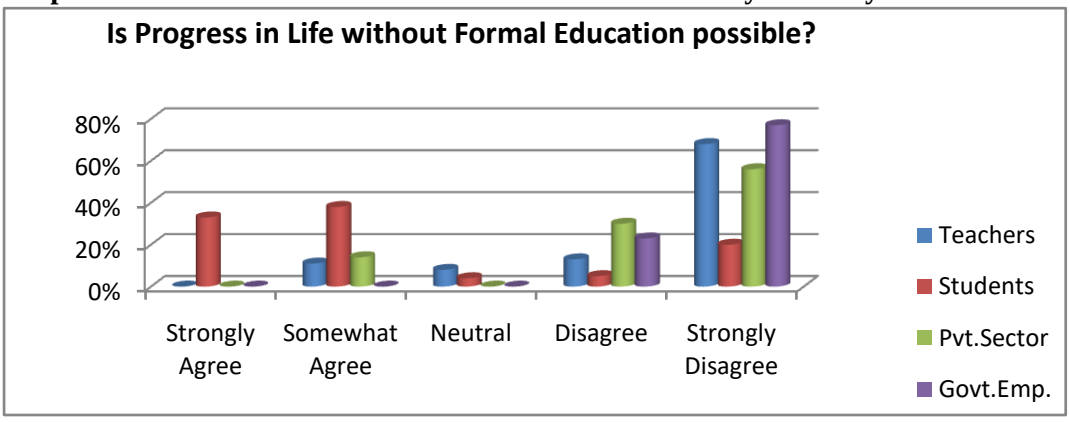


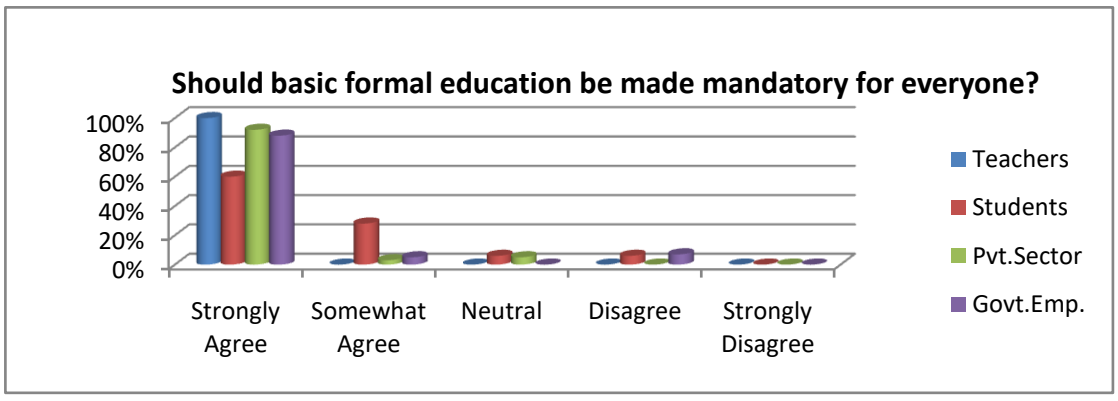
Graph 3. Does Education have a role in moulding the thinking patterns of people?



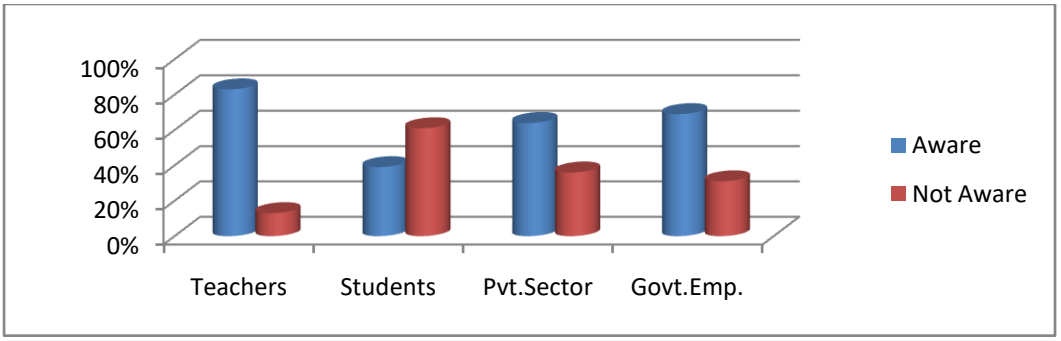
Graph 4. Is progress in life without formal education possible?

Graph 5. Should basic formal education be made mandatory for everyone?





Graph 6. Are you aware that Government of India has made Right to Education as a Fundamental Right guaranteed to every citizen of India?



Findings: The survey conducted threw up some interesting results on the peoples' perception about formal education and role which formal education plays in the progress of a person's life and career. Highlighted above, are a few of the notable questions covered in the questionnaire apart from other basic demographic questions. The following were the findings of the survey conducted:

- As expected, 100% of the respondents belonging to the teaching fraternity were of the opinion that formal education was extremely important. This view was also supported by the Pvt. Sector & Govt. Sector employees. However only 65% of the students were of the opinion that it was very important while 35% of the student respondents found it to be somewhat important
- Similarly 100% of the teachers, 85% of the private sector employees & 90% of the government employees were of the opinion that education enhances the ability to acquire knowledge. Among the student respondents, 60% strongly agreed with this and 35% somewhat agreed while 5% were fence-sitters and were neutral on this
- On the role of formal education in moulding the thinking patterns of the people, 100% of the teachers strongly agreed, while 73 & 79% of private and government sector employees respectively agreed strongly on this. Amongst student respondents, only 45% agreed strongly & 35% somewhat agreed.
- On being asked about the possibility of progressing in life without formal education, there were mixed reactions. 68% of the teachers strongly disagreed that progress without formal education is possible which was echoed by 20% of the students, 56% of private sector employees & 77% of government employees. Surprisingly, 33% of the students were of the opinion that progress was possible without formal education as they strongly agreed to this viewpoint
- On the question of basic formal education being made mandatory for everyone, the strongly agree answers were 100%, 60%, 92% & 88% from the teachers, students, private sector & government employees respectively. 6% of the students & 7% of the government employees disagreed that formal education should be mandatory
- On the awareness levels of the Right to Education as a fundamental right by the government of India, surprisingly, none of the categories of respondents, even teachers, were aware 100%. Amongst the teachers, only 83% were aware of this right while amongst students, a dismal 39% had this awareness. Amongst private sector employees & government employees, the awareness levels stood at 64% & 69% respectively.

Suggestions & Recommendations:

- The first and foremost effort of the government of India should be focused on creating mass awareness of:
  - ✓ The importance and role of education in progress of a person
  - ✓ The various benefits of education which can help a person to grow
  - ✓ The ill-effects of not having even basic education
- Just as a doctor diagnoses a patients illness before prescribing him medicine, and informs the patient about the possibilities, in the same manner, our country is ailing with the disease of illiteracy and the effects of the same need to be dispelled & communicated far & wide in order to create enough awareness among people about its dangers, so as to compel them to take the medicine of education. The approach can be two folded – either scaring the people with the ill-effects or cajoling the people with the positive effects & outcomes of having basic education – either way, the objective remains the same i.e. to get the masses to acquire at least basic education and thus improve their lot
- Having constitutional remedies on paper cannot do much good to our country. The survey shows that even in a modern, urban city like Mumbai, even the teachers are surveyed are not 100% aware of the Right to Education as a fundamental right to citizens. This very clearly illustrates what the actual position may be in the interiors of our country, particularly in the rural areas & hinterlands
- Therefore, the need of the hour for the government is to reach this provision of the constitutions to each and every nook & corner of the country through grass-root movements conducted by every aanganwadi workers & Shikhsa Sevaks go can go to each and every household and spread this awareness
- Mass advertising campaigns by notable brand ambassadors at local level can be roped in to spread the message similar to earlier successful campaigns such as pulse polio, etc
- The government cannot stop at creating awareness alone, it needs to be supported by suitable infrastructure where such basic formal education is made available to each & every child free of cost, knowing well the financial condition of rural India

Conclusion: Right to Education as a fundamental right to every citizen is indeed an applaudable act of the Government of India as education is the cornerstone of progress for any country as literacy levels of population determine the level & rate of progress a country can achieve in all spheres of life, be it economic, social, political, and technical, etc. Lack of literacy causes a country to fall in the vicious circle of unemployment, poverty, uncontrolled population growth leading to further illiteracy and so on. In such circumstances, particularly in context with a country like India, it is important that the importance of education be stressed upon and each and every citizen should and be able to acquire at least basic formal education and the Right to Education is a correct step in that direction.However, just by having laws on paper is not sufficient, the people of this country need to be made aware of the existence of such laws & only when there is awareness, will there be effective implementation & only then will our country progress and slowly find its way out of the developing countries club to the developed countries club.

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LEARNER & CYBER LAWS

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Abstract

Cyber crime has become one of most complex issues global in legal framework, which can be committed without the need of being physically involved. Cyber crime includes all negative activities, misuse or corruption conducted in cyber world either with help of computer or against it. This paper will discuss attitude of college students towards cyber crime & analyse few sections of cyber crime on social marketing & intellectual property right of article 66(A)

Keywords*: cyber crime, attitude of college students, article 66 (A)*

Introduction: Rapid development of internet and computer technology globally has led to the growth of new forms of transnational crime especially internet related. These crimes have virtually no boundaries & may affect any country across the globe. There is need for awareness & enactment of necessary legislation in all countries for prevention of computer related crime.Any illegal behaviour directed by means of electronic operations that targets the security of computer systems and the data processed by them is termed cyber crime. For example computer hacking, spoofing, e-mail bombing, internet time theft, web hacking, cyber stalking, pornography, software piracy and cyber terrorism etc.Anyone who has access to a computer and a telephone network is free to get hooked to the Internet. This uncontrollable growth of the Internet makes the need for regulation even more badly felt.Systems across the globe have many different rules governing the behaviour of users. These users in most of the countries are completely free to join/ leave any system whose rules they find comfortable/ not comfortable to them. This extra flexibility may at times lead to improper userconduct. Also, in the absence of any suitable legal framework, it may be difficult for System Administrators to have a check on Frauds, Vandalism or Abuses, which may make the life of many online users miserable.In this context, there is one provision in the cyber law which has got the attention of all stakeholders, i.e. section 66A of the Information Technology Act, 2000. In India, there have been many controversies over the use of this section. Kolkata-based professor AmbikeshMahapatra was arrested for forwarding caricature/cartoons on Facebook. The Ravi Srinivasan Twitter case showed how a person's tweets could be brought under the ambit of section 66A. Mumbai residents KV Rao and Mayank were arrested for allegedly posting offensive comments against some leaders on their Facebook group. This research paper aims to explain and analyse fewsection of 66A Common types of Cyber Crimes like harassment through e-mails, Dissemination of obscene material on the Internet , Hacking/cracking, Indecent exposure, Computer vandalism, Transmitting virus, Unauthorised control over computer system, Against Government, Private Firm, Company, Group of Individuals like Hacking & Cracking, Possession of unauthorised information,Cyber terrorism against the government organisationetc

Objectives of the Study:

1. To study the attitude of college students towards cyber crimes
2. - To analyse few sectionof 66A of the Information Technology Act,(2000)

Delimitations of the study: The Study is limited only college students of English medium schools in Ulhasnagar &kalyan region.It is limited with fewsection of 66A of the Information

Technology Act,(2000) like some Common types of Cyber Crimes like harassment through e-mails, Dissemination of obscene material on the Internet , Hacking/cracking, Indecent exposure, Computer vandalism, Transmitting virus, Unauthorised control over computer system, Against Government, Private Firm, Company, Group of Individuals like Hacking & Cracking, Possession of unauthorised information,Cyber terrorism against the government organisation etc

Methodology: Survey Method:In this study, the researcher has employed the survey method as the method of research, where in the research is carried out by the use of a detailed and structured questionnaire.

Sample Size: In this study, 30 college students from aided section & 30 college students from unaided sectionwereselected from English medium.Samp [e size is 60

Tools and technique: Questionnaires: To collect primary data from college students the researcher has made use of a self-made questionnaire for collecting the data from the students of from different college of English medium schools of Kalyan and Ulhsnagar region, in order to study the attitudes of the college students towards cyber crime.

Data collection :Data collected through questionnaire was analyzed with the help of frequency & percentage. For qualitative data, a simple statistical procedure was used.

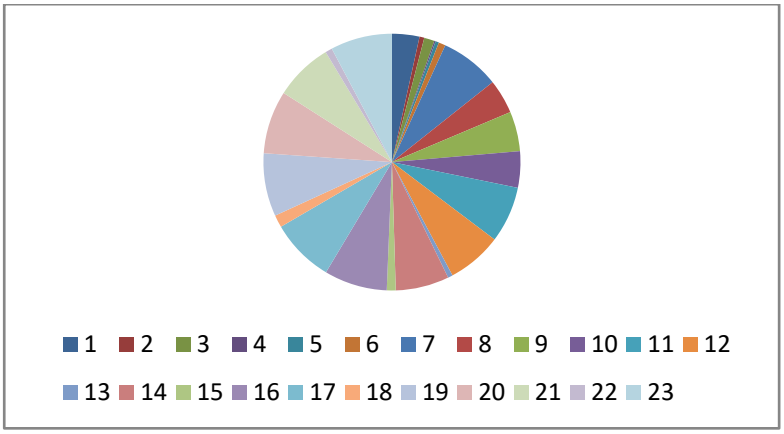
Analysis of Questionnaire: Questionnaire consists 30 items, which are analysed and shown in following table

Table 1

	Variable	**Frequency (yes)**	**percentage**
1	access data of other's computers	24	40
2	damage data of others computer	4	7
3	send offensive messages	9	15
4	unauthorised data	1	2
5	committing mischief	3	5
6	data spying	6	10
7	computer frauds	52	87
8	Forgery of prohibitive data	30	50
9	alteration of data	29	58
10	annoyance &inconvenience	32	53
11	false entry in an authentic deed	49	82
12	false entry in permit licence	48	80
13	send e- mail message to mislead	4	7
14	accessing electronic record of public servant	47	78
15	damage computer material of any business/ e-commerce	8	13
16	upload videos which destroy image of person	55	92
17	destroying computer data of public document	56	93
18	destroying computer data of private document	11	18
19	accessunauthorised data with intention to commit offences	55	92
20	Access of unauthorised data of	55	92

	computer services		
21	Access of unauthorised data of National defence	51	85
22	Access of unauthorised data of finance	6	10
23	Access of unauthorised data of a government	54	90

The following graph represents percentage of different variables



Major findings of study: Following are the major findings of study

1. 40% of College Students access data of other's computers.
2. 7% of College Students like to damage data of others computer.
3. 15% of College Students like to send offensive messages through mass media
4. 2 % of College Students access unauthorised data of computer and computer material
5. 5 % of College Students like committing mischief with other's data.
6. 10 % of College Students like data spying.
7. 87% of College Students won't do computer frauds.
8. 50% of College Students will not do Forgery of prohibitive data,
9. 58% of College Students like doing alteration of data of computer material
10. 53% of College Students like to send any information which is false, but for the purpose of causing annoyance &inconvenience through communication device
11. 82% of College Students won't do false entry in an authentic deed of computer data
12. 80% of College Students don't like false entry in permit licence or passport of computer data
13. 7% of College Students like to send electronic mail message to mislead the recipient
14. 78% of College Students don't like accessing electronic record made wrongfully by public servant
15. 13% of College Students like to destroy or damage computer material of any business/ e-commerce
16. 92% of College Students don't like to upload videos which destroy image of person
17. 93% of College Students don't like to destroy computer data of public document.
18. 18% of College Students like to destroy computer data of private document.
19. 92% of College Students don't like accessunauthorised data with intention to commit offences/ computer crimes
20. 92% of College Students won't use unauthorised data and interception of computer services

21. 85% of College Students don't like accessing computer information without authorisation related to National defence or foreign relation

22.10% of College Students intentionally access computer without authorisation to obtain financial Information of organisation

23. 90% of College Students don't like accessing unauthorised computer data of a government department.

Conclusion: Result shows there is increase in number of such crimes in this area is expected which demands for greater attention of lawmakers. Virtual world is fraught with real dangers, so students should be cautious when using internet and social media

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Manish Lunker, Cyber Laws: A Global Perspective

A STUDY OF THE MOBILE LEARNING PRACTICES AMONG THE HIGHER SECONDARY STUDENTS

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Abstract

In the recent times,, mobile technology has become a leading technology in the support of educational outcomes. The researcher has undertaken a descriptive research using survey method.This study investigated the mobile learning practices among the higher secondary students in Ulhasnagar area. The objectives were to explore the availability of mobile technology for learning; its costs; learning trends, institutional policies, and opinion towards mobile learning. These factors would be explored to identify implications for pedagogical applications. The study adopted qualitative survey, in which the quantitative data were collected by using a questionnaire with a sample of 60 students from three junior colleges The findings of the research would pave way for the teachers and institutions to take the necessary actions and steps for providing guidance to students about the effective uses of mobile technology because successful use of technology in learning largely depends on appropriate pedagogy and teacher support.

Keywords: *Mobile learning; higher education*

Mobile learning (m-learning) is education via the Internet or network using personal mobile devices, such as tablets and smartphones to obtain learning materials through mobile apps, social interactions and online educational hubs. It is flexible, allowing students access to education anywhere, anytime.Mobile learning provides a way for educational institutions to deliver knowledge and educational content to students on any platform, anyplace and at the time of need. Students use mobile apps and tools to complete and upload assignments to teachers, download course instruction and work in online social groups to complete tasks. The phrase mobile learning is most often used to describe the technology — the mobile devices and apps used in the classroom, however it may also be used to describe the support of always-on learning with mobile technology.A mobile learning activity is classified as this type when 1) the learners have more psychological and communication space with their instructor or institutional support; 2) the learners are involved in group learning or projects where they communicate, negotiate, and collaborate with each other; 3) learning materials or the rules of activity are delivered from the predetermined program through mobile devices; and 4) transactions mainly occur among learners, and the instructor or teacher has minimal involvement in facilitating the group activity (Park, 2011).

Importance of mobile learning: Mobile learning (m-learning) happens on a smaller form-factor (screen) than conventional desktop e-learning and is often undertaken by people on the go.This has encouraged instructional designers to embrace a bite-sized learning paradigm, i.e., smaller, specific learning sessions that are easy to digest, than they might design for a more conventional e-learning audience. This highly granular approach gives m-learners great flexibility in what they learn and when they learn it. They don't have to spend an hour going through a comprehensive course when they have access to a five-minute video that tells them the specific thing(s) they need to know.And this can happen on a device that learners are comfortable using, that's always with them, always on—and increasingly one that their employer doesn't have to purchase, maintain or upgrade!

Benefits of Mobile Learning: The main mobile learning benefits are:

1. **Learning Flexibility**: Online learning created flexibility by eliminating the need for learning to happen at a set time and a set place. Now mobile takes learning flexibility even further by making instructional content such as videos, podcasts, and other multimedia formats available on smartphones and tablets. What's more, learners have the added flexibility of being able to access this content on their mobile devices whenever and wherever they want.
2. **Improved Completion And Retention Rates:** Learning only happens when instructional content is completed and key points are retained. Mobile learning is designed to create engagement, which leads to course completion. And being that mobile learning is also tailored to fit the device usage habits and learning patterns of today's learners, the result is higher rates of retention.
3. **Online Learning Communities**: Today's younger employees enjoy collaborating with others in the workplace. And mobile devices are important tools for engaging learners towards the establishment of online learning communities where more effective learning can take place.
4. **Learning on Multiple Devices:** Employee training needs to be convenient. And technology makes it possible for the same e-learning courses to be available on all devices an employee might interact with on a daily basis, from PCs and laptops to tablets and smartphones.
5. **Better Performance:** Employees prefer learning methods that don't disrupt their daily routines. Information must be made easy to access while at work. The result is the creation of an employee learning habit that supports a higher quality of workplace performance.
6. **A Clear Path to Learning**: Many of today's mobile learning platforms for organizations are integrated with phone-based learning reminders and organizers. This allows learners to receive ongoing alerts and updates on their courses, which they can check on their smartphones while on the go, anywhere and at any time. Learners can also easily pick up coursework right where they left off, without losing the content they previously studied. This makes for a more personalized learning path than can be achieved in a non-mobile learning platform.

Factors affecting the use of Mobile learning in teaching learning process:

•Administrators and faculty members have different visions about mobile learning.
•There is resistance letting students bring devices into the classroom.
•Main concern: mobile devices distract students from learning. (Do they?)
•Concerns are valid: students often do not have the right discipline to develop healthy digital behavior Students' mobile learning practices depend on personal factors like age, gender and interest. Type of devices, network availability, battery backup, screen size and resolution, apps and other features available in the devices are some of the technological considerations, which influence actual uses of mobile for learning. Similarly, institutional policy, the nature of curriculum and the assessment system also influence teaching methodology. Other important factors include teachers, parents, and peers' support for mobile learning.

Review of relatedliterature: This study was conducted in May 2014, one year prior to the great earthquake in Nepal which badly affected the Gorkha District where this study was conducted. Theoretically, mobile learning takes place at any time anywhere (Kukulska-Hulme& Shield, 2008, cited in Shohel& Power, 2010). However, students' time for other activities, such as part time employment, and family commitments might contribute to variation in the mobile learning practices. Cost of devices, call rates, mobile data charges, availability of Wi-Fi for internet connections are some of financial considerations, which might also limit the use of devices.

Statement of the study: A study of the mobile learning practices among the higher secondary students.

Significance of the study: In a technological era, mobile learning is being practiced in classrooms to supplement teaching learning. However the researcher wanted to investigate whether the higher secondary students use mobiles in the teaching learning process.In this context, investigating students' current mobile learning practices will be significant since it will provide some descriptive data for educational policy maker, planners, administrators, and teachers.

Objectives of the study : The main objective of this study was to explore the mobile learning practices of higher secondary students in Ulhasnagar areas. Its other objectives were to explore the availability of technology, financial consideration of mobile learning gadgets, data charge, students' affordability, institutional policy and practices, teachers' and parental support to students in mobile learning. It also aimed to suggest some implications for teaching learning and research. This study was designed to answer the following research questions: 1. What is the technological and financial readiness for mobile learning among undergraduate students in Ulhasnagar colleges? 2. How do students use their mobile devices for learning? 3. What are their views on mobile learning?

Research design This research used a mix methods design employing both quantitative and qualitative techniques, as an exploratory and descriptive research project. A student survey was conducted with a questionnaire containing both closed and openended questions. The researcher administered the questionnaire in person to ensure that participants could seek clarification of the questions on the spot. Most of the questions were answered with relevant information.

Sample and sampling method used: the size of the sample was 60 students studying in three different colleges in Ulhasnagar areas. Random sampling method was used to collect the data from both eleventh and twelfth standard students.

Findings of the study: :Quantitative data:

1) **Demographical profile of the respondents**: The first section of the questionnaires had questions on the background information of the respondents. An analysis of the first section of the questionnaire generated a demographic profile of the respondents, which showed that 90% of the respondents were females and only 10% were male. Their ages ranged from 15 to 18years with a mean age of 17-18 years, their parents qualifications ranged from SSC,HSC,graduate and postgraduate with 35%,20%,26%, and 27% respectively.83% of the student's father are working, 17% of the mother's of the student's are working.
2) **Accessibility and cost**: The second section of the questionnaire explored students' accessibility to mobile technology and financial costs. 75% of the students had a mobile phone. Majority of (75%) had smart mobile phones and (25%) had basic mobile phones. However, only 30% of them had computers (47% laptop &30% desktops). Similarly, 30% had a digital camera, 20% had an iPad and 40% had Mp3 players. Seventy-five percent of respondents had Internet connections on their mobile phones. The average price of their mobile phone was above 7000.Thirty percent of the respondents paid between 4000-7000 for their mobile phones. The average monthly expense of respondents was upto 300 per month. 58% of them spend uptoRs300 per month for making calls and for data use.

3) **General uses of mobile technology**: The third section of the questionnaire sought to find how the respondents used their mobile phone in day-to-day life. 78% of the respondents used their mobile phones for making phone calls and sending text messages. Email was used by 33% the respondents, 78% of them used their mobile devices for entertainment, 50% used them for browsing the internet, 30% for playing games, 30% for social networking, 70% for reading online news, and 83% used them for taking photos.
4) **Mobile learning practices**: The fourth section investigated students' mobile learning environments and practices. The majority of the respondents (78%) used their mobile devices for learning outside their classroom. Only 22% of the respondents stated that they wanted to use their mobile devices in class. Nobody reported that the classroom was their favorite place for mobile learning. Thirty two percent of the respondents were sure that they could use a mobile device for learning in the class for learning. Majority of the students(68%) were not using mobile device in the classroom for learning. Majority of the students (85%) reported that they were not allowed to use mobile phones in class whereas 15% reported that they were allowed to use mobile phones for learning in class. The majority of the respondents (63%) reported that they did not get any support from their teachers for mobile learning.
5) **Student's perception of mobile learning**:Majority of the students (63%) believed that mobile phone can facilitate learning. 53% of the students were of the opinion that the campus administration should allow students to use mobile in the class for learning purpose. 55% of the students felt that they need orientation/training for mobile learning. Majority of the students (62%) felt that the campus administration should not ban on mobile phone use in the class. Majority of the students (65%), felt that they will use mobile appropriately in the class if they are allowed to use. Majority of the students (73%) felt that teachers should guide students for effective mobile learning. Majority of the students(62%) , felt that Mobile phone affects studies. Fifty percent of students felt that Mobile learning can replace traditional face to face class. Most of the students (85%) felt that Mobile learning should be integrated in formal education system. Majority of the students (65%) , felt that the teachers have positive attitude towards mobile learning.

Discussion, Conclusion and Recommendations The present study gathered and analyzed data to understand current trends regarding mobile learning practices among undergraduates in Ulhasnagar. The result confirmed that students generally have a sound technological understanding and positive attitude towards mobile learning. Almost all of the students have a mobile phone with a good number having smart phones. Cost of technology is an important issue. They can buy low price smart phones. However, use of the phones for learning is expensive. No higher institution provides free Wi-Fi facilities for the students. They are using their mobile devices mainly for checking word meanings, browsing the web, and accessing multimedia. It shows that students need to learn and practice several other ways for the optimal use of their mobile devices for both formal and informal learning.

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FINANCIAL MANAGEMENT AND ELECTRONICS ACCOUNTING

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Abstract

Financial Management is concerned with acquisition and use of funds by business organizations. It includes planning, directing, monitoring, organizing and controlling of the monetary resources of organizations. Estimating financial requirement, deciding capital structure, selecting a source of finance, proper cash management and implementing financial control are the various areas to be covered by financial management. Financial management in public and private sectors differ significantly. Electronic Accounting is the application of internet technologies to the business accounting function.E-Accounting involves performing regular accounting functions, accounting training and education and accounting research through various computer/internet based accounting tools such as Digital tool kit, International Web based materials, internet based accounting software and Electronic Financial Spreadsheet tools to provide efficient decision making. Main problem in E – Accounting is hesitation to learn something new. Challenges related to safety of data, manipulation of programs, software stealing and few more are faced in E-Accounting, which can be resolved by some safety measures.

Keywords: *Financial Management, Capital Structure, Procurement, Allocation, Control, E-Accounting.*

Financial Management

Introduction:Finance is the life-blood of the business. Without Finance neither any business can be started nor successfully run. The word Finance was originally a French word. In 18th century, it was adopted by English speaking communities to mean "TheManagement of money", since then, it has found a permanent place in the English dictionary. Management is the art of getting things done through people in order to achieve defined objectives, as finance has a vital role in business, hence it should be managed efficiently by the Financial Manager.Financial Management is broadly concerned with the acquisition and use of funds by a business organization. Financial Management refers to efficient and effective management of funds in such a way so as to achieve the objectives of the organization. It includes Planning, Directing, Monitoring, Organizing and Controlling of the monetary resources of an organization.It means to apply general management principles to financial resources of the enterprise. It is specialized function associated with the Top Level Management.

The term applies to an Enterprise or Company's financial strategy, it includes:

1. How to raise the Capital and
2. How to allocate the Capital i.e. Capital Budgeting.

DEFINITIONS OF FINANCIAL MANAGEMENT:

- "Financial Management is an area of financial decision making, harmonizing individual motives and Enterprise goals." WESTON AND BRIGHAM
- "Planning is an inextricable dimension of financial management.The term Financial Management connotes that funds flow are directed according to some plan." JAMES VAN HORNE

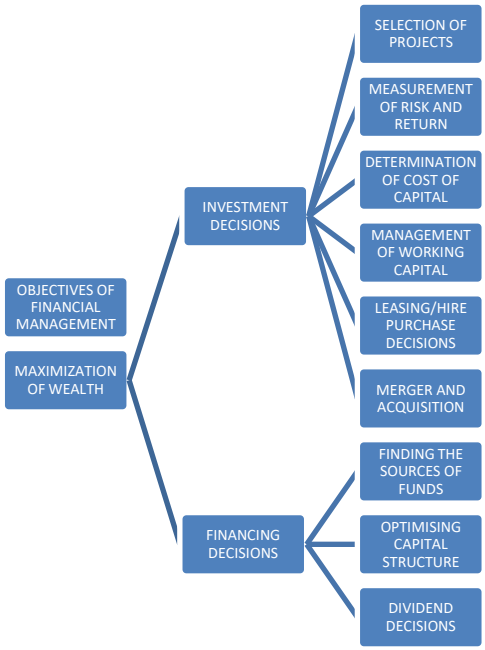
OBJECTIVES OF FINANCIAL MANAGEMENT: Financial Management is basically concerned with procurement, allocation and control of financial resources of an enterprise.

Objectives of financial Management:

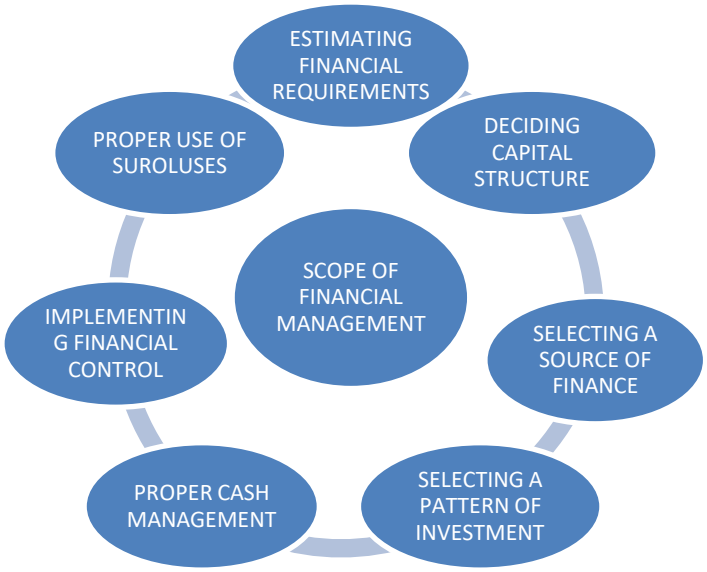
1. One of the most important objectives of financial management is to maximize the value of shares of their shareholders.
2. Profit maximization is concerned as the goal of Financial Management.
3. To ensure regular and adequate supply of funds to the concern.
4. To ensure optimum utilization of funds.
5. To ensure adequate returns to the shareholders.
6. To ensure safety on investment i.e., funds should be invested in safe ventures so that adequate rate of return can be achieved.
7. To plan a sound and fair capital structure, so that a balance is maintained between Debt and Equity Capital.
8. To co-ordinate with the other functions or departments.

NATURE OF FINANCIAL MANAGEMENT:

The nature of Financial Management cab be summarized as given below:



SCOPE OF FINANCIAL MANAGEMENT:



Functions of Financial Management:

- **Estimating the amount of capital required**: This one is the foremost function of the financial manager. Business firms need capital for purchase of fixed assets, to meet working capital requirements and for modernization and expansion of business. The financial manager makes estimate of funds required for both short-term and long-term.
- **Determining capital structure:** Once the requirement of funds has been determined, a decision regarding the type and proportion of various sources of funds, has to be taken. For this, financial manager has to determine the appropriate mix of Equity and Debt, so as to achieve maximum shareholders wealth with minimum cost of capital.
- **Procurement of funds:** The next step is to procure the funds required for the business. It may require negotiation with creditors and financial institutions, issue of prospectus, etc. The procurement of funds depends upon the cost of raising funds, general market conditions, choice of investors, government policy,etc.
- **Utilization of funds:** The funds procured by the financial manager are to be prudently invested in various assets so as to ensure maximum return on investment. While taking investment decisions, three important principles of SAFETY, PROFITABILITY and LIQUIDITY should be considered by financial manager.
- **Disposal of profits:**The Financial Manager has to take decision regarding,

  I. How much to retain profits for ploughing back and

  II. How much to distribute as dividend to shareholders out of profits of the company.
- **Management of cash:** Management of cash and other current assets is an important function of Financial Manager. It involves estimating the cash inflows and cash outflows to ensure that there is sufficient availability of funds for purchase of materials and meeting day-to-day expenses.
- **Financial Control:**One of the important function of Financial Manager is evaluation of financial performance. The techniques of financial control and evaluation are budgetary control, cost control, internal audit, ratio analysis, etc.

FUNDAMENTAL DIFFERENCES BETWEEN PUBLIC AND PRIVATE SECTOR FINANCIALMANAGEMENT: Financial Management in the public and private sector differ significantly. One who has experience in one of these areas may not necessarily be ready for financial management in other sector due to some of these differences:

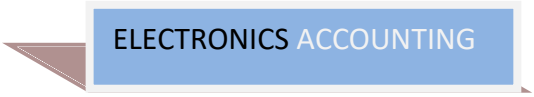
ACCOUNTING:Accounting methods used in public and private sector financial management differ significantly. In private sector, financial managers and accountants are bound by the Generally Accepted Accounting principles [GAAP], methodology for accounting [double-entry accounting method], used to ensure financial accuracy and uniformity. In public sector, these methods may also be used, but it is not that unusual to deviate from them, as well. This is observed in areas like budgeting, where public sector financial managers are not necessarily bound by accrual accounting methods.

PROFITS:Government agencies are not necessarily profit-driven as private businesses and corporations tend to be. In private sector, financial managers are generally motivated by profits. On the other end, public sector financial managers may not necessarily required to maintain a bottom line or a minimum level of profitability, they may be task-oriented.

CONTEXT: Another difference between public and private sector financial managers is the context in which they operate. The profit-driven financial managers in the private sector will generally have the leeway to get done what needs to be done in order to maintain the bottom line. Public sector financial managers may be subject to legislative and regulatory constraints that prevent autonomous action.

DECISIONS: The differences in the decision making process between private and public sector financial managers are closely related to the context of operation. In private sector financial management, decisions are made by top level and followed by next level on hierarchy of business. In public sector management, it is not so simple. Public sector financial managers have to work with political constituencies and navigate between competing interest groups. Decisions can be handed down to the next level only after some type of public sanction or approval.

ELECTRONICS ACCOUNTING



INTRODUCTION: Technology plays a vital role in today's business environment. Many companies greatly depend upon the computers and software to provide accurate information, in order to effectively manage their business. Information technology and systems have tremendous impact on productivity and performance of both manufacturing and service organizations, particularly accounting has been affected to the highest degree.Electronic Accounting/E-Accounting/Digital Accounting is the application of internet technologies to the business accounting function. E-Accounting involves performing regular accounting functions, accounting training and education and accounting research through various computer/internet

based accounting tools such as Digital tool kit, International Web based materials, internet based accounting software and Electronic Financial Spreadsheet tools to provide efficient decision making. E-Accounting does not have a standard definition but merely refers to the changes in accounting due to computing and networking technologies. Most companies use E-Accounting system for recording and presenting their financial information. The system allows them to record business transactions accurately and generate financial reports quickly for management review. Main problem in E – Accounting is hesitation to learn something new but as number of transactions is increasing, it will be more popular in times to come.

USES OF E ACCOUNTING:

- Accounts payable
- Accounts receivable
- Payroll
- Job costing
- Financial write-up and reporting
- Bank and account reconciliations
- Quarterly tax reporting
- Compliance reporting
- Tax return preparation
- Internal financial consultant
- Establish the control system
- Inform those concerned of financial condition
- Supply the business with adequate information
- Maintain contact with government agencies, bankers, etc.
- Provide insight, courses of action
- Facilitate future planning and growth

BENEFITS OF E-ACCOUNTING: The need for E-Accounting arises from the advantages of accuracy, speed and lower cost of handling the business transactions:

- Saves time and money.
- Reduction in paper work.
- Transactions that affect the company's Bank account can be sent automatically to the online accounting software.
- Data can be kept confidential.
- Data and reports are accurate and reliable.
- Handle large of transactions with accuracy and speed.

CHALLENGES AND PROBLEMS FACED IN E ACCOUNTING

- Manipulation of programs
- Theft of data.
- Stealing software.
- Controlling access.
- Data encryption.
- Security for backup.
- Network control&Passwords.

CONCLUSION: Financial Management is the mixture of financial planning, administration and control. Financial Corporation deals with how it obtains and allocates funds. The financial manager has a vital role which impacts directly on the activities of the commercial and personnel team. E-Accounting facilitates to record business transactions accurately and generate financial reports quickly for management review. Some challenges of data encryption, stealing software, controlling access and some other problems are faced in E- Accounting, which can be resolved by installing more safe software such as, SAFE software version 15, etc. Overall E-Accounting is beneficial for organizations as it saves time and money and provides accurate and reliable data to management.

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COMPUTER VIRUSES: AN OVERVIEW

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Abstract

In recent years the detection of computer viruses has become common place. It appears that most part of these viruses have been 'benign' or only mildly destructive. However, whether or not computer viruses have the potential to cause major and prolonged disruptions of computing environments is an open question. This paper discusses computer viruses and how they differ from Trojans, worms, and hoaxes. The term virus is often used as a generic reference to any malicious code that is not, in fact, a true computer virus. This paper discusses viruses, Trojans, worms, and hoaxes and ways to prevent them.

Keywords: *Benign, Trojans, worms, Virus hoaxes.*

Introduction: A computer virus is a program file capable of reproducing its own special code and attaching that code to other files without the knowledge of the user. When the newly-amended program or file runs, the virus code runs, also, and searches out other files to which it can adhere. These other files may reside on a floppy disk or the computer hard drive; they may range from common word processor programs or spreadsheets to e-mail address books.A computer virus we can say is a small software program or a piece of code that is loaded on your computer system while using internet can spread from one computer to another and running without your knowledge. Computer viruses can also replicate and they are man-made. How the replication done in the computer virus? A simple virus that can make copy of itself over and over again and that would be easy to produce. Sometimes a simple virus is very dangerous because it stored in your system available memory and when after some time all the small virus collected it may halt you system. A virus has a capacity to corrupt the files located in you system and it also has a capability to spread the virus via e-mail program and effect the system other email addresses in your online address book. It can also delete everything on your hard disk that would be the worst case scenario. A virus can also affect your system security. In 1987, a virus infect ARPANET, then the Defence department and other universities using large network, many antivirus programs become available. Such programs are invent because they check periodically your system and prevent it from known viruses.

OBJECTIVE:

1) To study and know the concept of virus.
2) To study and understand the recognized types of viruses.
3) To understand the difference between viruses, worms and Trojans.
4) To know what is not a virus.
5) To analyze and understand safe computing.

What is a virus? A computer virus is a small program written to alter the way a computer operates, without the permission or knowledge of the user. A virus must meet two criteria:

- It must execute itself. It will often place its own code in the path of execution of another program.
- It must replicate itself. For example, it may replace other executable files with a copy of the virus infected file. Viruses can infect desktop computers and network servers alike.

- Some viruses are programmed to damage the computer by damaging programs, deleting files, or reformatting the hard disk. Others are not designed to do any damage, but simply to replicate themselves and make their presence known by presenting text, video, and audio messages. Even these benign viruses can create problems for the computer user. They typically take up computer memory used by legitimate programs. As a result, they often cause erratic behavior and can result in system crashes. In addition, many viruses are bug-ridden, and these bugs may lead to system crashes and data loss.There are five recognized types of viruses:
  - **File infector viruses:**File infector viruses infect program files. These viruses normally infect executable code, such as .com and .exe files. The can infect other files when an infected program is run from floppy, hard drive, or from the network. Many of these viruses are memory resident. After memory becomes infected, any uninfected executable that runs becomes infected. Examples of known file infector viruses include Jerusalem and Cascade.
  - **Boot sector viruses:**Boot sector viruses infect the system area of a disk--that is, the boot record on floppy disks and hard disks. All floppy disks and hard disks (including disks containing only data) contain a small program in the boot record that is run when the computer starts up. Boot sector viruses attach themselves to this part of the disk and activate when the user attempts to start up from the infected disk. These viruses are always memory resident in nature. Most were written for DOS, but, all PCs, regardless of the operating system, are potential targets of this type of virus. All that is required to become infected is to attempt to start up your computer with an infected floppy disk thereafter, while the virus remains in memory, all floppy disks that are not write protected will become infected when the floppy disk is accessed. Examples of boot sector viruses are Form, Disk Killer, Michelangelo, and Stoned.
- **Master boot record viruses:**Master boot record viruses are memory resident viruses that infect disks in the same manner as boot sector viruses. The difference between these two virus types is where the viral code is located. Master boot record infectors normally save a legitimate copy of the master boot record in a different location. Windows NT computers that become infected by either boot sector viruses or master boot sector viruses will not boot. This is due to the difference in how the operating system accesses its boot information, as compared to Windows 95/98. If your Windows NT systems is formatted with FAT partitions you can usually remove the virus by booting to DOS and using antivirus software. If the boot partition is NTFS, the system must be recovered by using the three Windows NT Setup disks. Examples of master boot record infectors are NYB, AntiExe, and Unashamed.
  - **Multipartite viruses:**Multipartite (also known as polypartite) viruses infect both boot records and program files. These are particularly difficult to repair. If the boot area is cleaned, but the files are not, the boot area will be reinfected. The same holds true for cleaning infected files. If the virus is not removed from the boot area, any files that you have cleaned will be reinfected. Examples of multipartite viruses include One Half, Emperor, Anthrax and Tequilla.
  - **Macro viruses:**These types of viruses infect data files. They are the most common and have cost corporations the most money and time trying to repair. With the advent of Visual

Basic in Microsoft's Office 97, a macro virus can be written that not only infects data files, but also can infect other files as well. Macro viruses infect Microsoft Office Word, Excel, PowerPoint and Access files. Newer strains are now turning up in other programs as well. All of these viruses use another program's internal programming language, which was created to allow users to automate certain tasks within that program. Because of the ease with which these viruses can be created, there are now thousands of them in circulation. Examples of macro viruses include W97M.Melissa, WM.NiceDay, and W97M.Groov.

- **What is a Trojan horse?** Trojan horses are impostors--files that claim to be something desirable but, in fact, are malicious. A very important distinction from true viruses is that they do *not* replicate themselves, as viruses do. Trojans contain malicious code, that, when triggered, cause loss, or even theft, of data. In order for a Trojan horse to spread, you must, in effect, invite these programs onto your computers--for example, by opening an email attachment. The PWSteal.Trojan is a Trojan.
- **What is a worm?** Worms are programs that replicate themselves from system to system without the use of a host file. This is in contrast to viruses, which requires the spreading of an infected host file. Although worms generally exist inside of other files, often Word or Excel documents, there is a difference between how worms and viruses use the host file. Usually the worm will release a document that already has the "worm" macro inside the document. The entire document will travel from computer to computer, so the entire document should be considered the worm. PrettyPark.Worm is a particularly prevalent example.
- **What is a blended threat?** Blended threats combine the characteristics of viruses, worms, Trojan horses, and malicious code with server and Internet vulnerabilities to initiate, transmit, and spread an attack. By using multiple methods and techniques, blended threats can rapidly spread and cause widespread damage. Characteristics of blended threats include the following:
  - Causes harm:Launches a Denial of Service (DoS) attack at a target IP address, defaces Web servers, or plants Trojan horse programs for later execution.
  - Propagates by multiple methods:Scans for vulnerabilities to compromise a system, such as embedding code in HTML files on a server, infecting visitors to a compromised Web site, or sending unauthorized email from compromised servers with a worm attachment.
  - Attacks from multiple points:Injects malicious code into the .exe files on a system, raises the privilege level of the guest account, creates world read and writeable network shares, makes numerous registry changes, and adds script code into HTML files.
  - Spreads without human intervention:continuously scans the Internet for vulnerable servers to attack.
  - Exploits vulnerabilities:Takes advantage of known vulnerabilities, such as buffer overflows, HTTP input validation vulnerabilities, and known default passwords to gain unauthorized administrative access.Effective protection from blended threats requires a comprehensive security solution that contains multiple layers of defense and response mechanisms.

- **What is an expanded threat?** An expanded threat is an application or software-based executable that is either independent or interdependent on another software program, and meets one or more of the following criteria:

- Is considered to be non-viral in nature (that is, does not spread on its own using a virus-like mechanism, or meet the definition of a worm or Trojan horse), yet conforms in a significant way to the general definition of a category of expanded threat.
- Has been submitted to Symantec by a critical number of either corporate or individual users within a given timeframe. The timeframe and number may vary by category and by threat.

- Can be shown to create a general nuisance related to one of the specified threat categories, or exhibits behavior that is as yet undefined under a broader category of expandedthreat

What is a virus hoax? Virus hoaxes are messages, almost always sent by email, that amount to little more than chain letters. Some of the common phrases used in these hoaxes are:

- If you receive an email titled [email virus hoax name here], do not open it!
- Delete it immediately!
- It contains the [hoax name] virus.
- It will delete everything on your hard drive and [extreme and improbable danger specified here].
- This virus was announced today by [reputable organization name here].
- Forward this warning to everyone you know!
- Most virus hoax warnings do not deviate far from this pattern. If you are unsure whether a virus warning is legitimate or a hoax, additional information is available at the Symantec Security Response hoaxes site.

- **What is not a virus?** Because of the publicity that viruses have received, it is easy to blame any computer problem on a virus. The following are not likely to be caused by a virus or other malicious code:

- Hardware problems. There are no viruses that can physically damage computer hardware, such as chips, boards, and monitors.
- The computer beeps at start up with no screen display. This is usually caused by a hardware problem during the boot process. Consult your computer documentation for the meaning of the beep codes.
- The computer does not register 640 KB of conventional memory. This can be a sign of a virus, but it is not conclusive. Some hardware drivers such as those for the monitor or SCSI card can use some of this memory. Consult with your computer manufacturer or hardware vendor to determine if this is the case.
- You have two antivirus programs installed and one of them reports a virus. While this could be a virus, it can also be caused by one antivirus program detect the other program's signatures in memory. For additional information, see should you run more than one antivirus program at the same time?
- You are using Microsoft Word and Word warns you that a document contains a macro. This does not mean that the macro is a virus.
- You are not able to open a particular document. This is not necessarily an indication of a virus. Try opening another document or a backup of the document in question. If other documents open correctly, the document may be damaged.

- The label on a hard drive has changed. Every disk is allowed to have a label. You can assign a label to a disk by using the DOS Label command of from within Windows.

➢ **What is safe computing?**

➢ With all the hype, it is easy to believe that viruses lurk in every file, every email, and every Web site. However, a few basic precautions can minimize your risk of infection. Practice safe computing and encourage everyone you know to do so as well.

General precautions

- Be suspicious of email attachments from unknown sources.
- Verify that attachments have been sent by the author of the email. Threats can send email messages that appear to be from people you know.
- Do not set your email program to "auto-run" attachments.
- Obtain all Microsoft security updates.
- Back up your data frequently. Keep the (write protected) media in a safe place--preferably in a different location than your computer.

Specific to Symantec Endpoint Protection

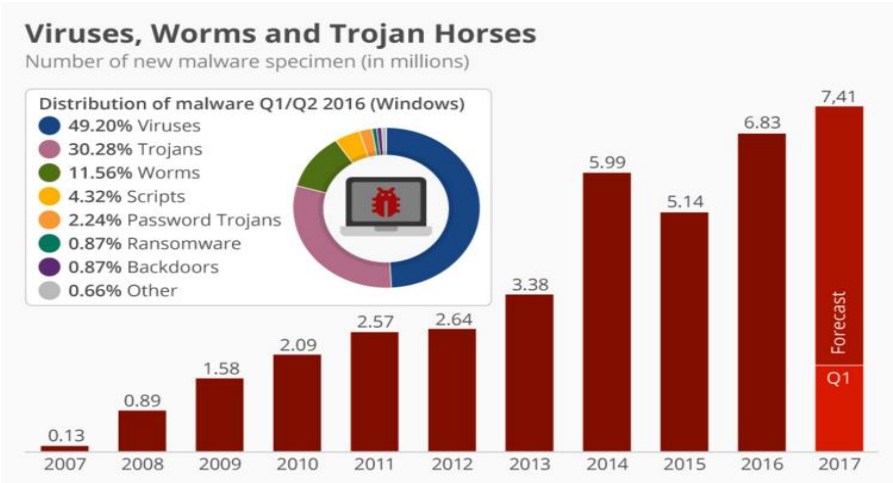
- Make sure that you have the most recent virus and spyware definitions. Symantec Security Response updates Symantec Endpoint Protection definitions in response to new virus threats three times daily. By default, the unmanaged client checks for updates every four hours; the managed client updates from the Symantec Endpoint Protection Manager as soon as new content is available. You can also run Live Update manually. Other content, such as Intrusion Prevention signatures, is updated less frequently, but as needed. For additional information, please see Virus Definitions & Security Updates.
- Always keep Auto-Protect running. Symantec Security Response strongly recommends that you have scans set to scan all files, not just program files.
- Scan all new software before you install it.
- Scan all media that someone else has given you.
- Use caution when opening email attachments. Email attachments are a major source of virus infections. Microsoft Office attachments for Word, Excel, and Access can be infected by Macro viruses. Other attachments can contain file infector viruses. File system Auto-Protect will scan these attachments for viruses as you open or detach them, as do the client email scanners.

LIMITATION: The topic is so vast but due to certain limitations couldn't express in depth. Due to certain situations could not collect primary data.

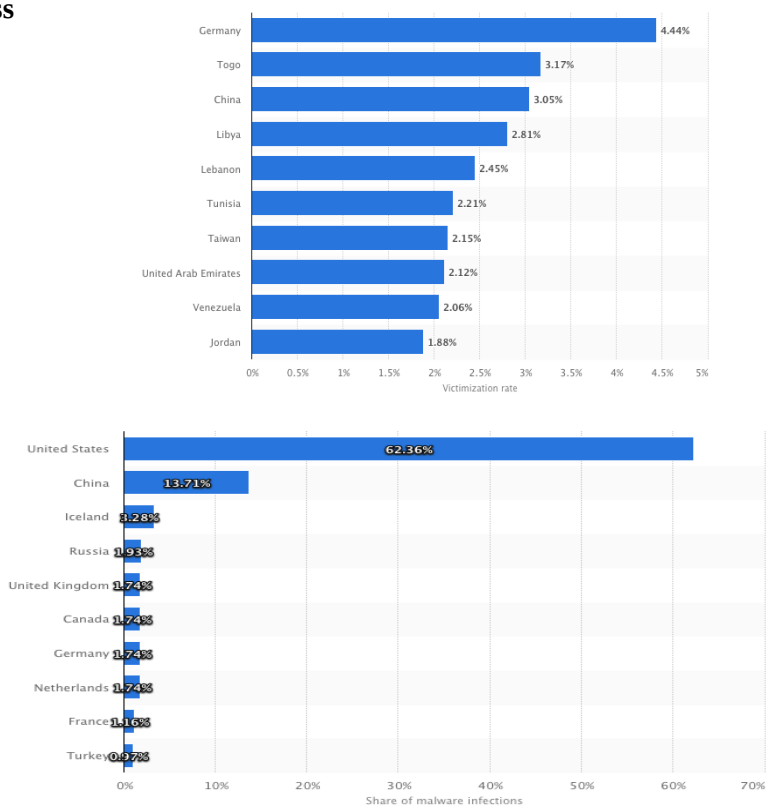
METHODOLOGY: Primary data was not collected for the research paper.

Secondary Data: These condary data has been collected.Forthis purpose, various magazinesand journals have been use dasitisa conceptual paper. Thus,the focus is to know more about the concept,its application and the impact one conomy via other parameters.Therefore,qualitative and quantitative data havebeen used.

This chart shows number of new malware specimen (in millions) and the share of windows-based malware (in percent)

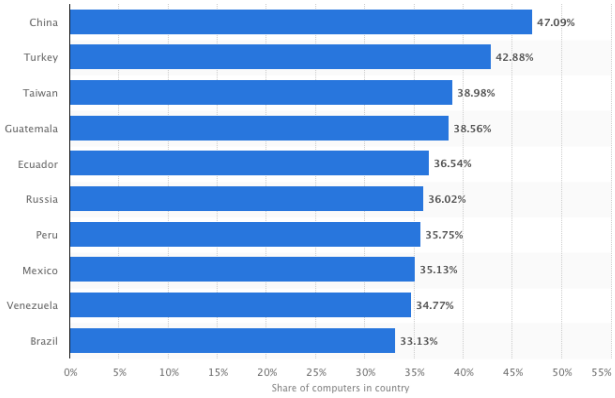


Leading phishing-based Trojans and downloaders hosting countries as of March 2016, by IP address



This statistic shows the share of countries hosting the most phishing-based trojans and downloaders, based on IP address. As of March 2016, the United States hosted 62.36 percent of reported phishing-based Trojans and downloaders.

Countries with the highest rate of malware infected computers as of 4th quarter 2016



The statistic presents the countries with the highest malware infection rates. As of the fourth quarter of 2016, 47.09 percent of computers in China were infected with malware. Turkey was ranked second with a 42.88 percent infection rate.

Countries most affected by banking trojans and PoS/ATM malware in 2017

This statistic shows a ranking of the countries most affected by banking Trojans and PoS or ATM malware in 2017. During the measured year, Germany ranked first with 4.44 percent of malware victims having been attacked by financial malware.

CONCLUSION: Protection of virus is well designed software program which is used in infected computer systems to prevent from viruses, worms and Trojan horses. The main purpose of using Virus protection is to remove any malicious software code which is already infect a computer. Most of the virus protection utilities now bundle anti-spyware and anti-malware ability that belong to anti-virus protection. To secure internet that include some additional capabilities like anti-spam, anti-phishing, firewall, optimization of files and file protection.

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IMPACT OF SOCIAL MEDIA ON EDUCATION OF POST GRADUATE STUDENTS: WITH SPECIAL REFERENCE TO ULHASNAGAR CITY

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Abstract

Nowadays, social media plays an important role in people's life especially the young learners. It is used as a tool to share the ideas and enhances the communication levels through networking. It provides a platform for the discussions and expression of opinions on various burning issues. Apart from this, it is an important tool for education. The present research paper aims to find out the impact of social media on education among the post graduate students in the selected suburb. The outcome of the study conducted through survey method of PG students of four colleges clearly shows the positive as well as the negative impact of the social media. The paper also highlights various merits and demerits of social media used for education. It concludes with certain suggestions to make various tools of social media more effective in the present age of digital revolution.

Key words: *Social media, education, impact, post graduate students*

I. INTRODUCTION: Social Networking sites are termed to as web based services that give an opportunity to individuals to create their own personal profile with the choice of their own list of users and thereby connect with them in an altogether public forum that provides them with features such as chatting, blogging, video calling, mobile connectivity and video/photo sharing. People spend more than usual hours on social networking sites to download pictures, browse through updates seek entertainment and chat around with friends to keep themselves connected to one another. These sites have held an addiction to the youth wherein they find it difficult to concentrate on their work and prefer logging in and jumping across one site to another. Some have derived benefit out of these sites whereas some have become academically challenged by the use of these websites. Individuals have set their own limits as to when and when not to access these websites but we witness very few out of the lot who does not access or make use of these sites at all. Among the different media, WhatsApp as a social networking tool has its own special place. WhatsApp Messenger is a freeware andcross-platform instant messaging and Voice over IP (VoIP). The application allows the sending of text messages and voice calls, as well as video calls, images and other media, documents, and user location.The application runs from a mobile device though it is also accessible from desktop computers; the service uses standard cellular mobile numbers. Originally users could only communicate with other users individually or in groups of individual users, but in September 2017 WhatsApp announced a forthcoming business platform which will enable companies to provide customer service to users at scale. All data is end-to-end encrypted..As of April 22, 2014, WhatsApp had over 500 million monthly active users, 700 million photos and 100 million videos were being shared daily, and the messaging system was handling more than 10 billion messages each day.On August 24, 2014, Jan Koum the CEO and the4 co-founder of WhatsApp announced on hisTwitter account that WhatsApp had over 600 million active users worldwide. At that point WhatsApp was adding about 25 million new users every month, or 833,000 active users per day. With 65 million active users representing 10% of the total worldwide users,India has the largest number of consumers.As of February 2017, WhatsApp has over 1.2 billion users globally.In May 2014,

WhatsApp crossed 50 million monthly active users in India, which is also its largest country by the number of monthly active users.In October 2014, WhatsApp crossed 70 million monthly active users in India, which is 10% of its total user base. Meanwhile, the introduction of Reliance Jio in September 2016 made an enormous increase in the internet users. So in February 2017, WhatsApp crossed 200 million monthly active users in India.Among these increasing users even the students are involved. The internet has revolutionized the way they learn and get education. The traditional classrooms have been converted to virtual classrooms due to social media. But the success rate of using these networking tools needs to be researched. The impact of such networking tool may be positive or negative. So an attempt is made to find out the impact of WhatsApp especially on post graduate education.

II.PURPOSE OF THE STUDY: Here the study was conducted to find out the effect of WhatsApp as a networking tool on the education of post graduate students of selected suburbs.

III. REVIEW OF RELATED LITERATURE:A lot of literature is available on the social networking sites and their impact on the youth of any nation, children, adolescence and families as during the last decade usage of such sites has increased among preadolescents and adolescents. Social networking sites such as Facebook provide individuals with a way of maintaining and strengthening social ties, which can be beneficial in both social and academic settings. But at the same time, these social networking tools have a negative impact as such sites also pose a danger to students' privacy, safety, health and professional reputations if proper precautions are not taken. Colleges and schools of pharmacy would be advised to consider how these issues might affect their students.Andres Kaplan (2010) described in his study that social media is a set of internet based application constructed on the ideological and technological foundation of web. Social media permits the designing and the exchange of user-generated content (Chukwuebuka, 2013).Nowadays, social media is essential for youth in the field of education to learn new trends in education, to improve writing and communicating skills, promoting cultural values, religious beliefs, gathering political information and sharing related links for knowledge enhancement. It also helps to make better life style and plays an important part in the growth and development of the society. (Merriam Encyclopedia, 2001).

The internet and American life project shows that the social media has an impact in the various aspects of American's life. The project covers the different areas of life like demographics, government official and on line elections and policies, education, family, friends and community, health, news and events, internet evaluation, online activities and searches, Public policy, technology, media and use of media (Turow, 2011).Social media is described as a means of connections among people in which they create, share, and exchange information and ideas in virtual communities and networks (Shrestha lucky, 2013). Alison Doyle an American Psychologist (2013) defines social media as an online technology tool that enable people to communicate easily and share information along with text, audio, video, images, podcasts, and other multimedia communication.Anthony J. Bradley (2009) asserts that the social media is inevitable for the vast majority of organizations worldwide. He also accepts the fact that this predictability is not assurance of success as many organizations fail in social-media efforts as they do not follow the social media norms.

IV. OBJECTIVE OF THE STUDY

1) To study the role of WhatsApp as a networking tool among the study group of Post-Graduate students and teachers

2) Toknow the impact of WhatsApp on teaching and learning process of teachers and post-graduate students.

V. METHODOLOGY: The study is limited to the post graduate students in Commerce only. There are four colleges offering post graduate degree in commerce in Ulhasnagar. For the purpose of the study, a survey was conducted on 120 post-graduate students and 20 teachers of the four colleges of Ulhasnagar city. The sample was selected by the convenience sampling method and a survey was conducted to find out the impact of Whatsapp on their education.

VI. FINDINGS OF THE STUDY: From the student survey conducted, the following were the findings:

1) It was surprising to find that all 120 students owned Smartphone. On asking the reason, the majority replied that it is an important networking tool without which life today cannot be imagined. As a result all were a part of their post graduate study group on Whatsapp.

2) Out of 120, 23 students i.e. 19.17% felt that their study group is a time waster as what is discussed in the group can be more clearly understood by attending the lectures. They agreed that repeated questions are asked in the group that creates irritation for them to answer again and again. However, the rest 80.83% i.e. 97 students felt that the group is necessary as it saves time of attending the lectures in the college.

3) 92% students found it informative while 83% students accepted that the group is irritating as the repeated questions are asked by the absent minded students

4) 96% agreed that the teachers sharing notes and question bank in the study group saves them from spending on outside notes. Also it provides them with the important questions to stress on for getting good marks in the exam.

5) 94% students felt that the networking tool is indispensable for solving doubts relating to their practical subject at the time when they study at their homes.

6) 81% students felt thatthe tool is providing undue advantage to those who do not attend the lectures at all, but get every material shared.

7) 97% sample agreed that the Whatsapp study group has a positive impact on their performance as even discussion among the members makes the points very clear.

8) It was also reported by 92% students that due to the availability of networking tool last minute shuffling of lectures has become a common phenomenon. This disturbs the psychological mindset of the students.

However, the survey from the teachers revealed the following data:

1) 90% teachers felt that it is a time saving method as exhaustive notes and question bank can be shared on it. The lecture timings can be used to give detailed explanation for the conceptual clarity of the students.

2) 80% teachers agreed that it has become a readymade solution for those students who don't attend the lectures. Thus the media is trying to replace the teachers for such students.

3) According to 96% teachers, the tool proves as an injustice to the regular students as they have to shoulder the extra responsibility of sharing the information given in the lectures.

4) 98% teachers agreed that due to this tool arranging extra lectures and giving emergency

information at the last minute has become very easy. This helps to complete the portion satisfactorily. Also the queries are answered and the doubts are solved as teachers come to know about the doubts in the form of discussions among the students in the group.

5) 90% teachers asserted that the students use their numbers given in the group and send them the personal queries creating disturbances for them.

6) 97% teachers agreed that the students' doubts and their anxiety level is known by reading their messages in the group.

7) All teachers agreed that it is a good tool to make the absent students connected to the happenings in the class as maximum post graduate students are working and are not able to attend the lectures. Atleast they are aware of what is going on in the class due to the group.

VII. Conclusion : The primary objective of the study undertaken was to throw light on how effectively has the usage of Whatsapp as the social networking tool has affected the youth by evaluating both of its positive and negative aspects. The survey conducted from the students and the teachers highlighted various issues relating to such study group. The data collected and analysed led to the conclusion that today's youth is much aware of their choice. They know that even after the availability of social media and various networking tool, physical teaching has its own importance. Even the teachers feel that technology can be a useful aid in education.

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TEACHING WITH TECHNOLOGY-ICT AND CHALLENGES

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Abstract

The aim of this paper is to know about the digital technology used in education and Information and communication technology is one of them used in the higher education for teaching and learning. The researcher has attempted to know the technical skills of the teachers and challenges while using Information and communication technology of arts, commerce and science streams. Technology can be as dominant but focused to improve learning, particularly when there is regular and frequent use into education. Research was conducted in the colleges of arts, commerce and science affiliated to University of Mumbai. The study is conducted using surveys and interviews among the faculties.

Keywords: *ICT, Technical Skills, Challenges using ICT.*

Introduction: Technology adds a value to the education and faculties need to be strong into using it. In an ever changing technological world, computers seem to be at the forefront of education. Technology can have a reciprocal relationship with teaching. The emergence of new technologies pushes educators to understanding and leveraging these technologies for classroom use; at the same time, the implementation of these technologies in the classroom can have an impact on how these technologies continue to take shape. Colleges and universities have usually been fast to accept innovative technologies. Higher education has tested with technical improvements as compared to the blackboard and the personal computer. Some technologies have become enduring parts of the higher education. Computers and broadcastings are the maintoolsredesigning higher education. Due to advances in these domains such as Computers, E-mail, fax machines, World Wide Web, CDROMs, Smart Phone,and Software'sare changing the daily processes and growing the education system.Information and communication technology is a combination of hardware and software which is helpful into communication while teaching and learning.The teaching practices deployed by faculties' plays an important role in students learning. Information and Communication Technology helps in the quality learning and teaching, teachers' professional development and more efficient education management, governance and administration. UNESCO has taken a holistic and comprehensive approach to promote ICT in education. Technology alone will not improve learning, but availing it as part of good teaching practice can open innovative access to teachers and learners. We use technology every day in our daily lives but majority of faculties in many countries do not often use ICT in their practice.

Literature Review: Information and communication technology can support and enhance learning. With access to computers and the Internet, students can search for information and acquire knowledge beyond what is available through teachers and textbooks. ICT also provide students with new ways to practice their skills – such as maintaining a personal webpage or online publication, programming computers, talking and listening to native speakers when learning a second language, and/or preparing a multimedia presentation, whether alone or as part of a remotely connected team. ICT devices bring together traditionally separated education media (books, writing, audio recordings, video recordings, databases, games, etc.), thus extending or integrating the range of time and places where learning can take place (Livingstone,

2011).More specifically, education can prepare young people for work in the sectors where new jobs are expected to be created in the coming years. Today, ICT is used across all sectors of the economy, and many of the sectors with high levels of ICT use, such as financial services and health, are also those that have increased their share of employment over the past several decades (OECD, 2013).Teachers play a critical role by organizing the learning environment to provide students with active, hands-on learning and authentic tasks and audiences for their work (Darling-Hammond, Austin, Orcutt&Rosso, L., Austin, K.(2001).

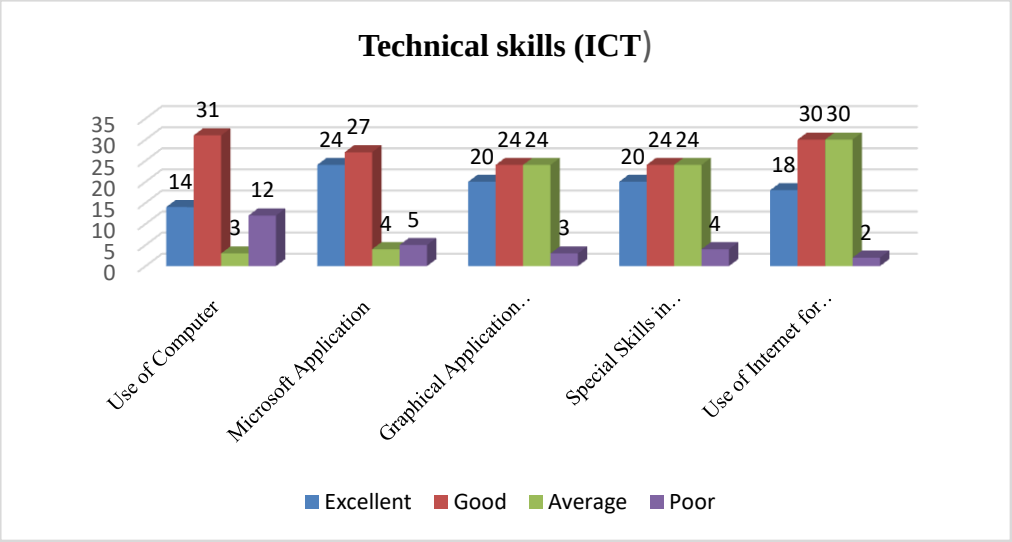
Learning is influenced by social interactions, interpersonal relations, and communication with others, and learners need opportunities for positive interactive and collaborative (Darnon, Butera, &Harackiewicz, (2007)

Objectives:

1. To know the technical skills of the faculties for using ICT.
2. To find out the challenges while using ICT by the faculties.

Research Methodology: Present study is based on the primary data collected from a sample of faculties in the selected colleges of Arts, Science and Commerce colleges affiliated to Mumbai University which is selected for the study. There are sixty faculty used as sample from arts, commerce and science colleges. A questionnaire is used as the instrument of data collection. The scaling method is used in designing of questionnaire which is Likert scale ie.five-point scale

Data Analysis and Interpretation:Figure 1:Faculties ICT technical skills



The above Figure-1 shows the ICT technical skills of the faculties in using the technology for academic activities. It is observed and found that the use of computer is good among the faculty of arts, commerce and science which is 31 percent, use of Microsoft application is also good that is 27 percent. Graphical application such as YouTube, mobile app, windows application is 24 percent as they use it for their academic activities, Software skills into Corel draw, Photoshop, PageMaker, PDF converter, Windows Movie maker is also good which is 30 percent.

Sr. No	Challenges	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
1	Insufficient & outdated computers	4%	13%	9%	19%	15%
2	Insufficient Internet speed	2%	12%	3%	25%	18%
3	Insufficient smartboards	10%	13%	8%	23%	3%
4	Lack of adequate skills of teachers	9%	17%	9%	16%	9%
5	Insufficient technical support for teachers	12%	18%	8%	19%	3%
6	Teachers lack interest in using latest technology	4%	15%	20%	12%	9%

Table 1: Challenges for using ICT by the teachers

Table 1 shows the Challenges for the efficient use of ICT by the teachers. It is seen from the analysis that there are challenges in using Information and communication technology. Faculties agree that there are insufficient and outdated computers which is 19 percent, Insufficient Internet speed is 25 per cent, smartboards which has a good relevance but it is insufficient into teaching which is 23 per cent, Lack of adequate skills of teachers is 17 per cent which they disagree, insufficient technical support for teachers is 19 per cent and teachers lack interest in using latest technology is they neither agree nor disagree which is 20 per cent.

Findings& Conclusions: From the research study is found that there are faculties using ICT into their academic activities such as browsing information into their respective subjects, they are also using Microsoft application like word, excel and power point for a better communication with learners which is 27 percent. There is also use of Graphical application such as YouTube, mobile app, windows application by the faculties for their academic activities, Software skills into Coreldraw, Photoshop, PageMaker, PDF converter, Windows Movie maker is also good which is 30 percent. There are challenges in implementing or using ICT by faculties such as outdated computer, insufficient internet speed, teachers lack technology interest, insufficient smartboards and insufficient technical support for teachers. To conclude it is observed that the use of information and communication technology is implied by the faculties into their academic activities. ICTs also helps in education for the development of teaching and learning purposes. It also increases the flexibility with a rich environment and motivate for teaching learning process.

Recommendations: From the above findings and conclusions it is recommended to practices and share course material in education by means of ICT which can nurture better teaching and improved academic achievement of students. Training to faculty to use technologyshould be provided. It seems clear that building a physical technological infrastructure is not enough. Teachers can use technology to prepare for classes, research, deliver instruction, and interact with their students and colleagues who are far away. There should be technical programmes as faculty development programme for arts, commerce and science colleges.

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TO STUDY THE ORGANISATIONAL ENVIRONMENT OF THE DIFFERENT CATEGORIES OF ARTS AND COMMERCE COLLEGES OF MUMBAI FOR KNOWLEDGE MANAGEMENT

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Abstract

Knowledge Management is a buzz word in the economy. All the industries, organizations and institutions are using it in one way or the other. Knowledge Management is here to stay. Organizations need to equip it in near future to cope with the world. In this research paper researcher tries to find out whether there is suitable organisational environment for knowledge management or not in the different categories Arts and Commerce degree colleges of Mumbai. In this study Mumbai colleges have been divided in different categories such as Aided, Unaided, Government, Autonomous, and Minority Colleges. Information and Communication Tool (ICT), Organisational Culture,Organisational Leadership and Organizational Climate variables are taken into consideration.

Key words: *Knowledge Management; Aided, Unaided, Government, Autonomous, and Minority Colleges; Information and Communication Tool, Organisational Culture,Organisational Leadership and Organizational Climate*.

Introduction: Hansen, Nitin and Thomas (1999) say that knowledge management is nothing new. For hundreds of years, owners of family businesses have passed their commercial wisdom on to their children. Master craftsmen have painstakingly taught their trades to apprentices and workers have exchanges ideas and know-how on the job. But it wasn't until the 1990s that chief executives started talking about knowledge management (KM). As the foundation of industrialized economy has shifted from natural resources to intellectual assets, executives have been compelled to examine the knowledge underlying their businesses and how that knowledge is used. At the same time, the rise of the computers has made it possible to codify, store and share information and knowledge more easily and cheaply than ever before. Profits making organisations or nonprofit making organizations, all are using KM in one or the other way. In this paper we will see whether favorable factors for KM are there not in the Arts and Commerce Degree Colleges of Mumbai. Knowledge Management can be used to support educational administration, which in turn supports teaching and learning.Educational administrators and teachers have begun to look at how they might use information systems to assist in creating effective learning environments. VennilaGopal& Dr. K Shobha, (2012) mentioned Petides& Guiney (2002) in their paper that with the combination of KM and Information and Communication Tools (ICT), the education institution will be able to provide better education facilities, administrative services, strategic planning process, student retentions, teaching-learning process, cost effectiveness, data transfer, collaboration, research, faculty development, admissions, expand new web based offerings, students and alumni services, research process curriculum development, work analysis etc. Farida Hasanali, (2003) of American Productivity and Quality Centre (APQC) discussed following five critical success factors for KM:

1) Leadership
2) Culture
3) Structure, Roles and Responsibilities

4) Information Technology (IT) Infrastructure
5) Measurement

Letsus check whether suitable environment exists in degree colleges of Mumbai or not for KM in this paper. Following literatures were reviewed for the study.

Review of Literature: KowtaSitaNirmalaKumaraswamy (2009) in her thesis "An Empirical Study of Collaborative Knowledge Sharing Strategy to Enhance Organizational Learning with Special Reference to IT Education under Management Faculty of University of Pune" suggests the ways to enhance a collaborative knowledge sharing culture in academic institutions. She emphasizes on five factors for collaborative knowledge sharing in an organization.

•Work culture
•Interaction
•Willingness to share knowledge
•Recognition
•Information Technology.

She denotes three main practices for collaborative knowledge sharing:

- Faculty Development Program
- Communities of Practices
- Industry Institute Interaction.

She concludes in her findings that academic institutes are not at all encouraging knowledge sharing. There is a clear dependency between willingness to share knowledge and work culture of the academic institution. Effective work culture facilitates knowledge sharing amongst the faculty through regular interactions. MamtaBhusry, JayanthiRanjan, Raj Nagar (2012) in "Implementing Knowledge Management in Higher Educational Institutions in India A Conceptual Framework" conclude that IT based KM intervention in HEIs can prove to be a promising techno management tool to enhance performance in the vital areas of teaching and learning, research and administrative services. Based on the results, the authors have presented a conceptual framework for the development and refinement of knowledge management systems in higher educational institutions. The authors feel that if implemented, the framework will yield more benefits to improve the quality of knowledge sharing and use.

ParulSinha, Monika Arora, N.M. Mishra (2012) in "Framework for Knowledge Management Platform in Higher Education Institutions" state that the relevant factors that bring success to an educational organization by adopting KM practice are an appropriate mix of

1. Integrated technical infrastructure,
2. An organizational culture that supports learning, sharing and use of knowledge,
3. Motivation and commitment of users including incentives and training and
4. Senior management support related to resource allocation, leadership and providing training.The above reviews point of that KM is depended on factors like rganisational culture, leadership, technology, climate, and ICT. Lets us test these variables.

Objectives: Theobjectives of the paper are as follows:

The main objective is to study the organisational environment of the different categories of the Arts and Commerce degree colleges for implementation of KM.

Following are the secondary objectives:

- To study the Organisational Climate of the different categoriescolleges.
- To check the Organisational Culture of different categories of colleges.
- To test the Organisational Leadership in different categories of colleges.
- To find out the availability ICT tools among different categories of colleges.
- To check theUsage of ICTamong the different categories of colleges.

Hypothesis: To test the above objectives let us divide it into 5 parts (variables) as follows:

1. There is no significant difference in Organizational Climate of different categories of colleges.
2. There is no significant difference in Organisational Culture of different categories of colleges.
3. There is no significant difference in Organisational Leadership of different categories of colleges.
4. There is no significant difference regarding the availability ICT tools among different categories of colleges.
5. There is no significant difference among the different categories of colleges with respect to Usage of ICT.

Research Methodology: From 74 colleges total 712 respondents filled the questionnaire. Random sampling method-Cluster sampling and non random sampling method-Convenient sampling, these two was used for data collection. F-Test-ANOVA Test andPOSTHOC Test were used. The Mumbai colleges are divided in the following different categories for the research purpose.

Table 1.1 Respondents with Different Categories of Colleges:

Categories	Number of Colleges	Frequency	Percent
Aided Colleges	38	321	45.1
Linguistic minority Colleges	16	210	29.5
Unaided Colleges	13	113	15.9
Linguistic minority & Autonomous Colleges	02	30	4.2
Autonomous Colleges	02	13	1.8
Government Colleges	04	25	3.5
Total	74	712	100.0

1.6 Hypothesis Testing and Analysis

Null Hypothesis- H_0: There is no significant difference in Organisational Climate of different categories of colleges.

Alternate Hypothesis-H_1: There is a significant difference in OrganisationalClimateof different categories of colleges.

Table 1.2 F-Tests of OrganisationalClimateScore:

	Sum of Squares	Df	Mean Square	F	p-value	Result
Between Groups	2705.313	5	541.063	2.550	0.027	Rejected
Within Groups	149802.869	706	212.185			
Total	152508.182	711				

The P value 0.027 in the above table is less than standard value 0.05, which means null hypothesis is rejected and alternative hypothesis is accepted. It means there is significant difference among the mean scores of the different categories of the HEIs with respect to organisationalclimate. In thePOSTHOC Test, Table 1.3 shows there is significant difference in the mean score of aided colleges with linguistic minority colleges and autonomous cum linguistic minority colleges. Even there is significant difference in organisationalclimateof government colleges and linguistic minority colleges. Surprisingly there is no much difference among unaided colleges with the rest and autonomous colleges with others. So little more care is needed to be taken by linguistic minority colleges with respect to its organisationalclimate.

Table 1.3Multiple Comparisons among Different Categories of Colleges for OrganisationalClimate:

(I) College Category	(J) College Category	Mean Difference (I-J)	Std. Error	p-value	Significance
Aided	Linguistic minority	2.59351*	1.29283	.045	Significant
	Unaided	.41449	1.59335	.795	Non-significant
	Linguistic minority and autonomous	5.49379*	2.78098	.049	Significant
	Autonomous	-3.08398	4.12104	.454	Non-significant
	Government	-5.36681	3.02464	.076	Non-significant
Linguistic minority	Aided	-2.59351*	1.29283	.045	Significant
	Unaided	-2.17902	1.69946	.200	Non-significant
	Linguistic minority and autonomous	2.90029	2.84311	.308	Non-significant
	Autonomous	-5.67748	4.16321	.173	Non-significant
	Government	-7.96031*	3.08185	.010	Significant
Unaided	Aided	-.41449	1.59335	.795	Non-significant
	Linguistic minority	2.17902	1.69946	.200	Non-significant
	Linguistic minority and autonomous	5.07930	2.99175	.090	Non-significant
	Autonomous	-3.49847	4.26611	.412	Non-significant
	Government	-5.78130	3.21950	.073	Non-significant
Linguistic minority and autonomous	Aided	-5.49379*	2.78098	.049	Significant
	Linguistic minority	-2.90029	2.84311	.308	Non-significant
	Unaided	-5.07930	2.99175	.090	Non-significant
	Autonomous	-8.57777	4.83682	.077	Non-significant
	Government	-10.86060*	3.94465	.006	Significant
Autonomous	Aided	3.08398	4.12104	.454	Non-significant

	Linguistic minority	5.67748	4.16321	.173	Non-significant
	Unaided	3.49847	4.26611	.412	Non-significant
	Linguistic minority and autonomous	8.57777	4.83682	.077	Non-significant
	Government	-2.28283	4.98090	.647	Non-significant
Government	Aided	5.36681	3.02464	.076	Non-significant
	Linguistic minority	7.96031*	3.08185	.010	Significant
	Unaided	5.78130	3.21950	.073	Non-significant
	Linguistic minority and autonomous	10.86060*	3.94465	.006	Significant
	Autonomous	2.28283	4.98090	.647	Non-significant

*. The mean difference is significant at the 0.05 level.

2)Null Hypothesis-There is no significant difference in Organisational Culture of different categories of colleges.

Alternative Hypothesis-There is a significant difference in Organisational Culture of different categories of colleges.

Table 1.4 ANOVA Test for Organisational Culture:

	Sum of Squares	difference	Mean Square	F	p-value	Result
Between Groups	3580.180	5	716.036	2.739	.018	Rejected
Within Groups	184576.693	706	261.440			
Total	188156.873	711				

The above table shows P value 0.018 which is less than 0.05, it means null hypothesis is rejected and alternative hypothesis is accepted. There is a significant difference among the different colleges with respect to organisational culture. The POSTHOCtest shows there is significant difference among linguistic minority cum autonomous colleges with the rest of colleges with respect to organisational culture. Its score is not only the least it's significantly different than the other colleges. Their management and leaders need to do alter this. Let's check organisational leadership variable of these colleges.

3)Null Hypothesis: -There is no significant difference in Leadership mean of different categories of colleges.

Alternative Hypothesis: -There is a significant difference in the Leadership mean of different categories of colleges.

Table 1.5 ANOVA Test for Organisational Leadership Score:

	Sum of Squares	difference	Mean Square	F	p-value	Result
Between Groups	5506.758	5	1101.352	3.822	.002	Rejected
Within Groups	203451.961	706	288.176			
Total	208958.719	711				

The above table says P value is 0.002 which is less than the standard value 0.05, which means null hypothesis is rejected and alternative hypothesis is accepted. So there is significant difference among the different categories of colleges with respect to organisational leadership.

4)Null Hypothesis: There is no significant difference regarding the availability ofICT tools among different categories of colleges.

Alternative Hypothesis: There is a significant difference for the availability ICT tools among different categories of colleges.

Table 1.6 ANOVA Test for Availability of ICT Tools for Different Categories:

	Sum of Squares	df	Mean Square	F	Sig.	Result
Between Groups	5717.233	5	1143.447	13.244	.000	Rejected
Within Groups	60953.553	706	86.336			
Total	66670.786	711				

The significant value of above test is .000 which is less than the standard P value 0.05, so null hypothesis is rejected and alternative hypothesis is accepted. So it proves there is a significant difference among the different categories of colleges with respect to availability of ICT.ThePOSTHOC test demonstrates that there is significant difference in the availability of ICT amongunaided colleges with the rest. Similarly among autonomous colleges and the rest of colleges there is huge gap. Between linguistic minority colleges and aided colleges also there is significant difference. Let's test another hypothesis.

5)Null Hypothesis: There is no significant difference among the different categories of colleges with respect to Usage of ICT.

Alternative Hypothesis: There is a significant difference among the different categories of colleges with respect to Usage of ICT.

Table 1.7 Usage of ICT According to Categories of Colleges:

	Sum of Squares	Df	Mean Square	F	Sig.	Result
Between Groups	2598.889	5	519.778	5.180	.000	Rejected
Within Groups	70846.667	706	100.349			
Total	73445.555	711				

The above table illustrates significant value .000 which is lower than the standard P value 0.05, so null hypothesis is rejected and alternative hypothesis is selected. So it means there is a significant difference among the different categories with respect to Usage of ICT.

The POSTHOCtest shows us that there is significant difference among unaided colleges and aided, linguistic minority, autonomous, linguistic minority with autonomous colleges with respect of usage of ICT. There is significant difference between aided and linguistic minority colleges as well. While analysis the data further following outcomes were obtained:

- Out of 38 aided colleges, only 14 colleges have above average score for availability of ICT tools, 19 colleges for usage of ICT and 24 colleges for organisational environment and 22 colleges have above average score for organisational culture, 17 colleges for organisational leadership and 13 colleges for organisational technology.
- Out of 13 unaided colleges, three unaided colleges have zero score for availability of ICT and its usage. Gurukul College has the highest score for availability of ICT, organisational environment, culture, leadership and technology.
- Out of 16 Aided cum Linguistic Minority colleges, half of the colleges have above average score for availability of ICT, 5 colleges for usage of ICT and 8 colleges for organisationalclimate. 8 colleges have above average score for organisational culture, 9

colleges for organisational leadership and 11 colleges for technology score. ManibenNanavati college of VileParle has highest score for organisational culture and leadership. G. N. Khalsa College, Matunga has highest score for organizational technology. Burhani College of Commerce & Arts, Mazgaon has the lowest score for all the three variables.

- AakbarPeerbhoy College has better score than other government colleges for availability of ICT whereas Sydenham College has better for usage of ICT and organisational climate. Ismail Yusuf College has highest score for organisational culture and technology where as Sydenham College has superior score for organisational leadership.
- St. Xaviers College has outstanding score for availability of ICT and its usage among autonomous colleges. NagindasKhandwala College has better score for organisational Climate. NagindasKhandwala College; Malad has the highest score for all the three variables, i.e. Organisationalculture, leadership and technology.

1.7 Conclusion: Following table 1.8 reveals Autonomous Colleges have uppermost score for availability of ICT tools and its usage whereas Government Colleges has maximum score for OrganisationalClimate, Culture, Leadership and Technology. Among autonomous colleges St. Xaviers has leading score for availability of ICT and its usage whereas NagindasKhandwala has premier score for rest of the 4 variables. Among Government Colleges Sydenham College has leading score than other 2 colleges for OrganisationalClimate and Leadership where as Ismail Yusuf College has the highest score for Organisational Culture and Technology.

Tables 1.8 Different Categories of Colleges' Mean Scores:

	Availability of ICT	Usage of ICT Tools	Organizational Climate	Organizational Culture	Organisational Leadership	Organizational Technology
Aided	17.8035	11.929	75.7968	74.3136	75.5763	71.1296
Unaided	12.4915	8.6449	70.4174	70.6575	70.9660	65.5600
Linguistic Minority cum Aided	21.0525	14.756	73.4330	70.9561	73.1666	68.9393
Government	18.6531	13.573	**77.0555**	**83.0306**	**79.8000**	**74.6111**
Autonomous	**26.3455**	**16.917**	73.245	69.2738	65.8302	64.6051

From the above data analysis it is cleared that bearing few institutions like Khandwala colleges,St. Xaviers College,HEIs need to do a lot to improve their organisational environment to implement KM in the organizations. If HEIs want to implement KM successfully in their institutes then they need to focus and improve on the above discussed KM factors. Bearing few good colleges most of the institutes need to work on one or few drivers of KM. Dynamic atmosphere needs to be created for introducing and implementing KM practices in HEIs. Awareness among all the stakeholders of HEIs need to be created regarding the use of ICT, creating sharing of explicit and tacit knowledge, digitalization of information, use of open

sources, effervescent culture, dynamic leadership and latest technology for effective KM practices. If Mumbai colleges wants to compete with the rest of the world then need to gear up.

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ON-SCREEN ANALYSIS OF BIOLOGICAL DATA (PROTEIN, CARBOHYDRATES AND LIPIDS) IN LIVER AND MUSCLE OF EXPERIMENTAL FISH, *CHANNA PUNCTATUS* (BLOCH) USING SPSS SOFTWARE.

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Abstract
Mathematical and Statistical analysis of biological data obtained from the experiments is essentially required for comparing the level of significance. In the present study, an approach has been made to analyse these data on Computer screen using the Software SPSS version 20.0. The software was downloaded and installed in the computer, data was fed On-screen in SPSS sheet and processed for One-way ANOVA followed by Dunnett t-test for assessing the level of significance (P value less than or equal to 0.05) and to compare data within and in between the groups. In many instances (after expiry of different exposure periods to clove oil), it was observed that the changes were significant for all the three biomolecules (proteins, carbohydrates and lipids) in liver and muscles of fresh water air-breathing edible fish Channa punctatus indicating that the clove oil adversely affects the synthesis of these biomolecules.
Key words*: Channa punctatus clove oil, biomolecules, Mean, SD, and ANOVA.*

1. Introduction: The use of mathematics and statistics even in biology has significant role in analyzing the experimental data obtained from different observations. This enables the researches to check and validate the changes that are significant or not in comparison to the control values. Manual methods i.e use of various formulae for calculating mean, standard error of mean, standard deviation, degree of freedom and also the post-hoc tests including students t-test, Duncan'sMultiple Range Tests(MRT) are time consuming and hectic and require skills of calculations. The use of software, on the other hand, has simplified all the processes with a click of a button .The SPSS software originally named as Statistical Packages for the Social Sciences is very useful in almost all branches ofScience subjects including the Biological sciences. The SPSS software provides a good platform for high level learning of Algorithms, Text Analysis, and Integration with large data, Open sources of extensibility in application. The software is user friendly and has greater flexibility in terms of data feeding and analysis. Fishes are well known for their nutrients. The fish *Channa punctatus* (Bloch), an animal model for present study is an air-breathing fish and is hardy in nature. The fish can be easily maintained in laboratory condition with little care. The liver and muscle of *C. punctatus* are the main storage organs for proteins, carbohydrates and lipids (Janyani, 2016). The concentration of all these nutrient molecules however vary species to species and also on several other factors including the storage, handling and hygienic practices, methods of rearing, preserving up to the marketing.In a study by Janyani et al 2011, it has been evidenced that how the temperature variation in chilling method of fish preservation affects the level of protein and carbohydrates in muscles of *Clarias gariepinus*, an important edible catfish found in local fish markets of Ulhasnagar and Kalyan.Clove oil is slightly yellowish or brownish liquid obtained from flowers, stalks, stems and leaves of *Eugenia aromatica* and *Eugenia caryophyllata* (Soto and Burhanudin, 1995;).

Clove oil has characteristic pleasant smell and burning taste. Clove oil has the antibiotic, antiseptic, antibacterial, antiviral, analgesic, anti-oxidative, antifungal activity (Bullerman et al, 1977, Karapmur&Aktug 1977, Briozzo et al, 1989). Clove oil is used as a food flavouring agent and is used in dentistry profession as anaesthesia (Nagababu&Lakshmaiah, 1992). Clove oil also exhibits antioxidant properties (Cort, 1974, Rajakumar&Rao, 1993). Clove oil is also used as an additive in certain cigarettes (Voie et al, 1986; Guidotti, 1989). The present paper analyses the effect of clove oil on biomolecules using statistical approaches rather than conventional methods.

2. Materials and Methods: Live and healthy specimens of *Channa punctatus* were procured from fish market of Kalyan and maintained in laboratory condition. Before storing in water tanks (glass aquarium of 20 L capacity), the fish were washed with potassium permanganate to disinfect and also to minimize the chances of infection in future during the course of experimentation. The fish were stored in laboratory condition for fifteen days for the purpose of acclimation. During acclimation, the fish were regularly fed with fish feed (dried worms) obtained from the market. After acclimation period, the fish were divided into groups and exposed to sublethal concentration (0.5µl) of clove for 32 days. Fish, after expiry of different time periods, were anaesthetized, sacrificed and liver and muscle were removed and processed for estimation of protein, carbohydrates and lipids by following standard methods.For protein analysis, the tissues of liver and muscle were weighed (50 mg wet weight), homogenized (10% homogenate) in 1N HCl using mortar and pestle and centrifuged at 3000 rpm for 15 minutes. The tissue residue was dissolved in 9ml distilled water and estimated by following Lowery et al. 1951. Glycogen estimation was done by Anthrone method (Sadasivam and Manikam, 1992). For glycogen estimation 50 mg liver and muscle were homogenized in 5 ml of 30% KOH. The content was heated in water bath at 90^0C for 10 minutes. Glycogen was precipitated by using 95% ethyl alcohol. The precipitate was dissolved in distilled water and estimated by Anthrone reagent. Lipid estimation was dome method of Folch, 1957. For lipid estimation 100 g of tissues were homogenized in chloroform: methanol mixture in ratio of 1:1 and centrifuged at 3000 rpm for 10 minutes. The supernatant was washed with 0.9% saline solution to remove non-lipid portion. The upper portion was discarded and precipitate was dried and weighed for lipids.All colorimetric data obtained were statistically analyzed using SPSS software version 20.0 followed by Dunnett t test (2 sided) and significant levels were checked at 5% and 1% by comparing experimental values with control ones.

3. Results and Discussion: The results obtained from the biochemical estimation of proteins, carbohydrates and lipids are expressed as Mean ± SE (tables 1, 2 and 3). One way analysis of variance (ANOVA) followed by Dunnet's t-tests were performed using SPSS software version 20 to determine whether the values obtained by exposed groups were significantly altered from control groups or not. The entire biochemical data obtained has been detailed in statistical sheet (tables 1, 2 and 3). The control is positioned at level 1 and experimental ones are being started from level 2 onward up to level 11.From One-Way ANOVA(tables 1, 2 and 3), it is observed that the clove oil induces significant variation in glycogen concentration in liver at 1% level of significance, where the associative p value is 0.000; whereas the clove oil induces insignificance variation in glycogen concentration in muscles at 1% level of significance where the associated p value is 0.175. When multiple comparisons are observed, it is concluded that the mean

difference after the 96 hour exposure to clove oil induces significant alterations in glycogen concentrations at 1% level of significance. Regarding the lipid concentration, the clove oil induces significant alteration in the liver at 1% level of significance when the p value is 0.001.Also there are significant alterations observed in the lipid concentration in muscles at 1% level of significance when the associated p value is 0.000.After the multiple comparisons, it was found that the mean difference in glycogen concentration in muscles after 24 hour exposure and 96 hour exposure to clove oil is significant at 1% level of significance. From the One-Way ANOVA table, the clove oil causes significant alterations in protein concentrations in liver at 1% level of significance when the associated p value is 0.000.Also the protein concentration in muscles is significantly altered at 1% level of significance when the associated p value is 0.000. After the multiple comparisons, it is concluded that the mean difference after 6 hours exposure to clove oil causes significance alterations in protein concentration in liver.Also, there is significant difference in protein concentration of muscles after exposure to 12 hours, 96 hours and 384 hours to clove oil at 1% level of significance.From the Anova table it is concluded that, the length and weight of fishes exposed to clove oil have significant effect on the protein, lipid and carbohydrate concentration at 1% level of significance.

Table 1: One way ANOVA of Glycogen concentration in Muscles & Liver of *Channa punctatus.*

Notes		
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Comments		
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Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on cases with no missing data for any variable in the analysis.
Syntax		ONEWAY VAR00001 VAR00002 BY VAR00005 /STATISTICS DESCRIPTIVES /MISSING ANALYSIS /POSTHOC=DUNNETT (1) ALPHA(0.01).
Resources	Processor Time	00 00:00:00.499
	Elapsed Time	00 00:00:00.490

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
						Lower Bound	Upper Bound
VAR00001	1.00	3	.6200	.08544	.04933	.4078	.8322
	2.00	4	.6313	.25969	.12985	.2180	1.0445
	3.00	4	.4600	.30561	.15281	-.0263	.9463
	4.00	4	.7400	.18525	.09262	.4452	1.0348
	5.00	4	1.1250	.60759	.30380	.1582	2.0918
	6.00	4	.8500	.34157	.17078	.3065	1.3935
	7.00	4	1.6500	.83865	.41932	.3155	2.9845
	8.00	4	.2012	.10274	.05137	.0378	.3647
	9.00	4	.4950	.20174	.10087	.1740	.8160
	10.00	4	.2595	.13273	.06637	.0483	.4707
	11.00	4	.7938	.16590	.08295	.5298	1.0577
	Total	43	.7136	.51457	.07847	.5552	.8719
VAR00002	1.00	3	28.4467	48.11062	27.77668	-91.0667	147.9601
	2.00	4	.3675	.24814	.12407	-.0274	.7624
	3.00	4	.3663	.11116	.05558	.1894	.5431
	4.00	4	.1250	.08505	.04252	-.0103	.2603
	5.00	4	.2600	.19114	.09557	-.0441	.5641
	6.00	4	.6700	.03937	.01969	.6074	.7326
	7.00	4	.3225	.28814	.14407	-.1360	.7810
	8.00	4	.1263	.04854	.02427	.0490	.2035
	9.00	4	.1325	.09500	.04750	-.0187	.2837
	10.00	4	.2125	.10372	.05186	.0475	.3775
	11.00	4	.6050	.08347	.04173	.4722	.7378
	Total	43	2.2812	12.76084	1.94601	-1.6460	6.2084

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
VAR00001	Between Groups	6.664	10	.666	4.785	.000
	Within Groups	4.457	32	.139		
	Total	11.121	42			
VAR00002	Between Groups	2209.279	10	220.928	1.527	.175
	Within Groups	4629.958	32	144.686		
	Total	6839.238	42			

Post Hoc Tests

Multiple Comparisons

Dunnett t (2-sided)[a]

Dependent Variable	(I) VAR00005	(J) VAR00005	Mean Difference (I-J)	Std. Error	Sig.
VAR00001	2.00	1.00	.01125	.28503	1.000
	3.00	1.00	-.16000	.28503	.997
	4.00	1.00	.12000	.28503	1.000
	5.00	1.00	.50500	.28503	.388
	6.00	1.00	.23000	.28503	.967
	7.00	1.00	1.03000*	.28503	.008
	8.00	1.00	-.41875	.28503	.588
	9.00	1.00	-.12500	.28503	1.000
	10.00	1.00	-.36050	.28503	.734
	11.00	1.00	.17375	.28503	.995
VAR00002	2.00	1.00	-28.07917	9.18696	.030
	3.00	1.00	-28.08042	9.18696	.030
	4.00	1.00	-28.32167	9.18696	.029
	5.00	1.00	-28.18667	9.18696	.030
	6.00	1.00	-27.77667	9.18696	.033
	7.00	1.00	-28.12417	9.18696	.030
	8.00	1.00	-28.32042	9.18696	.029
	9.00	1.00	-28.31417	9.18696	.029
	10.00	1.00	-28.23417	9.18696	.029
	11.00	1.00	-27.84167	9.18696	.032

Table 2: One way ANOVA of Protein concentration in Muscles & Liver of *Channa punctatus.*

Notes

Output Created		13-Apr-2016 11:07:24
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	Cases Used	Statistics for each analysis are based on cases with no missing data for any variable in the analysis.
Syntax		ONEWAY VAR00001 VAR00002 BY VAR00003 /STATISTICS DESCRIPTIVES /MISSING ANALYSIS /POSTHOC=DUNNETT (1) ALPHA(0.01).
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Descriptives

						95% Confidence Interval for Mean	
		N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound
VAR00001	1.00	4	2.4750	.49917	.24958	1.6807	3.2693
	2.00	4	2.4500	.85829	.42915	1.0843	3.8157
	3.00	4	6.7250	2.17773	1.08886	3.2597	10.1903
	4.00	4	4.3750	.90692	.45346	2.9319	5.8181
	5.00	4	3.8500	.26458	.13229	3.4290	4.2710
	6.00	4	3.7000	.63246	.31623	2.6936	4.7064
	7.00	4	3.9000	.50990	.25495	3.0886	4.7114
	8.00	4	2.8500	1.13284	.56642	1.0474	4.6526
	9.00	4	.4250	.29861	.14930	-.0502	.9002
	10.00	4	4.7000	.83666	.41833	3.3687	6.0313
	11.00	4	4.2500	.61373	.30687	3.2734	5.2266
	Total	44	3.6091	1.74380	.26289	3.0789	4.1393
VAR00002	1.00	4	4.0500	.42032	.21016	3.3812	4.7188
	2.00	4	3.8750	.62915	.31458	2.8739	4.8761
	3.00	4	4.7500	.65574	.32787	3.7066	5.7934
	4.00	4	6.6750	.84212	.42106	5.3350	8.0150
	5.00	4	5.1000	.34641	.17321	4.5488	5.6512
	6.00	4	2.9750	.57373	.28687	2.0621	3.8879
	7.00	4	1.8250	.34034	.17017	1.2834	2.3666
	8.00	4	3.3500	.38730	.19365	2.7337	3.9663
	9.00	4	1.0250	.35940	.17970	.4531	1.5969
	10.00	4	3.1500	.20817	.10408	2.8188	3.4812

	11.00	4	3.3500	.59161	.29580	2.4086	4.2914
	Total	44	3.6477	1.55496	.23442	3.1750	4.1205

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
VAR00001	Between Groups	101.566	10	10.157	11.482	.000
	Within Groups	29.190	33	.885		
	Total	130.756	43			
VAR00002	Between Groups	95.122	10	9.512	35.479	.000
	Within Groups	8.848	33	.268		
	Total	103.970	43			

Table 3: One way ANOVA of Lipid concentration in Muscles & Liver of *Channa punctatus.*

Notes

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Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on cases with no missing data for any variable in the analysis.
Syntax		ONEWAY VAR00001 VAR00002 BY VAR00003 /STATISTICS DESCRIPTIVES /MISSING ANALYSIS /POSTHOC=DUNNETT (1) ALPHA(0.01).
Resources	Processor Time	00 00:00:00.765
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Descriptives

						95% Confidence Interval for Mean	
		N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound
VAR00001	1.00	4	.0375	.00957	.00479	.0223	.0527
	2.00	3	.0500	.01732	.01000	.0070	.0930
	3.00	4	.0575	.04924	.02462	-.0209	.1359
	4.00	4	.0450	.02517	.01258	.0050	.0850

	5.00	4	.0550	.00577	.00289	.0458	.0642
	6.00	4	.0775	.00957	.00479	.0623	.0927
	7.00	4	.0800	.02160	.01080	.0456	.1144
	8.00	4	.0250	.00577	.00289	.0158	.0342
	9.00	4	.0200	.00816	.00408	.0070	.0330
	10.00	4	.0200	.00816	.00408	.0070	.0330
	11.00	5	.0360	.01517	.00678	.0172	.0548
	Total	44	.0455	.02672	.00403	.0373	.0536
VAR00002	1.00	4	.0350	.00577	.00289	.0258	.0442
	2.00	3	.0367	.00577	.00333	.0223	.0510
	3.00	4	.0350	.01291	.00645	.0145	.0555
	4.00	4	.0125	.00500	.00250	.0045	.0205
	5.00	4	.1775	.05560	.02780	.0890	.2660
	6.00	4	.0800	.02160	.01080	.0456	.1144
	7.00	4	.0850	.00577	.00289	.0758	.0942
	8.00	4	.0200	.00816	.00408	.0070	.0330
	9.00	4	.0300	.00816	.00408	.0170	.0430
	10.00	4	.0250	.00577	.00289	.0158	.0342
	11.00	5	.0360	.01140	.00510	.0218	.0502
	Total	44	.0520	.04883	.00736	.0372	.0669

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
VAR00001	Between Groups	.017	10	.002	4.347	.001
	Within Groups	.013	33	.000		
	Total	.031	43			
VAR00002	Between Groups	.090	10	.009	23.685	.000
	Within Groups	.013	33	.000		
	Total	.103	43			

Post Hoc Test

Multiple Comparisons

Dunnett t (2-sided)[a]

Dependent Variable	(I) VAR00003	(J) VAR00003	Mean Difference (I-J)	Std. Error	Sig.
VAR00001	2.00	1.00	.01250	.01530	.975
	3.00	1.00	.02000	.01417	.672
	4.00	1.00	.00750	.01417	.999
	5.00	1.00	.01750	.01417	.794
	6.00	1.00	.04000	.01417	.056
	7.00	1.00	.04250	.01417	.037
	8.00	1.00	-.01250	.01417	.960
	9.00	1.00	-.01750	.01417	.794
	10.00	1.00	-.01750	.01417	.794

	11.00	1.00	-.00150	.01344	1.000
VAR00002	2.00	1.00	.00167	.01489	1.000
	3.00	1.00	.00000	.01378	1.000
	4.00	1.00	-.02250	.01378	.515
	5.00	1.00	.14250*	.01378	.000
	6.00	1.00	.04500	.01378	.020
	7.00	1.00	.05000*	.01378	.008
	8.00	1.00	-.01500	.01378	.879
	9.00	1.00	-.00500	.01378	1.000
	10.00	1.00	-.01000	.01378	.988
	11.00	1.00	.00100	.01307	1.000

Conclusion: The SPSS software is very useful not only for the academicians and researchers but also for the students studying at various levels and want to incorporate concepts of statistics in their study. It is very easy to handle and one can operate on screen by clicking the mouse in few simple steps. The SPSS along with its flexibility to the users provides good pace for accurate analysis and interpretation.

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RIGHT TO EDUCATION: A NEED OF THE SOCIETY

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Abstract

The term Human Rights denotes all rights that are present in our society and without which one can not live as human beings. Human rights are granted to every human being irrespective of caste, religion, color, language, creed and gender.The Universal Declaration on Human Rights 1948 first emphasized the concept of Human Rights. Human Rights are rights inherent to all human beings. We all are equally entitled to our human rights without discrimination. Human Rights must be ensured to all human beings for their prosperity and happiness.Human rights are commonly understood as basic fundamental rights that a person cannot denied by any individual or any Government. India being a democratic country provides such rights to its citizens. The makers of Indian Constitution have incorporated many of the Human Rights. Our fundamental rights are based on these rights. Education has very important role to play for promotion and protection of Human Rights. The important aspect of this research paper is to throw light on Human Right to Education.

Key Words: *RTE, Promotion, Awareness, Supportive measures*.

Introduction: Education is the basic Human Right. Through education a person becomes aware of all his or her remaining other rights such as civil, political, social economic, cultural rights. Indian Constitution recognize the following eight fundamental rights which are

1. Right to Equality
2. Right to Freedom
3. Right against Exploitation
4. Right to freedom of Religion
5. Cultural and educational rights
6. Right to constitutional remedies
7. Right to education
8. Right to information

Objecties Of The Study

1. To study the current situation of Human Rights Education in India
2. To study the awareness of Human Right Education Act in India
3. To suggest certain supportive measures to solve the problems of education in India
4. To impart practical knowledge about the basic legal rights and remedies provided.

Methodology Of Study: The study is mainly based on secondary data taken from the reputed Published Sources like Economic Survey, various books and websites on Internet. The study is analytical and descriptive in nature.

The Right To Education Act: The Right To Education Act enacted on 4 August 2009 provides for free and compulsory education for children in the age group of 6 years to 14 years. It requires all private schools (except the minority institutions) to reserve 25% of seats for poor and other categories of children. The Act also provides that no child shall be held back, expelled or required to pass a board examination until the completion of elementary education. There is also provision for special training of school drop-outs to bring them up to par with students of the same age. India became one of the 135 countries to make a fundamental right of every child when the act came into force on 1 April 2010.The passing of the Right to Education Act 2009

marks a historic moment for the children of India. Few countries in the world have such a national provision to ensure both free and child-centered, child friendly education.

There are 5 main components that the Act puts forth:

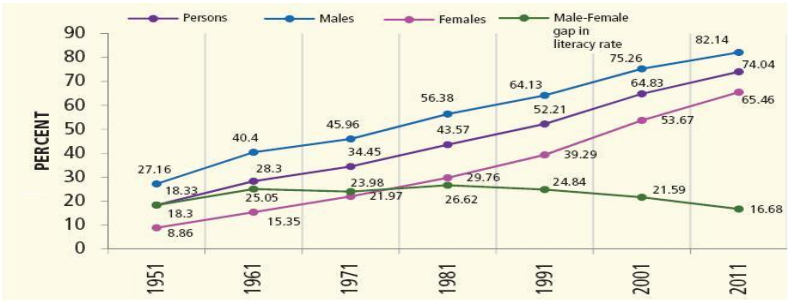
- In India, every child is entitled to free and compulsory full-time elementary education (first to eighth grade) as facilitated by the Right of Children to Free and Compulsory Education Act. This means elementary education of satisfactory and equitable quality in a formal school run with certain essential standards
- Parents of children covered under RTE are not liable to pay for school fees, uniforms, textbooks, mid-day meals, transportation, etc. until the elementary education is complete.
- If a child has not managed to secure admission in a school according to age, it will be government's responsibility to get the child admitted in an age-appropriate class. Schools will have to organize training sessions to allow such a child to catch up with others.
- No child shall be held back (failed) or expelled until the completion of elementary education.
- Not following the RTE rules can invite a penalty of Rs 25000.

Role Of Various Factors In Human Rights Education Promotion:

The nation-states immediately after the establishment of the United Nation, established United Nations Educational, Cultural and Scientific Organization (UNESCO). It drew a number of plans to inculcate the significance of education, especially human rights education to oversee every child in the world gets qualitative education as a fundamental human right. Media plays an important role in a number of issues in guiding the nation and as well as public in the realization of human rights. Academia and Educational Institutions also played an important role in promoting Human Right Education. Several schools offer Human Rights Education as part of their curriculum, for example linked subjects like History, Politics.Legal professionals such as lawyers, judges, legal officers, teachers of law also play an important role in promoting Human Right Education.Non-Government Organizations (NGO) play a vital role in the local, regional, national and international promotion, protection and realization of human rights. These organizations mainly work directly or indirectly for Human Development, Humanitarian aspects etc.

Limitation Of Rte: The constitutional amendment to make free and compulsory education a fundamental right does not go beyond the age of 14 (eight years of education). The upper limit of 14 years was probably appropriate in 1950 but not now. The lawmakers did not include pre-school or early childhood education in the right. As a result, the current act will ignore these age groups unless individual states want to make separate laws extending the limits.

Literacy Rate In India:



Literacy Rate Year wise, Gender wise Government have taken many major steps and initiatives for increasing the literacy rate in India. The National Literacy Mission which was held in 2001 have given the following data which shows that in India 64.84% of the persons were literate in which 75.26% were males and 53.67% were females. At that time the highest literacy rate was in the state of Kerala in which 90.86% persons were literate among them 94.24% were males and 87.72% were females. The lowest literacy rates were in Bihar in which only 47% of the persons were literate among which 59.68 were males and 33.12% were females.

Awareness Campaign For Right To Education: The Government of India launched 'ShikshaKaHaqAbhiyan' to create awareness about the Right To Education (RTE) Act. The one-year long campaign was launched on 11, November, 2011 by Dr. Manmohan Singh with an appeal to women to study hard for achieving success in life.

Conclusion:Only passing an act is not sufficient. The need of hour is to keep a proper check on the functioning of the act. The constant monitoring and strong political support is a must to make it effective. The much-awaited Right to Education (RTE) Act which has been passed by the parliament of India should play a significant role in attaining universal elementary education in India. The victory and defeat of RTE would largely depend on consistent political care. Financial allocation of funds should be adequate in this respect. The youth in India should come forward and spread the utility of education to illiterate parents who are unable to appreciate the significance of education in limiting the social evils. Education which is free of cost up to a certain age must be accessible to each and every one.

Right to education for all and free education for certain age group of people is a brilliant policy by the government and one should appreciate that, as key to a developed nation. The right to education is a fundamental right. India along with other countries of the world should also put genuine and honest efforts to make this goal a real achievement.

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SMART FARMING WITH DIGITAL TECHNOLOGY – NEW MODEL OF BUSINESS IN PRIMARY SECTOR

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Abstract

There are many technology providers in the market today offering digital services that aid agriculture. There are start-up entrepreneurs and also local enterprises who can deliver solutions to small farmers at an affordable cost. The barrier of entry into farming technology has dropped as digital tools like cloud computing systems, connectivity, open-source software and other digital tools are now affordable. There are other slightly more complex technologies too. For example, aerial images from satellites or drones, weather forecasts, and soil sensors are makes it possible to manage crop growth in real time. Automated systems are available to provide early warnings in case of deviations from normal growth. There are also other start-up ventures like that deals with precision farming, with the facility to measure and analyze soil data like temperature, nutrients and vegetative health to help farmers apply the right fertilizer and irrigate their farms optimally. The process reduces input waste, thus automatically improving farm productivity. Such analytics can easily be used by small-scale farmers. All of this access to technology has made farming a more exciting option for young people who are increasingly viewing it as a business.

Introduction: Agriculture plays a crucial role in Indianeconomy. Over fifty eight per cent of the rural households depend on agriculture as their principal means of livelihood. The Indian food industry is marching for huge growth, increasing its contribution to world food trade every year due to its immense potential for value addition, particularly within the food processing industry. The Indian food and grocery market is the world's sixth largest, with retail contributing seventy per cent of the sales. According to the Ministry of Agriculture, total food grain production in the country in May 2017 stood at around 273.38 million tons.[8] India's GDP has grown at 7.1 per cent in FY 2016-17, led by growth in private consumption, while agriculture GDP has grown at 4.1 per cent to Rs 1.11 trillion (US$ 1,640 billion).Sinceindependence India has made immense progress towards food security. Indian population has tripled, and food-grain production more than quadrupled. There has been a substantial increase in available food-grain per capita.Indian agriculture includes a mix of traditional and modern farming techniques. Ploughing is still done with the help of cattle in some parts of India. Traditional farms have some of the lowest per capita productivities and farmer incomes. Modern farming is also restricted to use of tractor and fertilizers in most regions.India has shown a steady average nationwide annual increase in the kilograms produced per hectare for some agricultural items over the last 65 years. These gains have come mainly from India's green revolution, improving road and power generation infrastructure, knowledge of gains and reforms. Despite these recent accomplishments, agriculture has the potential for major productivity and total output gains, because crop yields in India are still just 30 percent to 60 percent of the best sustainable crop yields achievable in the farms of developed and other developing countries.[9]On this background the researcher finds it crucial to understand the role of digital agriculture in growth of primary sector and also a prospective business opportunity for young farmers.

[8]Finance Ministry, Ministry of Agriculture
[9]World Bank: "India Country Overview 2016"

Objectives of the study: Prime Minister NarendraModi launched Digital India on July 1, 2015. The program was introduced with the intention to create digital infrastructure for empowering rural communities. It aimed at not only enabling digital delivery of services but also promoting digital literacy. Looking at the vast population dependent on agriculture for their livelihood, the role of digital agriculture is crucial. Digital Agriculture can be defined as Information and Communication Technology and data ecosystems to support the development and delivery of timely, targeted localized information and services to make farming profitable and sustainable socially, economically and environmentally while delivering safe, nutritious and affordable food for all. Democratization of market pricing will be the major affected area with the introduction of digital agriculture. The transaction costs will be highly compressed so that farmers capture a higher portion of the produce's marketable value. The concept is successfully applied globally. It mainly concentrates on the efforts of small farmers. India needs to activate these new tools to accelerate the pace of agriculture development. It will help to realize the vision of the Prime Minister of a Digital India. The sustainable development goals can be achieved at the earliest. Digital agriculture will also help achieve the objectives of the National Food Security Act in the most efficient, effective and equitable manner to ensure all have access to safe, nutritious and affordable food. The concept is wide and will benefit to larger section of the society i.e. the primary sector where the livelihood depends on farming. The young population which is turning away from villages and heading towards cities in search of jobs will find a ray of hope in terms of better farming techniques. The negative approach of young generation of farmers needs to be changed in order to bring revolution in agriculture.

Significance of the study: Majority of the population is unaware of the true significance of agriculture in our society. It's not only providing food to the citizens of India but also large employment opportunities. Agriculture does not only provide nourishment for our daily diet but also an income source of every single nation. Most manufacturing industries as well as businesses are dependent on agriculture. The vulnerable state of agriculture can be the reason for the political, economic and social unrest and instability.The importance of technology in agriculture is recognized when social development rises to its peak. It began in the early times when our forefather thought of tilling the ground and establishing food crops and grain as a main source of food aside from animals. Agriculture prospers the land under farming and technology aids the process by providing better techniques and solution for different processes of farming. The significance of agriculture is highly recognizable in the process of transformation of mankind from time to time.

Agricultural transformations with use of digital technology : Information and communication technology facilitates socio-economic development in rural India in the areas of health, education, financial services and employment. Providing Online and mobile services is of great help. The information technology solutions are aimed at empowerment, enablement and market expansion.A new step to bring e-Farming is being introduced that serves fresh fruits and vegetables direct from Farm without storage. Because of a vast digital revolution in India, it brings agriculture in a digital front through e-Farming where anyone can be an online farmer and can get fresh vegetables and fruits direct from Farm. The central and state government has taken

measures for agriculture extension. Some of the schemes are E-chaupal, Aqua, E-Krishi, Village knowledge centers etc.The combination of agriculture and information technology is difficult to digest for Indian farmers. Agriculture is a primary activity whereas information technology is an advanced and modern one. However it doesn't shed off the importance of farming in human life. The basic purpose of sustenance can be achieved only through agriculture and not information technology. Indeed it aids for the better farming and subsequently increasing the yield of the farms. Till last few years there was a vast communication gap between the farmers and the government. Many programs announced by government for farmer's welfare never used to reach them due to lack of proper communication means. Information and communication technology works as an effective tool in communicating to farmers about policies and programs of government, various schemes for farmers, facilitating institutions. Farmers are able to know the innovations in the field and also the good agricultural practices. Proper training can be provided to farmers not only for on the field job but also the marketing activities related to agriculture. The assurance of inclusiveness is achieved through digitalization. Indian agricultural products are not only consumed domestically but also in the international markets. Farmers have the fear to lose the market share due to ignorance about the international policies, standardizations, branding, labeling, packaging details. A wide international market becomes open for them as they become well verse about the international policies, rules and regulations. It indirectly improves the quality of their life. Soil management, water management, seed and fertilizer management, pest and harvest management are the important components of agriculture where technology aids farmers with better information and alternatives. The technologies like remote sensing, computer simulation, assessment of speed and direction of wind, soil quality, and crop yield predictions have proved a crucial help to agriculture.E-Agriculture is a part of Mission Mode Project which is included under National E-governance Plan. Mission Mode Project is operationalized by Department of Agriculture and Cooperation. It is a government initiative to consolidate various learning from the past and integrate the divert efforts. Finally the aim is to streamline the efforts of farmers as well as government.Smart phones are smart in real sense as monitoring and controlling crop irrigation is facilitated through features of smart mobile phones. There is hardly any need to move from field to field for controlling the irrigation. Smart mobile is the right equipment for the purpose. Similarly moisture sensors in the ground detect the level of moisture present at a certain depth of the soil. It facilitates controlling of water and other inputs like fertilizers that are applied for irrigation. GPS mapping for an input to the field using variable rate technology helps the farmers in accessing the need for accurate quantity of fertilizers.Digital agriculture facilitates knowledge about market prices, product delivery, international norms etc. Farmers can seek the expert advice of scientists using webcam which facilitates virtual presence and they need not physically travel all the way to the farms.

The advantages which farmers have derived through digital agriculture are:

- Farmer with any scale of activity can make a well informed and constructive decision about the agricultural activities.
- Not only production but also distribution becomes much easier with the communication technology.

- International marketing decision and export procedure is facilitated through information and communication technology.
- Farmers can plan their farm yield in advance like best plantation time and type, need of crops, better farming techniques, crop predictions, yield predictions etc.
- Farmers can have better control of their crops by adjusting to modern farming methodologies which in turn sustain the success and fuels further growth.
- Production of local goods can be increased by community involvement through several programs which are made possible by IT applications.
- Income levels improve not only on individual level but also of the overall community. Local farmers become united and greatly benefit from their land and resources for agriculture.
- Sharing of information to help everyone progress is made much easier through resources made available and accessible by information and communication technology.
- Not only the traditional and seasoned farmers gain from modern technology but also the common man benefits through understanding about simple farming methods like backyard farming, growing own sustainable gardens. The assurance of freshness and quality of the own farm produce is much adorable.
- Numerous farm-level applications of digital technology, including remote sensing, GIS, crop and soil-health monitoring, livestock and farm management have been making their mark. At the pre-harvest stage, digital technology can recommend crop and input selection and assist in obtaining credit and insurance. Weather advisories, disease and pest-related assistance through data generation as well as the advanced analytics allow farmers to make smart decisions about farming and benefit from an economical use of inputs and labour.
- Drones and other such monitoring technologies are being developed with the objective of creating an integrated hyperlocal farm data collection and crop analytics platform to increased pre-harvest efficacy.Monitoring and predicting weather, thus providing agri-risk solutions with a high level of accuracy in the short, medium, and long term too is an important innovation.
- Numerous innovators with solar-powered phase change enabled materials are offering products for irrigation and cold storage, with the aim of catering to smallholder farms and regions with limited or no electricity.
- Eco-friendly crop protection methods are also coming up, that have the potential to minimize a significant proportion of the damage caused by pests and diseases without overdosing crops and plants with chemicals, thus preventing soil and water contamination.
- Hi-tech farming by a number of entrepreneurs is being enabled through digital applications of sensor and communication technology.

The concept of satellite farming is quite new and advanced in the market. It is also referred to as site specific crop management. It is based on observing, measuring and responding to inter and intra-field variability in crops. It focuses on utilizing resources optimally to improve the quality and quantity of crops while lowering the cost of production. It reduces fertilizer and pesticide use, prevents soil degradation, water optimization and improved productivity. The use of this technology is done globally with the help of modern, eco-friendly farming practices and technology. It helps to solve many problems faced by agriculture sector like ill produce, excessive use of water, poor soil quality which used to prove it as an unprofitable profession.

Though the whole process looks pleasant and satisfactory it has its own limitations for the country like India. Technology is highly hampered because of many factors which are mainly considered as the problem of rural India.

- Feasibility of connectivity in rural areas is a major stumbling block in the way of modern technology. It is difficult to expect the clear and effective connectivity to technology where electricity is available to farmers only during night time even in today's era.
- Basic computer literacy is still a dream to achieve in rural India. Advanced digital learning is beyond imagination.
- The reach of technology is still very poor and large number of farmers is still ignorant about such advancements. The distribution of technology is not uniform throughout the country. The rich area in terms of agriculture receives the major share of advanced technology. The farmers of Punjab, Haryana etc. receive more attention than that off in the remote parts.
- The unaffordable cost of the advanced technology pulls the legs of farmers and disappoints them for their life. There are certain remote areas in rural India where farmers have to take loans for buying of seeds even. Technology is a dream for such community.
- The gap between poor and rich farmers is increasing day by day. Rich farmers use advanced techniques whereas poor still continue with the traditional. It hampers the regional development of the country.
- Possibility of distortion of information is quite high. The information technology service providers who act as an intermediary between farmers and government distort the information for their own benefit.
- Regional disparity is another major reason for the ununiformed infrastructure availability for the use of information and communication technology.

Digital technologies are providing new opportunities for farmers to maximize yields and reduce the amount of time taken for decision-making. Not only that, but other industries can benefit from the optimization and development of these innovative solutions. Crop failure leads to less food production and in turn affects hunger, hence an innovative solutions that can aid and empower our smallholder farmers is necessary while ensuring an increase in agricultural productivity. Technology will play a crucial role in sustaining the future of agriculture.

Conclusion:"We are certain that digital agriculture supported by advanced technology platforms will truly benefit farmers." expressed Dr. T.N. PrakashKammardi, Chairman, KAPC, Government of Karnataka[10]There is continuous growth of self- help groups and aid of micro finance in rural India. More and more rural population is brought into main stream. Penetration rate of market forces in growing and providing new avenues to the young farmers of rural India a platform to showcase their talent. Not only rural India is expanding in terms of potential market but also the rural farmers are getting lot of opportunities to sell their farm products on large scale. The export market is wide open for the rural farms. India is a land of diverse cultures and languages. Information and communication technology proves both a boon and bane here. Ultimately it will lead to substantial upliftment and sustainable development. Technology is changing the

[10]Business Today, Jan 15th 2017.

dimensions of human lives. Agriculture though primary sector and major area being rural parts of the country is not an exception. The role of an agent in changing agrarian and farmer's life is crucial on the part of digital technology. The focus is mainly on information and knowledge sharing.The younger generation of rural India is looking forward towards digital tools in agriculture as empowerment and opportunity to prosper. The pool of ideas and knowledge available to them facilitates appropriate use in time of need. The farming activities have become much advanced and compact. Indian agriculture has come a long way with the extension of ITC initiatives like Krishivihar, i-Kisan, e-Kutir etc. Several records have been established in terms of production and productivity with the help of ICT models like AGROWEB, Agropedia etc. The major hurdles of climate change and less land under cultivation can be removed through the digital tools.India is expected to achieve the ambitious goal of doubling farm income by 2022. The agriculture sector in India is expected to generate better momentum in the next few years due to increased investments in agricultural infrastructure such as irrigation facilities, warehousing and cold storage. Furthermore, the growing use of genetically modified crops will likely improve the yield for Indian farmers.[11]The face of Indian agriculture sector can be transformed to a lot extent with the help of digital technology. It has tremendous potential to revive the lives of Indian farmers. Major challenges confronting Indian agriculture include declining farm productivity, unsustainable usage of resources, diminishing and degrading natural resources, a rapidly growing demand for high-quality and safe food, stagnating farm incomes and fragmented land holdings, can be overcome through sustainable and scalable deployment of digital technologies and infrastructure.[12]E- Commerce had greatly benefited both farmers and consumers in catching up with food supply chain aggregation. It works effectively at both the ends. The Indian agribusiness sector stands to greatly benefit from the numerous innovative digital technologies across farm, post farm, processing, market and logistics that have emerged in the recent past. The barriers on the part of young rural farmers are mainly related to the area of commercialization. Financial crunch, low technological infrastructure and limited access to farmer networks hamper commercialization to a considerable extent. Innovation and entrepreneurship can be imbibed in people only when they have no worries to earn their livelihood. The picture in rural India is bit contrast to Government's imaginations. Government needs to first address the basic issues which may create a progressive environment for primary sector development. There are few farmers who have the interest and capacity to pay for the digitalization but they are not sure about the prospective market to sell the yield on the other side. The imbalance between investment and returns will damage their financial conditions bitterly.The challenge before India lies in balancing high growth with

[11]Socio-economic impact of mobile phones on Indian agriculture, Mittal Surabhi, Feb 2010
[12]Indian council for research on international economic relations

inclusive growth in agriculture. It can be achieved by an effective policy framework and enabling technology ecosystem. The support of innovative financing is equally necessary which can empower Indian farmers and make agriculture sustainable.

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RETAIL SECTOR AND ENTREPRENEURSHIP

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Abstract

Retail sector is truly one of the basic pillars towards Country's development. It is an indispensable sector that will earn the economy; the desired returns to support development. Looking at the current trend, this sector is set to grow and grow so as to provide the required push to the economy with the help of "Digital Retail". The rural areas will also flourish due to development and establishment of such stores in these areas. The Retail market has to be out of the protectionist cocoon so that Country can flourish under the retail umbrella.'Entrepreneurship is the professional application of knowledge, skills and competencies and of monetizing a new idea, by an individual or a set of people by launching an enterpriseor diversifying from an existing one, thus to pursue growth while generating wealth, employment and social good. The wealth is created by individuals who assume major risks in terms of equity, time, and career commitment or provide value for some product or service.

Key Words: - *Retail booming sector for Entrepreneur with Digitalization*

RESEARCH PROBLEMS-

a) To face the difficulties for new Entrepreneur to involve into Retail sector.
b) New Challenges according to the Product Life Cycle of Retail Products.
c) Differences in Ancient and Digital Retail Sectors

OBJECTIVES OF THE STUDY-

a) To study growth, prospects and challenges of Retail Industry for Entrepreneurs.
b) To study impact of organized retail industry on unorganized retail in India.
c) To study various retail location strategy.
d) To find out the factors attracting New Entrepreneurs.
e) Entrepreneurial spirit is characterized by innovation and risk-taking.

INTRODUCTION-Retailing as a concept is not new in India. In fact, it dates back to the period of hard-core traditional formats of retailing that prevailed in the form of Haats, Shandis, Painth, Weekly Bazar and the famous kirana or BaniyakiDukan. It is only during recent past that Indian retail sector is witnessing a process of change and is poised to undergo dynamic transformation. India is now developing into retail power where both organized and unorganized retail sector compete with each other.

Early trade-when man started to cultivate and harvest the land, he would occasionally find himself with a surplus of goods. Once the needs of his family and local community were met, he would attempt to trade his goods for different goods produced elsewhere. Thus markets were formed. These early efforts to swap goods developed into more formal gatherings.

"Doing Business in India, isnot easy, but its easy if you have the right Business". -

KishoreBiyani: Kishore Biyani is the person who's talent is transforming India Retail and Indian Economy with his vision and power to grow.

Phases-

a) Barter System
b) Adoption of common means of currency c) Small stores transforming to bigger size store

EVOLUTION OF THE SECTOR-

- Traditionally retailing in India can be traced to the emergence of the neighborhood 'Kirana' stores catering to the convenience of the consumers
- Era of government support for rural retail: Indigenous franchise model of store chains run by Khadi& Village Industries Commission
- 1980s experienced slow change as India began to open up economy.
- Textiles sector with companies like Bombay Dyeing, Raymond's, S Kumar's and Grasim first saw the emergence of retail chains
- Later Titan successfully created an organized retailing concept and established a series of showrooms for its premium watches
- The latter half of the 1990s saw a fresh wave of entrants with a shift from Manufactures to Pure Retailers.
- For e.g. Food World, Subhiksha and Nilgiris in food and FMCG; Planet M and MusicWorld in music; Crossword and Fountainhead in books.
- Post 1995 onwards saw an emergence of shopping centers,
- Mainly in urban areas, with facilities like car parking
- Targeted to provide a complete destination experience for all segments of society
- Emergence of hyper and super markets trying to provide customer with 3 V's - Value, Variety and Volume
- Expanding target consumer segment: The Sachet revolution - example of reaching to the bottom of the pyramid.

Retailing Formats in India-

- Malls
- Branded Stores
- Departmental Stores
- Specialty Stores

INTRODUCTION OF ENTREPRENEURSHIP-The word 'entrepreneur' is derived from the French verb entreprendre. It means " to undertake". In the early 16th century, the Frenchmen who organized and led military expeditions were referred to as "entrepreneurs", Around 1700 A.D., the term was used for architects and contractors of public works.

ENTREPRENEUR IN TECHNOLOGY-Technical entrepreneur: A technical entrepreneur is essentially compared to a "craftman".He concentrates more on production than on marketing. He demonstrates his innovative capabilities in matter of production of goods and rendering of services.

Non- technical entrepreneur:- Non- technical entrepreneurs are those who are not concerned with the technical aspects of the product in which they deal. They are concerned only with developing alternative marketing and distribution strategies to promote their business.

Professional entrepreneur:- Professional entrepreneur is a person who is interested is establishing a business but does not have interest in managing or operating it once it is established. Such an entrepreneur is dynamic and he conceive new ideas to develop alternative projects.

– **Entrepreneurship and the Internet-**
– The Internet offers numerous entrepreneurial opportunities.

- Online buying and selling
- Dot-com businesses
– Businesses are limited only by personal creativity.
– Business-to-Business (B2B) ventures are possible.

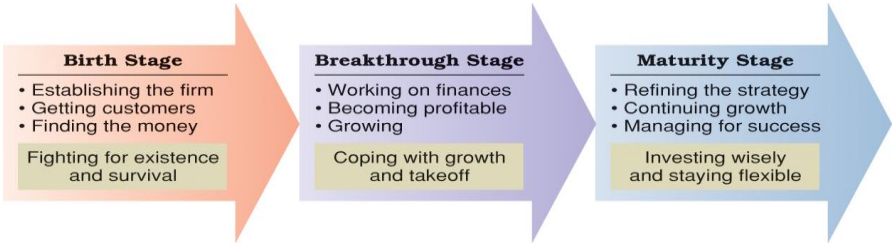
➢ **International business entrepreneurship-**

– Provides strategic opportunities for small businesses.
– Creates exporting and importing opportunities.
– Supported through appropriate governmental and non-governmental
– organizations.

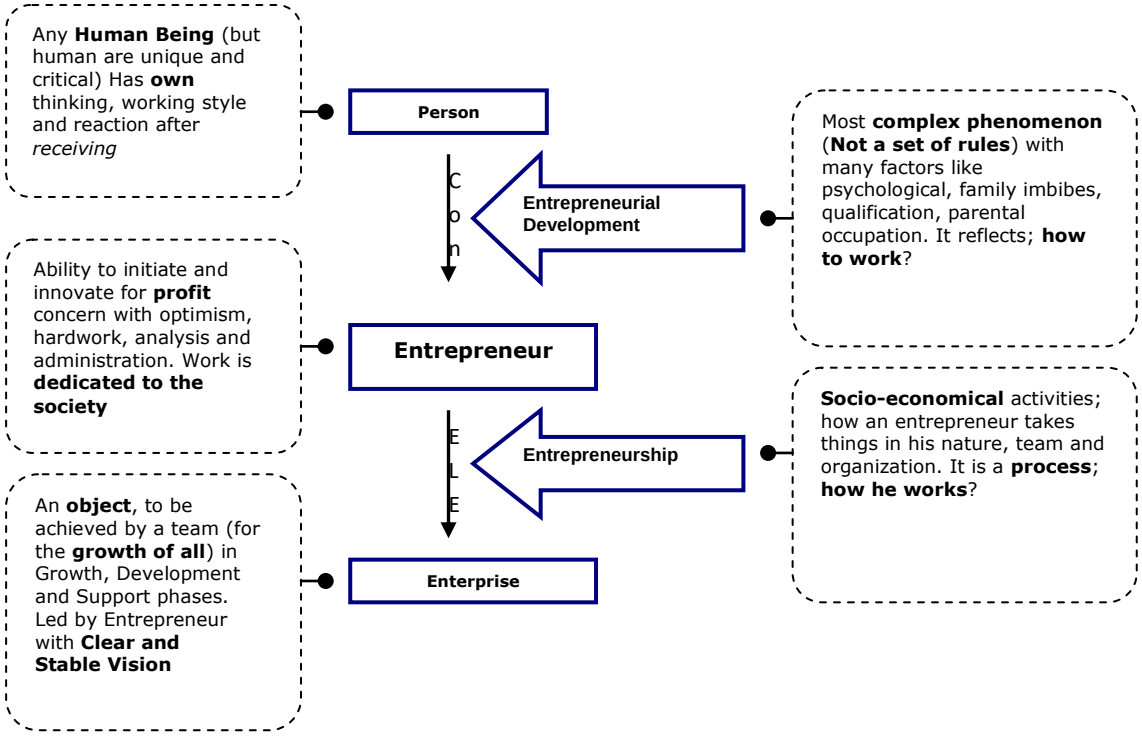
➢ **Family businesses-**

– Owned and financially controlled by family members.
– Largest percentage of businesses worldwide.
– Can provide an ideal business situation.
– Problems unique to family businesses:
- Family business feud
- Succession problem

STAGES IN THE LIFE CYCLE OF AN ENTREPRENEURIAL FIRM-



ENTREPRENEURSHIP AND RETAIL DEVELOPMENT-



CONCLUSION AND RECOMMENDATIONS-The retail sector has played a phenomenal role throughout the world in increasing productivity of consumer goods and services. Retail needs to grow more towards Digitalization as in Ancient times there was General Stores than Big Bazaar, Shopping Malls and now current scenario is Online marketing such as ***amazon.com***, ***flipkart.com.***

- There is no denying the fact that most of the developed economies are very much relying on their retail sector as a locomotive of growth.
- The demanding assertive Indian consumer is now sowing the seeds for an exciting retail transformation that has already started bringing in larger interest from International Brands / formats.
- With the advent of today's players, the race is on to please the Indian consumer and it's time for the Indian Consumer to sit back and enjoy the hospitality of being treated like a King.

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GREEN COMPUTING: A NEED OF THE HOUR

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Abstract
In today's age resources are seemingly becoming scarce, the need to maximise skills, devices and all forms of resources is becoming highly essential and mandatory. The technology that we have these days is such a complicated and intricate one. This same technology basically is dependent on a group of diverse and dynamic people whose learning experience, knowledge and skill set bring about more issues in the utility of the hardware and software technologies that they currently have. For this reason, many experts from all fields as well as the field of computing industry are thinking about how they can make sure that resources never come to a point that they will become extinct or no longer re-usable. One of the theories that a lot of experts have agreed to the prime resolution to the bloating issue of scarcity in resources is the Green Computing Theory. The Green Computing theory is geared towards the right practise in using the computing resource in an efficient manner. However, extravagant practise of involving computer technology demands certain degree of responsibility on the part of the user to avoid or minimize associated harmful impacts that are badly affecting our environment. For this reason, the need for an effective implementation of Green Computing should be properly addressed or given enough priority. Green Computing methodologies involve practises such as Energy Management, Use of Recyclable Materials, Virtualization and Specific Employee Procedures and habits. The concept of Green Computing revolves around making sure that people are practising how they can save resources when they use the computing technology. Green Computing can empower more vitality proficient utilization of computing power. This paper focuses on tools and techniques for saving energy money and resources with Green Computing.

Key words*: Hardware and software technologies, Green Computing theory, Energy Management, Recyclable materials, Virtualization.*

Introduction: In this modern era of globalization, computers play a vital role in every field, so the needs of computers increased day by day and, to fulfill these needs, a large amount of electricity required for manufacturing of computers functional units, such as CPU, memory, monitors and peripheral devices etc. Green computing, the study and practice of efficient and eco-friendly computing resources, is now under the attention of not only environmental organizations, but also businesses from other industries. In recent years, companies in the computer industry have come to realize that going green is in their best interest, both in terms of public relations and reduced costs. The Green Computing Initiative, stewards of the industry standards that defines Eco- Friendly Green Computing as the study and practice of the design, development, implementation, utilization and disposal of IT infrastructure efficiently and effectively with low or zero impact on the environment whilst reducing operating costs[4]. Currently the ICT industry is responsible for 3% of the world's energy consumption. With the rate of consumption increasingly by 20% a year, 2030 will be the year when the world's energy consumption will double because of the ICT industry. Organizations use the Green Computing Lifecycle when designing and implementing green computing technologies. The stages in the Life Cycle include Strategy, Design, Implementation,Operations and Continual Improvements. The 5 core green computing technologies advocated by GCI are Green Data Center, Virtualization, Cloud Computing, Power Optimization and Grid Computing. Company like Via Technology offer green PC's that are affordable, non- toxic and ultra low wattage. It takes responsibility for their outdated products by offering a PC recycling service [17]. Cutting back

on these two energy uses - the computers themselves and the energy used to cool them - makes a direct impact on company costs. If you can increase the energy efficiency of front and back-office computing, you may not need to increase hardware resources quickly which can save capital expenditure on the kit, cooling equipment and even the buildings necessary to house them [8]. It provides managers, academicians, scientists, and researchers in various government, public, and private sectors coverage of topical issues like green strategy, green transformation, green technology, green revolution, ecology system, sustainability supply chain, green and sustainable innovation, global warming, energy efficient system, recycling and reuse systems, product usability, reverse supply chain, closed loop supply chain, environmental issues, carbon footprints, renewable energy, applied ergonomics, and climate change[12]. This paper offers research contributions, investigations on new legislations on green IT, green processes, and applications in terms of environmental and climate issues for both manufacturing and service industry.

History: The widespread deployment of IT has had inadvertent side effects, such as increasedenergy consumption and pollution. Technology-related power consumption is rising rapidly.According a recent U.S. Environmental Protection Agency (EPA) report, "the IT industryconsumed approximately 61 billion kilowatt-hours of electricity in 2006. That's 1.5% of the totalelectricity consumed in the United States. The power bill is roughly $4.5 billion. Servers and data centers deployed by the U.S. Federal Government account for about 10%, or 6 billion kWh, of thetotal consumption" [3]. Accordingly, awareness of these effects has brought about a practice called "the greening of IT." The concept of green computing got its start in 1992 when the EPA created its Energy Star program, which labelled electric products, such as refrigerators and air conditioners that minimized energy consumption while maximizing efficiency [16]. This was revised in October 2006 to include more stringent requirements for computer equipment efficiency [6]. In 1997, the United Nations' Kyoto Protocol mandated the reduction of carbon emissions and required manufacturers to calculate the electricity used by the computers [1]. Next, in 2003, the European Union adopted a Restriction of Hazardous Substances (RoHS) which restricted the use of specific toxic materials in the manufacture of electronic equipment. In 2006, the United States passed Public Law 109-431 to study and promote the use of energy-efficient computer servers. Subsequently, in 2007, President George W. Bush issued Executive Order 13423, which required all United States Federal agencies to use the Electronic Products Environmental Assessment Tool (EPEAT), a set of standards aimed at increasing the efficiency and life of electronic products, when purchasing computer systems [2]

Methodology The concept of Green Computing revolves around making sure that people are practising how they can save resources when they use the computing technology. There are many ways by which a company can practise Green Computing. Some of the ways where Green Computing is being manifested are: Recycled Materials, Virtualization and Power Saving.

Recycled Materials: Electronic waste is oneof the fastest growing components of waste stream in the world. This e - wastes contain various hazardous substances which are harmful to the environment as well as to human health if they are not disposed carefully.When these electronic components break down they release various toxic elements like Lead, Cadmium, Mercury, Arsenic, Lithium, PCB (polychlorinated biphenyls), Chlorofluorocarbon (CFC).People nowadays feel that it is cheaper to replace computer parts than have the parts fixed as this entails

labour costs.They also look for computer parts that are environment friendly. Computer parts that can be recycled are Glass monitor, KeyboardCD Rom drive, Plastic case, Cathode ray tube, Cables, Copper in power cord, Metal from circuit board, Printer cartridges, Batteries.Recycling helps in recovering valuable materials from used electronic products which can be used as raw material to make new products [11]. As a result it helps in saving energy, conserving resources, reducing pollution, and decreasing greenhouse gas emission. It also helps in elimination of hazardous substances thereby protecting environment. Moreover donating e-waste to people who need it, leads to reuse of old functioning electronic equipment [11].Recycling thus creates new job opportunities for recyclers as well as helps in conserving landfill space.

Virtualization: The biggest power draw to IT infrastructure is from the servers. In and of themselves they can gobble up 50% of the power coming into the data servers.In the past multiple servers were needed to fulfil mission-critical tasks however today by consolidating several machines into one and wheel out some of the watt-munching behemoths.Data storage is another massive consumer of power.Direct -attached storage can account for as much as 27 percent of the electricity bill.Direct-attached storage units fragment where data is stored in the organization. Also each device must consume its own power.Clustering also involves identical hardware and operating systems to ensure a smooth rollover in the event of a tragedy [10].The costs add up, especially when one considers the cost of the hardware and the power draw especially from a largely unused device.If servers are virtualized, however, advanced clustering technologies allow them to act as traffic cops and move applications between servers and storage devices with precision.Power usage is an important issue for green organization -the more power organization uses the more money organization has to spend and greater the greenhouse emission. It has become more difficult and expensive for organization from power consumption point of view. Virtualization is one method used to reduce power consumption.It is achieved using specialised software which creates partitions of a physical server into smaller virtual servers to maximise server resources thereby reducing the amount of power consumption.Virtualization is a technique that can help you save both hardware and software resources by creating a "similar environment" like an operating system or a peripheral device using available resources. When the need for the virtualized application is over one can put back the original resource into its original state.Virtualization is thus probably one of the most useful technologies in the green computing arena as it improves hardware utilization and reduces the number of servers and storage devices thereby reducing power usage.

Power Saving: Saving energy is the core element at the heart of most green computing efforts. That's because the energy meets several core needs at once. These are briefly summarized as Saving money, Reducing risk and Reducing carbon footprints.

Cost Saving through Energy Saving: The number one driver for many green projects is direct financial savings by cutting electricity and gas bills. There are three main components to these savings

Reduced energy use by devices: Savings can be achieved by managing devices differently or shifting usage to new, less energy intensive devices. Turning off monitors that are not in use is a relatively quick fix; getting entire salesforce off laptops and onto tablets is slower still.

Reduced heating and especially air conditioning costs: Devices take space and that space has to kept warm enough for both the device and the people who use them and look after them, to

operate effectively. Devices also give off heat, and this is bigger concern especially for data centers. The cost of air conditioning for electronic devices is increasing not least global warming is slowly increasing average ambient temperatures.

Reducing other facilities costs: besides costsdue to HVAC –heating, ventilation and air-conditioning, facilities cost a lot of money for purchasing or renting floor space, cleaning security, and so on.Although these costs are not energy costs per se, projects that reduce energy use often reducerelated facility costs as well.

Carbon Footprint Reduction through Energy Savings: A carbon footprint of organization is defined as "the total amount of greenhouse gas emissions caused by organization expressed as CO_2. Energy use usually requires the burning of fossil fuels. Your carbon footprint is the amount of carbon dioxide (CO_2) and equivalents that go into the air from the fossil fuels burned to produce the needed energy [9]. Measuring carbon footprint of company actually requires collecting a lot of information from various areas of company like facilities, operations, transportations, purchase, travel etc. Carbon footprint also reflects a lot of other aspects of the green computing effort.Reducing carbon footprintincludes reduction of:

Pollution: Power generation is a huge source of pollution.Some pollutants are obvious and tend to wash out the air with the rain, such as soot; others such as mercury emissions from burning coal remain in the environment for a long time. Although emissions are regulated the cumulative effect of many sources of pollution still contributes hugely to pollution on a local,regional and worldwide basis.

Collateral damage from resources extraction: Coal is mined by lopping the tops off mountains; oil is extracted from risky deep sea drilling and highly polluting tar sands mining in Canada; natural gas is wrenched from the surrounding rock by fracturing, using high-pressure water injections with dangerous chemicals. As you reduce carbon footprint, you reduce your contribution to the damage caused by resource extraction.

The need for new power plants: It takes a lot of energy to build a power plant,and each new one is likely to generate a lot of CO2 and other pollutants during its lifetime. Reducing your carbon footprint reduces your contribution to the demand for new power plants.

The energy intensity of the economy: One of the features of advanced economy is that they're able to wring in more and more productivity from less and less energy. For instance, through clever regulation Californiahas managed to maintain flat electricity usage for decades while growing strongly in population and economic output. The efforts to reduce carbon footprint increase your efficiency and decrease the energy intensity of your operations.

Reducing Resource Use: Resource use maybe the most visible issue in all of green computing. After all, electricity is invisible; even coal -fired power plants don't throw off much visible smoke these days. But electronic waste is highly visible and familiar to everyone.Factors influencing purchasing decisions to pursue green computing:

Toxic stuff: Computersand related products are full of exotic materials and chemicals.More and more people are sensitive to these materials. But the materials in computers include known and suspected carcinogens and other pollutants like lead, mercury and brominated (bromine -containing) flame retardants [5]. Also commonly used are heavy metals like cadmium, hexavalent chromium and arsenic.Polyvinyl chloride (PVC) coats many wires and cables,

alongwith a toxic additive called phthalates. Old-style monitors include pounds of lead- which is why they're so heavy - and all kinds of monitors can contain mercury.

Exporting e-waste: Exporting e-waste is common and it causes serious problems wherever it's shipped. In the United States, CRT style monitors the ones that are full of lead can't be exported as waste, but other electronics can. They end up in recycling operations were totally unprotected workers- often desperately poor and ill smash up the devices to get at the resalable parts of the materials inside. Children in these areas show high levels of lead,dioxins and other toxics in their blood.

Extended Producer Responsibility (EPR):Seek out manufacturers who support Extended Product Responsibility, also called "producer takes back". This means that manufacturers take their products off your hands when you're done with them and see to their safe and sane disposal. EPR encourages manufacturers to use fewer toxics, to design for reusability and recyclability, to create recycling capabilities adapted to their own products, to create products that last longer and to reduce waste.The chances you can make the best use of an old computer are quite low. For example, Dell, which has embraced EPR, can do much more.Facing hundreds and thousands of taken-back computers,they can resell or donate working computers; reuse working hard disks; safely extract and resell some hazardous chemicals,while safely disposing off the others. So EPR not only shifts a burden off you, it creates the opportunity to make the highest possible reuse of potentially valuable parts of electronic devices.

Responsible companies: Identify companies that are taking these steps. Set a minimum standard;for instance, one could refuse to buy from companies that aren't reducing toxins or embracing EPR. Then give bonus points for additional steps,such as greening entire supply and distribution chains. This will encourage a "race to top" among suppliers, as well as distributors.

Technologies used to maintain Green Computing Carbon free computing:

Due to increase in (CO_2), Methane, and Nitrous oxide are the reason for earth increasing temperature which leads to global warming, serve floods and drought. So it is essential to calculate the electricity used by the device over its lifetime generally three years. From the data, one can conclude how much carbon dioxide the device will emit in to the atmosphere during its operation [7].

Solar Computing: It is required to develop fully solar power devices that are non-polluting and highly reliable [13].

Energy efficient computing: An energy-efficient platform can be developed for low-power small form factor (SFF). Processors having a maximum power consumption of 1W are being developed. This processor can produce over four times less carbon during their operations and can be efficiently embedded in solar devices [13].

Effective steps to maintain Green Computing

a. People must switch off their computer at night so it runs only eight hours a day- it will reduce energy use by 810kWh per year and net a 67 percent annual savings.

b. Flat screen monitors use less energy and such monitors are not as hard on our eyes as CRT's.

c. Unplug the electronic if not in use.

d.A small monitor a 14-inch display uses 40 percent less energy than a 17 inch one.

e.Enable sleep/ stand mode is an effective way to conserve battery in a laptop computer.

f. Power off your monitor when you are not using it instead of using screen savers.
g. Buy vegetable or non-petroleum-based ink which are made from renewable resources require hazardous solvent.
h. Recycling of Electronics Waste is more effective because recycling process is more environmentally friendly than the process of making new stuff because it can reduce the use of new raw materials, land degradation, pollution, and energy usage [15].
i. Use network printer in a business organization to save the paper and energy [14].

Conclusion: Thus Green Computing can be an Effective Initiative to Energy and Resource Management. For many years now, responsible environmentalism and energy conservation were not normally associated with computer systems and technology. But with "going green "currently advocated, there are various ways of practising Green Computing with technology. Maintaining easily managed network systems can save a lot of time and resources. Apparently, an organized network system reduces network maintenance server requirements hence saving use of resources, such as electricity, hardware and more. Cutting down on paper, electricity, hardware, and toner. Colour settings of printers should constantly be checked. By calibrating printer settings, an individual can eventually save substantial amount of money while producing high-quality printed documents. Virtualizing the actual work setting offers the employees the capability to work from the comforts of their home without comprising productivity. Such work set up allows employees to even save money from daily use of gasoline and exposure to various pollutions. This system provides a more efficient printing resolution enabling favourable productivity thus, ensuring both customer and employee contentment. Monitoring and regulating staff internet access and use. Content filter solutions prove to be effective tools in reducing and/or eliminating potential internet problems. Doing these help increase staff efficiency and productivity while achieving a safe Internet environment for everyone. Using Voice over Internet Protocol (VoIP) can save substantial time and money among employees since the service is either free or low cost.In conclusion, the process of organizations "*going green*" does not only concern computers and technology, but also involves responsible conservation and management of energy and resources.

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SCRUM: REVIEW OF STRONG AND WEAK SIDE OF METHODOLOGY FOR ADOPTION

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Abstract
The agile programming strategies have been created and developed since mid-1990s. This programming improvement has picked up significance in the business on account of its approach on the issues of human dexterity and quantifiable profit. There isn't yet a particular approach of agile technique that has been demonstrated as a standard and built up until this point, still Scrum philosophy appears to be encouraging to convey the functionality in product according to the need of current needs of an industry. The point of this paper is to bring the more grounded and weaker side of Scrum usage to light and proposing answers for these. For the specified work different research paper were evaluated and study is led among the designers of different organizations. The investigation of the overview comes about uncovered a few issues that influence scrum execution specifically or in a roundabout way and bringing about infringement of Scrum rules.

Keywords*: Scrum, old styleSW development, agile SW development, literature review, survey.*

Introduction: The Scrum programming advancement process is an agile process that can be utilized to oversee and control complex programming and item improvement utilizing iterative and incremental practices and is an upgrade of iterative and incremental way to work with conveying questioned situated programming. Numerous associations incline toward Scrum to finish their work in time. Because of the short improvement life spin through an iterative and incremental process, the light-footed strategies have been utilized broadly in business areas where prerequisites are moderately shaky. Scrum is an iterative, incremental structure for tasks and item or application improvement. It structures improvement in activities of work called Sprints. These emphases are close to one monthly each, and happen in a steady progression immediately. The Sprints are time dependent, they accomplish on a specificday whether the activity has been finished or not, and are never broadened. Toward the beginning of each Sprint, a cross-practical group chooses things (client prerequisites) from an organized rundown. The group resolves to finish the things before the finish of the Sprint. Amid the Sprint, the picked things don't change. Consistently the group assembles quickly to investigate its encouraging, and alter the following stages expected to finish the work remaining. Toward the finish of the Sprint, the group surveys the Sprint with partners, and exhibits what it has manufactured. Individuals acquire input that can be joined in the following Sprint. Scrum underscores working item toward the finish of the Sprint that is extremely "done"; on account of programming, this implies code that is coordinated, completely tried and possibly deployable [1-2]

Challenges and Drawbacks Scrum isn't just a rigid arrangement of practices – rather, and all the more significantly, it is a structure that gives straightforwardness, and a system that permits "assess and adjust". Scrum works by making unmistakable the brokenness and obstacles that are

affecting Product Owner and the Team's viability, so they can be tended to. For instance, Product Owner may not by any stretch of the imagination know the market, the highlights, or how to evaluate their relative business esteem. Or on the other hand the Team might be unskillful in exertion estimation or improvement work. The Scrum system will rapidly uncover these shortcomings. Scrum does not take care of the issues of advancement; it makes them horrendously noticeable, and gives a system to individuals to investigate approaches to determine issues in short cycles and with little change tests. One basic misstep made, when given a Scrum activity that is testing, is to change Scrum. For instance, Teams that experience difficulty conveying on their Sprint responsibility may choose to make the Sprint length extendable, so it never comes up short on time – and simultaneously, guarantee it never needs to figure out how to complete a superior occupation of evaluating and dealing with now is the ideal time. Along these lines, without instructing and the help of an accomplished ScrumMaster, associations can transform Scrum into only its very own perfect representation shortcomings and brokenness, and undermine the genuine advantage that Scrum offers: Making obvious the great and the awful, and giving the association the decision of hoisting itself to a more elevated amount. Another normal mix-up is to accept that a training is disheartened or denied on the grounds that Scrum does not particularly require it. For instance, Scrum does not require Product Owner to set a long haul system for his or her item; nor does it expect designers to look for counsel from more experienced architects about complex specialized issues. Scrum abandons it to the people required to settle on the correct choice; and much of the time, both of these practices (alongside numerous others) are very much exhorted. Another thing to be careful about is chiefs forcing Scrum on their Teams; Scrum is tied in with giving a Team space and devices to oversee itself, and having this managed from above isn't a formula for progress. A superior approach may start with a Team finding out about Scrum from a companion or supervisor, getting exhaustively taught in proficient preparing, and afterward settling on a choice as a Team to take after the practices reliably for a characterized period; toward the finish of that period, the Team will assess its experience, and decide whether to move ahead [3-5].

Objectives The target of this paper is to limit the issues and difficulties of Scrum in SWdevelopment and propose answers for some of them. This exploration paper concentrates on the recognizable proof of shrouded difficulties and issues in Scrum usage and afterward the definition of strategies for handling such issues. It likewise proposes answers for these issues and difficulties said in existing work by, for example, documentation, correspondence, client contribution, scrum services and customer inclusion. It additionally incorporates answer for social and social contrasts issue which was featured by. This exploration paper additionally says the formal sessions with couple of associations to feature and analyze nature of issues they looked in scrum usage being developed. The distinction in experience will help in the investigation of the contrast between the issues looked by experienced Scrum groups versus the issues looked by unpracticed Scrum groups.

MATERIALS AND METHODS

Research Methodology In this exploration work, blended strategy is utilized to recognize and feature issues and difficulties of Scrum execution with the assistance of existing work and from encounters of few organizations by review. A review was intended for this examination. The study was evaluated by peers for coherence and by other Scrum specialists for content

legitimacy. It was disseminated to various Scrum specialists for over two weeks. Information was gathered from two sources i.e. study and writing survey. The overview member representatives incorporate venture supervisors, scrum experts, improvement group and quality affirmation group.

Literature review A group based approach for controlling the confusion of clashing interests and needs to iteratively, incrementally create systems and items when prerequisites are quickly evolving. Scrum can enhance interchanges and amplify co-operation. This strategy is adaptable from little single tasks to whole associations.

For an unpredictable frameworks improvement task to be fruitful it ought to be actualized in little advances, each with a reasonable measure of effective accomplishment and with an alternative of moving back to past effective advance upon disappointment, and this should be possible by following the exercises of Scrum. Agile systems put an awesome accentuation on individuals and their abilities, aptitudes, and information, recommending that for lithe advancement to be successful colleagues must be responsive, equipped, and communitarian.

In 2013, Scrum Alliance had directed an overview on the present territory of Scrum on the planet, in which 487 members from 71 nations participated. This report has demonstrated that Scrum is the most utilized strategy from lithe techniques and it likewise demonstrated that over 80% of their members have been associated with no less than at least one agile undertakings, it is nothing unexpected that a greater part utilize Scrum routinely.

Some essential terms of Scrum can be characterized as -

The Scrum Master isn't an "ace of Scrum" yet a part inside the system, something individuals may misjudge, particularly as this identifies by Product Owner part also. The Scrum Master is entrusted with being in charge of guaranteeing that Scrum esteems and practices are energized and that hindrances blocking the advance of the venture are expelled from the group. This individual leads by instructing and encouraging instead of by coordinating and controlling.

Product Owner is the particular person who has the specialist to set business needs for ventures, generally through a Product Backlog. This individual more often than not works straightforwardly with the client. The Scrum group ordinarily numbers 5-8 individuals and is typically anticipated that would be cross-useful and self-sorting out. The Sprint Backlog is a yield of the Sprint arranging meeting. It comprises of the assignments for the Sprint got from the Product Backlog. "Done" characterizes what the group implies when it focuses on "doing" a Product Back log thing in a Sprint. The Sprint Backlog Burn-down is a diagram of the measure of Sprint Backlog work staying in a Sprint over the time left in the Sprint. A Sprint is a one cycle of a month basis or lesser that is of steady length all through an improvement exertion. Just Product Owner has the specialist to wipe out the Sprint. The Sprint Retrospective gathering is a period boxed gathering where the group examines what went well in the last Sprint and what can be enhanced for the following Sprint. The day by day stand-up meeting is a period boxed, 15-minute gathering used to review advance toward the Sprint objective and to make adjustments that enhance the estimation of the following workday [6-12].

Survey Study of this exploration paper takes an inside and out perspective of the difficulties associated with usage of scrum into few associations.

Questionnaire for this review was gotten from the perspectives of scrum specialists. Study included 18 questions and these inquiries are identified with scrum formal preparing, usage of essential tenets of scrum, administrative and group reaction, gatherings, arrangement, testing and discharge process. A sum of thirty five people were requested to partake in the study. From these thirty five people, reactions from twenty people were gotten influencing come back to rate of 57.14%. The overview was made out of an aggregate of twenty three inquiries. The people were not offered any motivator to answer these inquiries. These inquiries secured the zones of Development, Testing and Release Process. The members have a place with the groups that have received Scrum Framework. All parts identified with programming improvement, for example, venture administrators, scrum experts, advancement group and quality confirmation group reacted to the review. The member's experience extended from 1 year to 10 years. The greater part of the meetings were sound taped and logged. The got information was put away in an information base and later information mining procedure was connected on it to locate the shrouded connection between various ideas. During the time spent information examination grounded hypotheses were utilized to get develops from gathered crude information.

Findings and discussions

Discovered Issues A few issues are recognized from review comes about and from talk with sessions. These issues are specifically influencing Scrum execution and are identified with administration, advancement and discharge process. Here is a detail depiction of each.

i. As the items are deployed as often as possible amid a run module combination testing can't be performed legitimately every one of the circumstances, as it requires a considerable measure of time for testing and quality confirmation. Insufficient time portion for QA of huge or complex frameworks can without much of a stretch produce basic issues.

ii. From overview comes about, it is noticed that Product Owner and Scrum Master meddle with colleagues by enquiringpositionsas they used to ask in customary SDLC. It has likewise been watched that customer includes the prerequisites amid the run. It has been watched that from study comes about that interferences by directors have been accounted for by 46% of colleagues, while the quantity of individuals/representatives fulfilled by their administrator's parts is around 58%.

iii. Teams have a fleeting due dates due the agility of the groups. To adapt up to a slacking due date, the designer needs to put additional hours. This will make Code Quality related issues. In any case, one can't compose bug free code all the time particularly when he is working under strain.

iv. This is likewise demonstrated form comes about that groups which are develop in Scrum usage have moderately less issues than youthful groups. In any case, the distinction isn't enormous. It has likewise been watched that issues distinguished from organization review comes about are 16% more than the issues recognized from Bentley Systems Inc. review information, which is 43%.

v. Another significant issue in scrum is the Release procedure/organization process. Dexterity in work is presented by Scrum; dash sending is the significant worry for each group. Results likewise uncovered that half colleagues need formal preparing of scrum

and are uninformed of the scrum procedure. The information that they have picked up is either a direct result of the other group colleagues or from their low experts.

vi. Although scrum demonstrates a decent undertaking administration ability, there aren't any specialized practices that can be called as best.

vii. Agile puts stock in no documentation so does Scrum; however this wonder is as yet not effective in genuine condition where things come in and out through email or whatever other source, which is very hard to track. From the review, it has been discovered that necessities get changed through messages without relating them legitimately in Product Backlog which makes issues for group in traceability.

viii. There is no arrangement or methodology in scrum to deal with dangers. It is a critical factor for any task and subsequently work is required around there of Scrum.

Solution for the discovered Issues In this segment, arrangements are proposed to a portion of the issues which are recognized in the above segment.

I. Teams ought to invest more energy in testing of last interior re-rent. It is profoundly recommended to commit a full dash for ventures which are having firmly coupled modules for testing.

II. Special consideration is required to quality related things to in-wrinkle dependability and in accomplishing objectives, for example, viability and execution. Quality related assignments dependably helps in accomplishing elements, for example, dependability, viability and versatility consequently it ought not to be disregarded whenever.

III. Disruption in Team work doesn't enable a group to act naturally sorted out and self-engaged, which is a solid advantage of scrum. On the off chance that group isn't develop in their work and obligations, at that point it ought to be made develop first. Appropriate preparing and examining process assumes a noteworthy part in the development of the group. Chiefs and Scrum Masters ought to abstain from meddling in cooperation. Give the group a chance to carry out their activity themselves.

IV. Impediment determination gatherings ought to be led with just those colleagues who are specifically identified with the hindrances. After the determination, other colleagues ought to likewise be educated about the finishes of the dialogs or gatherings. Resolutions ought to likewise be included errand stories. Looking after stories/undertaking depictions assist other colleagues with tracking necessity in later runs.

V. Re-perusing for assignments which are missing due dates can unravel code quality issue effectively. The assignments can be separated into subtasks after appropriate re-checking. Advance on the errand can be appeared by doing some sub segments in current dash moving whatever is left of the areas to the following run. However those areas ought to be done in the following dash as they would be considered as a slack.

VI. It is vital to set run term to the rate at which necessities change and the rate at which the group can convey a usefulness. Including more work than the group can do makes it hard to meet duties and to gauge advance and speed of the group, and new "high-need" work can upset stream.

VII. Teams have more arrangements on the grounds that the work that they have done is presently isolated into dashes. Additional care must be taken if there should arise an occurrence of sending. A procedure that can be of incredible help for this situation is the Release Management process. Discharge Management additionally requires approaches

which can best suit to Scrum. This issue can be settled by better strategies and their authorization in groups.

Summary This paper discovers that an expansive number of components affect Scrum execution which are likewise legitimate for other agile improvement strategies. Issues recognized from this examination are Quality Elements Pileup, Module Integration difficulties, Quality of code, Disruption in Team Work, Experience versus less experience Scrum, Sprint time, Lack of Scrum Practice, Deployment Process, Backlog handling, No specific practices, Multiple gatherings, Metrics, Risk Management, Documentation, Too Idealistic Scrum and Communication/Scrum Ceremonies. While course of action were obliged the going with issues which are Quality Items Pileup, Module Integration Issues, Code Quality, Disruption in Team Work, Sprint Duration, Lack of Scrum Training, Deployment Process, Multiple Groups, Documentation and Communication/Scrum Ceremonies. The audit displayed in this examination infers that Scrum is a standout amongst the most discussed idea of the present period. This technique gives a huge method for filling in as well as an incredible environment for work with help to self-sorting out groups. In future, more changes and headways can be made to Scrum strategies. Other aficionado analysts can actualize Scrum on different areas.

Scrum isn't a procedure or a system for item advancement, however an iterative and incremental structure. This structure might be utilized with various procedures and methods functioning admirably in a domain of steady change. Scrums uncovers what may be revised in the group and its embodiment is firmly associated with the identity of the colleagues. Along these lines, one should continually approve the choices, practices and process as per the standards and qualities the group holds dear. Scrum was received after some lab individuals have heard reports of comparative encounters in logical occasions that moved toward the subject of dexterous programming venture advancement and administration.

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INNOVATIVE BANKING PRACTICE IN RURAL MARKET

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Abstract

Indian banking system growing very fast and influence the growth of Indian Economy. Banking sector plays an important role in Indian Economy and also facing challenges like changing needs and perceptions of customers, new regulations from time to time and advancement of technologies poor recovery and authentication problems. To overcome from problems and challenges have bound banks to change the traditional ways of doing business. This research papers aim is to focuses on how the technology has changed the phases of banking sector in India. India's banking system has major financial innovations in the few decades which lead to tremendous growth in banking services and their working operations. Through ECS, RTGS, EFT, NEFT, ATM, Retail banking, Debit and Credit cards, free advisory services, online banking, mobile banking and many more value added products and services are various innovations in banking and financial sector .This paper also indicates the pros and cons of changing banking style. Innovative financial products are proper *blend of appropriate technology This paper explores the different scope of innovations for access into the rural market and also the future of rural market in India, motivated by growth of Agriculture and small scale industry which will be build around technological, Innovations in products and services specifically in rural areas by a banks.*

Keywords: *Indian Banking, Financial Innovations, Technological Changes, Challenges.*

INTRODUCTION: The financial development in Indian banking industry occurred after the nationalization of 14 major scheduled banks in July, 1969 and 6 in April, 1980. In the 1990s, the banking sector in India placed greater emphasis on technology and innovation. At present Indian banking sector is sufficiently capitalized and well-regulated. There are 26 public sector banks, 25 private sector banks, 43 foreign banks, 56 regional rural banks, 1,589 urban cooperative banks and 93,550 rural cooperative banks. Central bank granted approval to 11 payments banks and 10 small finance banks in FY 2015-16. Standard & Poor's (S & P) estimates that credit growth in India banking sector would improve to 11-13 per cent in FY17. The future of Indian bank looks not only exciting but also transformative. India's banking sector could become the fifth largest banking sector in the world by 2020 and the third largest by 2025. In future, technology will make the engagement with banks more multi-dimensional continue to develop and expand banking services. Indian banks deployed technology based solutions to raise revenue, enhance customer experience, optimize cost structure and manage organization risk. However, there is a wide change in the technology implementation capability across different banking industry.

Definition:- According to John Finnerty, "Financial Innovation involves the design, the development, and the implementation of innovative financial instruments and processes, and the formulation of creative solutions to problems in finance".

Role of Banking in Rural Development The banking industry is the real backbone of any country because it controls the entire economy. It was some twenty years after the attainment of independence in this country that the national leaders thought of involving the banks in a big way in the development plants of the country. Banking industry in India has come a long way

from the time when banks used to be mere deposit-taking and money-lending institutions. The aim of the bankers at that time was maximum profits with minimum risk. 'Class banking' and not 'mass banking' was the motto of the people managing the banks. But with the nationalization of banks in 1969, the concept and attitude of the bankers got totally changed. Banks became institutions with social responsibility. They decided to go to weaker sections of the society and help them in achieving their aspirations. Rural areas which hitherto were untouched by banks became the special targets of the banks. Opening of branches in rural areas assumed new significance. As a consequence, more than 40% of the branches of nationalized banks are in rural areas. In spite of rapid industrialization and development of cities, more than 70 percent of the people live in rural areas. It is therefore, clear that India can't progress without making an earnest effort to improve their lot. Rural populace has to be involved in the mainstream of the nation in one form or another.

EVOLUTION OF INNOVATIVE PRODUCTS IN INDIA Banking Innovations Over the years, the banking sector in India has seen a number of changes. Most of the banks have begun to take an innovative approach towards banking with the objective of creating more value for customers. Information technology has given rise to new innovations in the product designing and their delivery in the banking and finance industries. Technology offers a chance for banks to build new systems that address a wide range of customer needs including many that may not be imaginable today. Financial innovation associated with technological change totally changed the banking philosophy and that is further tuned by the competition in the banking industry. Challenging business environment within the banking system create more innovation in the fields of product, process and market. Today, we have electronic payment system along with currency notes. Financial sector is moving towards a scenario, where it can have new instruments along with liquidity and safety.

Important events in the evolution of new age payment systems in India:

Arrival of card- based payments- debit card, credit card late 1980"s and early 1990"s.
Introduction of Electronic Clearing Service (ECS) in late 1990"s

Introduction of Electronic Funds Transfer/ Special EFT in the early 2000"s Real Time Gross Settlement (RTGS) was introduced in March 2004.

Introduction of NEFT (National Electronic Funds Transfer) 2005/06

Introduction of CTS (Cheque Truncation System) in the year 2008

OBJECTIVES

- ✓ The purpose of the study is to highlight the new innovations in the banking sector at the rural area.
- ✓ To study how innovations have contributed to the development of rural Indian banking.
- ✓ To study the challenges faced by rural Indian banks in the changing scenario.

RESEARCH METHODOLOGY In this paper an attempt has been taken to study ***"Innovative Banking Practice in Rural Market"***. The paper is based on secondary data. The secondary data was collected from various published sources like reports, magazines, journals, newspapers and Internet etc. It is referred paper.

TECHNOLOGY BASED INITIATIVES TOWARDS BETTER SERVICING IN RURAL AREAS:

Internet Banking / Online Banking / Net banking: It is a system that allows individuals to perform banking activities through the internet. It enables customers to perform all routine transactions, such as account transfers, balance inquiries, bill payments, stop-payment requests etc. As an integral part of the e-business, the e-banking has been growing at a rapid pace. It is believed that the e-banking will help banks to cut costs, increase revenue and become more convenient for customers.

Mobile banking / M-Banking: It is a system that allows individuals to perform banking activities through the mobile phone. Mobile banking is not an entirely new channel but a modified version of online banking that fits on a two-inch screen.. It is also attracting customers to carry out financial transactions like: Last 10 transaction, Notification of ATM withdrawal, Disable/enable the account for payment, Instant money transfer, Issue subordinate card, M-payments (B2C) & Inter-personal (P2P) payments, Card based payments (Mobile debit/credit/pre-paid card), Cash payments (Electronic purses/wallets), Utility bill payments, Credit Card Payment, Mobile Top up, Alerting Services (Transaction alerts, reminders, Stock alerts, Offers & marketing promotions). This is achieved through the introduction of Interbank mobile payment service (IMPS), powered by National Payments Corporation of India (NPCI).The objectives of NPCI are to build robust and state of the art national level retail electronic payment system infrastructure in the country.

Tele-banking: It is a system which provides provision of certain banking services such as account balance inquiry, funds transfer, and payment of bills through telephone, information about products and services, information about status of cheque issued or deposited, information about deposit interest rates, information about ATM and branch locations, information / issues on usage of: ATM, internet banking or mobile banking, request for cheque book, request for statement by e-mail or fax, request for duplicate statement, regeneration of ATM pin for debit card, regeneration of internet banking password, blocking of internet banking user ID, etc.

ATM: An automated teller machine is a computerized device that provides the clients of a financial institution with access to financial transactions in a public space without the need for a cashier or a human clerk. The main facilities provided under ATM are roundthe-clock (24*7) cash withdrawals, cash and cheque deposits, balance enquiry & statement of account , a mini statement comprising last few transactions can also be obtained from the ATM.

Biometric ATMs: In biometric technology, the identity of user will be identified by biological phenomena of human body. Biological structures and actions of different body parts of human body ranges from iris of eye, finger print, face recognition to voice recognition can be used in biometric ATMs. ATMs with biometric devices are the latest solution in the ongoing effort to offer banking services to the rural masses. Establishing the identity of a rural depositor through biometrics makes it possible for illiterate or barely literate people to become part of the banking user community.

Mobile ATM: Mobile ATMs are designed for providing ATM facility to the rural poor as well as to other customers. The Van moves to the pre-determined places and it is also accessible to biometric card holders. Opening of accounts also can be undertaken during the visits to the rural areas. This can be used at weekly markets effectively.17 Mobile ATMs are useful at sporting

events, trade fairs, social gatherings, etc. where there's a high probability of a large number of transactions.

Common Service Centre (Kiosks): The CSCs is designed as ICT-enabled kiosks having a PC along with basic support equipments like printer, scanner, UPS, with wireless connectivity as the backbone and additional equipment in the form of projection systems, etc. as per the requirement. An IT-enabled CSC18: Provides citizen-centric services of the State and Central Governmentin a convenient and efficient manner through the CSC across rural India. Enhances the accountability, transparency and responsiveness of theGovernment to citizen's needs, Provides efficient and cost effective methods of service delivery todepartments and agencies,

ITC e-Choupal:- It is designed especially for the farmers of India. Through e Choupal, farmers who are living in the remote area of the country and cannot manage to have direct contact with the consumer can come forward to have a direct contact. It provides e procurement system through which the farmer can access the latest and updated information (Local, national and International) related to different farming practices. It provides real time information and customized knowledge to the farmers through which the farmer can take better decisions and can have direct contact with the customer, reducing the amount wasted by moving through the distribution channel of intermediary. E copal has already become the largest initiative among internet based interventions in rural India. E choupal is present in 36,000 villages through nearly 6,000 kiosks across nine states.ITC (Indian Tobacco Company) is planning to expand the concept of e choupal further in 15 states of India.

Kisan Credit Card The government of India has taken several policy initiatives for strengthening of rural credit delivery system to support the growing credit needs of the agricultural sector. Some of the important innovations taken in the recent years for improving agricultural credit flow are Kisan Credit card scheme, Agricultural credit at lower rate of interest, simplification in lending policies and revamping of cooperative credit structure. The emphasis of these policies has been on progressive institutionalization for providing timely and adequate credit support to farmers with particular focus on small and marginal farmers and weaker sections of society to enable them to adopt modern technology and improved agricultural practices for increasing agricultural production and productivity. Kisan Credit Card aims at ensuing educate and timely supply of Credit to farmers. KCC Scheme is under implementation by Banks throughout the country since 1998-99. KCC is simple card cum passbook. Farmers may approach the nearest branch of any Banks or PACS for it.

CONCLUSION: The Present Generations is the witness to the fact that the rural markets are gradually yet steadily evolving and are on the way to become the hot beds for the future marketing activities. Also , a fact established beyond doubt is that these rural market being different from their urban counterparts on several counts, call for a distivively , different entry mode , operation strategy and marketing strategy for an ensure success in these markets . This naturedly presents a wide scope of innovation in the processes, delivery and value preposition. The key to success lies in bringing in the required distinctiveness through innovation which is continuous, cost effective yet efficacious.Some remarkable successes in the rural market bring to light the possibility of achieving the architectural innovation through consistent and accumilicated incremental innovation. Such innovation can further be used as a platform for

value innovation. A combination of architectural innovation and value innovation can further be used strategically by the company to emerge as a market driving company in the rural market.

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CRYPTO CURRENCY: AN INNOVATIVE ALTERNATIVE DIGITAL CURRENCY

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Abstract

We are in 21st century and witnessing era where science and technology has taken human being on a different platform and height. We are not going to stop here and many amazing developments would follow in years to come.Each and every one is using different kinds of technologies for the development. Advanced technology is use in various departments like in business, finance, education, banks etc. Technology use for transferring the payments and receive the money.Digital currency is also one type of currencies.It is first time appeared in Japan in 2009; name is "Bitcoin" and in India "Crypto Currency" is used since 2010 onwards. In this research paper we have focused on primary introductive information, status of digital currency and its impact on economy. It is attempt toward understanding online digital payment. Now it is very fast developing currency in the world. It is not available in physical form like notes and coins. It is available only in digital form. Digital currency is a decentralized electronic system. It is highly liquid. It has low transaction costs, can be used to send payments quickly across the world through internet. Today, Bitcoin is one of the most well-known digital currencies. Currently, digital currency schemes are not usedin many countries due to facing many series problems and challenges because it is not approved by Central Bank in many countries. On December 24th, 2013 the Reserve Bank of India (RBI) issued a cautionary circular on the risks of using, holding and trading in digital currency.

In this research paper we have focused on primary introductive information, status of digital currency and its impact on economy. Since its invention, all digital and crypto currencies have gained amazing popularity and much attention from the users. This paper argues that digital money as a new and network good could become a faster and important from of currency in the future. Such a development and popularity would influence the economy, effectiveness and implementation of monetary policy.

Key Words: - *Digital Currency, Bitcoin, Cryptocurrency*.

Introduction: -We are living in 21st century. It is known as technosavy era. Each and every one is using different kinds of technologies for the development. Advanced technology is use in various departments like in business, finance, education, banks etc. Technology use for transferring the payments and receive the money. We know various types of currencies like paper currency (notes), metal currency (coins), plastic money etc. and types of payments mode such as cash transaction, mobile transfer, ATM to ATM money transfer etc. digital currency is also one type of currencies. It has arises in 2009 in Japan, name is "Bitcoin". This paper has focused on digital currency. Now it is very fast developing currency in the world.

Subject Entry:- The concept of "Digital Currency" has recently occupied forefront of economic discussion. The subject "Digital Currency" has been discussed in internationally since 2009. It is first time appeared in Japan in 2009 and in India "Crypto Currency" is used since 2010 onwards. The subject of "Digital Currency" talks about economic development which is an important part of development of any nations. India cannot be an exception to this. There has been much discussion about digital currency or crypto currency in our nation too. It is very interesting concept was initially put forwarded by "Satoshi Nakamoto" and has now become one of the important topics on the agenda of global level. Many counties have accepted the digital money and they transact in it with legal support. Many countries far away from this currency, they have not yet accepted it. Yet, India has not accepted. This currency has been facing various problems and limitations in the economy.

Subject Importance:- This is true that digital currency facing many problems and limitations but still it is growing vary fat in the economy. This is seen that, digital or crypto currency is overwhelming on the other currencies. In the world, many countries now routinely refer the digital currency like "Bitcoin".

Why this topic is selected for the study:- We are in 21st century and witnessing era where science and technology has taken human being on a different platform and height. We are not going to stop here and many amazing developments would follow in years to come.However, one particular and important segment which still needs to be properly attended is digital currency, because this is most important part of human being as well as economy. Development and growth of economy possible only when the topic digital currency is also given prime importance, same as the importance given to the development of science and technology.The topic "Digital Currency" has been selected to bring to the notice of common man, who are not all aware of the developments that are being talked and plane on global level. When it comes to Indian economy, the acceptance of the digital currency is growing fast by the consumers.When we think of digital currency, we have to think and study many dimensions rather than one because we cannot find proper inference by studying only one side. In this research paper we have focused on primary introductive information, status of digital currency and its impact on economy. It is attempt toward understanding online digital payment. This obviously helps to study in detail the development and improving status of digital currency in the economy.

There would some mistakes in the writing of paper information may be changed while doing social research e.g. statistical data.

Objectives of the study:-

1. To know the digital currency.
2. To know the development of digital currency.
3. To study of impact of digital currency's on economy.

Methodology:- This research paper is based on purely secondary data. Secondary data has collected from various sources such as research articles, handbooks, different newspapers, review of literature and analysis of secondary sources, RBI's cautionary circular, and websites etc. Presently, we use FIAT money. It is issued by the central government so it is authorized money. But today, there are various innovative money transfer systems in the economy, many of which the build on platforms like the mobile phone, internet and digital storage card. Beyond payment systems, digital currency is growing use and more innovative payments. One digital currency, however, stand out among the rest such as Bitcoin. As of January 2018, the total value of all bitcoins was pegged at $ 283 billion. The second most popular currency, called "Ripple" was valued at $ 119 billion. According to coin market cap, the total value of all cryptocurrencies is about $ 708 billion.Digital currency is known as Digital Money, Electronic Money (E – Money) or Electronic Currency, Virtual Currency etc. Virtual currencies are also called Crypto currencies. It is a one type of currency. It is not available in the physically form like notes, coins, bank cheque etc. It is available in only digital form. Digital money is issued and controlled by its developers and accepted, sold, purchased and usedamong the members of users and a specific virtual community.

What is cryptocurrency? Cryptocurrency is a form of payment that can be exchanged online for goods and services. As such Bitcoin is a digital currency but also virtual currency. Bitcoin

and its alternative are based on cryptographic algorithms, so these kinds of virtual currencies are also called crypto currencies. It can be downloaded by anyone; the system runs on a decentralized peer – to – peer network. It is fully distributed. Bitcoin is a decentralized electronic cash system initially designed and developed by Satoshi Nakamoto. It is using open source software. Cryptocurrencies are based on mathematics. People are using this software programs that follows a mathematical formula to produce digital currency. This mathematical formula is available on internet without any cost. The word "Satoshi" meaning in Japanese is "Wise" and someone has suggested that the name might be a portmanteau of four technology companies like SAMsung, TOSHIba, NAKAmichi and MOTOrola. Others have noted that it could be a team from the National Security Agency (NSA) or an e - commerce firm. (Ref.1- Page no. 11)As of October, 2011, a bitcoin (currency ticker BTC) is worth about two US Dollars (USD), there are about $ 20 million worth of bitcoins in existence, there are probable around 20000 bitcoin users and over $ 300,000 worth of bitcoins are traded every day. (Ref. 2)The first time crypto currencywas created bitcoin back in 2009. Today there are hundreds of other crypto currencies available in the economy.

Top 10 cryptocurrencies in 2016:-

1) Bitcoin 2) Blackcoin 3) Dash 4) Dogecoin 5) Litecoin 6) Nemocoin 7) Nxt 8) Peercoin 9) Prime coin 10) Ripple etc.

Other currencies are included up to 2018 such as Monero, Capri coin, Master coin, Quark Coin, World coin and Mega coin etc.

Key Features:-

1. It's anonymous.
2. Digital currencies are assets.
3. Open source software.
4. Its value depends on supply and demand.
5. Value transfer from peer to peer through internet.
6. Users get digital wallet for store digital coins.
7. All transactions are recorded and value is stored.
8. Digital currency is highly liquid.
9. It has low transaction cost and less time consuming.

Impact of crypto currency's on economy:- This is a new instrument enter in the economy from the last decade. Still it is not using worldwide with legally support. So there is no perfect answer to predict this new instruments affect on monetary aggregates and the role of central banks. Its growth will be based on many things such as future advance technology, legal security, regulation and ease of conversion. It can impact on monetary supply, exchange rate, the money multiplier, velocity of money etc.Many economists believe digital money could completely replace currency while others feel that its impact will be less drastic. Digital or E- money is expected to completely change the character of cross country trade and exchange rates. Due to the ease of transfer of these funds, e- money denominated in a stronger currency could be preferred and therefore would cause exchange rate instability, not only giving rise to instability in the financial system but also working as a factor limiting the influence of monetary policy (Tak, 2002).

Criticisms:-

1. Not accepted and usage thorough out the world.
2. It is decentralize currency, not controlled by any group or entity.
3. Lot of risky for using, holding and trading in digital currency due to their high volatility.
4. It is not legally approved currency so; government may be shut down or seized at any time.
5. Crypto currencies are not generating cash flow.
6. It has no intrinsic value.
7. Digital currency must be held in digital wallets. The security for these wallets has become a major difficulty.
8. Problem in implementation.
9. Risk for consumers because fewer protection and lack of knowledge.
10. Supporting to criminal activities.
11. Still developing.

Recommendations:-

1. Provide the legal support and effective supervision.
2. Provide the transparent legal arrangements.
3. Make strong technical security.
4. Protection against criminals and hackers.
5. Strongly maintain the all transactions.

Conclusion:- Since its invention, all crypto currencies have gained amazing popularity and much attention from the users. This paper argues that digital money as a new and network good could become a faster and important from of currency in the future. Such a development and popularity would influence the economy, effectiveness and implementation of monetary policy.

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DIGITAL TECHNOLOGY IN PHARMA AND HEALTHCARE INDUSTRY "A CASE STUDY OF SUNPHARMA" – NO. 1 INDIAN MNC

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Abstract

A digital wave is sweeping across the $ 17 billion Indian Pharmaceutical industry and companies are dumping old ways of marketing for newer technology. This new technology ranges from scientific detailing to doctors using newer algorithms for better insights into issues like a patients compliance. Pharma companies in India have already begin switching to new technology SunPharma has launched a mobile app called Respitrack for patients awareness for asthma to ensure their adherence to treatment regimen. GSK has not only leveraged webinars, videochats, information portals and platforms like 'viva' for doctors but also equipped its workforce with i-pads. Abbott healthcare has introduced several tools like knowledge Genie, a heart and liver app and another one for vertigo exercises. SunPharma is world's 5th largest specialty generic pharmaceutical and India's top pharmaceutical company. It's global presence is supported by 49 manufacturing facilities spread acrossed 6 continents, R&D centers across the globe and multicultural workforce comprising over 50 nationalities. It's Global Consumer Healthcare business is ranked amongst top 10 across 4 global markets. This research paper titled Digital technology in Pharma and Healthcare industry 'A case study of SunPharma 'India's no 1 MNC is a brief attempt to highlight the digital innovations and e-business in the pharmaceutical industry. The paper also endeavors to understand the evolution of the digital technology in Indian MNC SunPharma.

Keywords: *Digital wave, Pharma companies, SunPharma,GSK, Abott, Respitrack, MNC*

Introduction : Digital innovation is everywhere and it is relentless digital is changing every aspect of the way healthcare is delivered and pharma industry customers are transitioning ever more quickly into the digital world. The race to win the battle for customer engagement in cyberspace has begun. Those who embrace digital into the core of their engagement model will see increased customer reach, lower costs higher sales and greater value creation. Technologies are readily available to enable digital customer management and there are sufficient examples to show that the benefits of digitalization far outweigh the costs. Digital technology have transformed many industries including pharmaceutical giants like GSK, Abbott Healthcare, and SunPharma. Pharma companies need to make digital their primary approach to customer engagement. Today everyone along the pharma value chain-patients, physicians, pharmacists payers, commissioners, regulation and government authorities has a digital "self" that is generally far more open to sharing in cyberspace than in the real world. Sunpharmaworld's fifth largest pharmaceutical company's global consumer healthcare business is ranked amongst top 10 across 4 global markets. Its API business footprint is strengthened through 14 world class API manufacturing facilities across the globe. Sunpharma fosters excellence through motivation supported by strong R&D capabilities comprising about 2,000 scientist and R&D investments of over 7% annual revenues.

Objective of the study:

- To understand the role of digital technology in Pharmaceutical industries.
- To gather information based on case study of Sunpharma in order to understand innovative methods of digital technology in Indian pharmaceutical and healthcare industry.
- To assess the various challenges faced in this field.

Keywords: Digital technology, SunPharma, GSK, Abott healthcare, Objective

Methodology: A case study method was adopted to understand the nature of digital technology and its implementation.

Limitations:

- Since case study method was adopted a large scale information could not be gathered.
- The study is only focused on big pharma industries and enhance may not be able to dwell into small pharmaceutical and health care industry.

Digital Marketing trends in Pharma Industry.

- Explainer Videos – A pharma brand could create tons of video content for introducing their products, tutorials of safe usage of products, dos and don't video, pros and cons of using a particular medicine videos, real life case study videos.
- Influencing marketing on various platforms- Digital marketing has given birth to Influencer Marketing and is a leading tool for digital marketer. Influencer Marketing is especially useful for a content backed niche like pharma industry.
- Educational Content- Pharma industry can use various digital marketing platforms for sharing educational content to help their potential and existing clientele. The same educational content can be used across blogs, facebook etc.
- Online Consulting Sessions- Direct interaction with users in very useful for healthcare industry. Facebook live sessions with your audience around the topic that matters to them.
- Social Media Marketing- There are immense opportunities for a digital marketer in pharma industry to leave a lasting impact on your audience using social media marketing.

Four areas of Digital marketing: There are four main areas where digital developments will drive value for pharma companies building on the key components of digital success.

Keywords: Methodology, Limitations, Digital marketing

- Personalized care sensors and digital services for tailored 24/7 treatment. The ability to personalize interactions with stakeholders is a key value driver from digital technology in any industry. In pharma this value will be realized in large through the use of sensors and digital services to provide tailored care around the clock.
- Fuller engagement's Omni channel with physicians and patients. Digital engagement technologies open up a whole new world for marketing, the exchange of information and recruitment for trials. Pharma industries have to build advanced digital marketing and engagement capabilities similar to leading retailers, airlines, telecom companies etc.
- Data driven insight- Advanced analytics to increase pipeline and commercial value pharma companies sit on a wealth of data usually locked away in different technical and organizational silos. Some are already linking and mining their data sets to improve their pipeline products and strategies.
- Real time responsiveness- Automated process to improve cost, reactions and closed and mobile technology sensors and next generation business intelligence will bring about a new wave of automation in business processes. This will drive a step change in the efficiency responsiveness and agility of a wide range of complex often cross-functional processes.

Six ways digital is changing the pharma and healthcare industry.

The pharmaceutical and healthcare industry is rapidly coming to terms with digital technology.

- Better patient communication- Patient portals, apps and online communities are increasingly common place. The second and third generations of this technology should help improve customer experience.
- Providing services not just drugs- Its fairly obvious that whilst drugs are vital in treating many conditions and diseases there is much more for the patients and physicians to consider. There could be anything from education or lifestyle advice to emotional support.
- Improving diagnostics and adherence- The concept of the connected human being open personalized care and improved diagnostics is one long foreseen by science fiction. Indeed, the ubiquity of the smart phone now gives the prospect of reliable access to patient data in the real world.
- Better sales practices- Increasingly pharma companies are using digital technology to provide this CRM system can achieve a single customer view

Keywords: Personalized care sensors,24/7 treatment, Six ways, Pharmaceutical and healthcare industry. and digital communication channels can provide access to samples and resources.

- R&D and supply chain efficiency- R&D can be improved by bringing real time technology to bear on clinical trials and the supply chain could benefit from better sales and operations planning.
- Real world data and drug development- The proliferation of health analytics solutions has implications for drug development too. Manufactures will have access to much more real world data and this will undoubtedly assist in understanding the effects of a drug.

A case study of SunPharma- SunPharma world's fifth largest specialty generic pharmaceutical company and Indian top pharmaceutical company. A vertically integrated business, economies of scale and extremely skilled team delivers quality products in a timely manner at affordable prices. In India the company enjoys leadership across 12 different classes of doctors with 30 brands featuring amongst top 300 pharmaceutical brands in India. The company has launched India's first unique and innovative mobile application that will connect asthma patients. As per WHO report India has an estimated 15-20 million asthma patients. Various studies estimate that nearly 40% of asthma patients use inhalers and the rest prefer oral formulations. The app called as RespiTrack has been specifically developed by Sunpharma for enabling doctors to track treatment progress of their patients and increase compliance to medication for better management of asthma disease."Unlike other chronic illnesses where non-adherence to treatment regimen could have significant impact on the patients health, asthmatics tend to be adversity impact of non-adherence. However in the long run, the implications of non-adherence to prescribed asthma treatment can severely impede quality of life of these patients" said Abhay Gandhi CEO-Indian Business, SunPharma.RespiTrack allows complete monitoring of asthma attacks symptoms and medications prescribed by the physician. It enables these patients to record time and triggers of attacks along with medication details on the mobile App. The patient can easily send this data to the consulting physician through over the air mode on a weekly or monthly basis.A review dashboard in the app provides a snapshot of all parameters to monitor over a period of time.

Keywords: R&D, Case study, RespiTrack, Asthma,CEO-SunPharma Through RespiTrack a doctor can access his patients details through a personalized tracker module which is directly

synced with the patients App. This module allows doctor to access patients ailment history, attack patterns, symptoms, medication patterns and reports. A doctor can remotely view patient reports and also connect with them through an integrated messaging app. Sunpharma's India Business CEO Abhay Gandhi tells Business Standard that company plans to create innovative mobile and digital applications for other ailments too.

Conclusion: The future success of e-pharma is based on effective use of digital technologies and it is believed that internet will move into mainstream pharmaceutical operations.

The modest goal of integrating digital technology into the pharmaceutical industry is well on the road to attainment the next step in realizing the full potential of digital strategies.

Recommendations:

- Companies must focus on promoting creativity and flexibility in the working process and the environment.
- As e-pharmaceuticals often require the integration of the work flow of many departments, the structure of it's management within organizations need to be adapted.
- The companies should employ cross-functional team approach bringing together scientists, supply chain experts, marketers and IT professionals to create new solutions at each stage of value chain

Keywords: Conclusion, Recommendations

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INNOVATIVE BANKING PRACTICES IN RURAL MARKET: A CASE STUDY OF NABARD

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Abstract

The National Bank for Agriculture and Rural Development(NABARD) was set up in July 1982. It became the apex institution to play an important role in the sphere of policy planning and providing refinance facilities to rural financial institution. The paper analysesthe role and function of NABARD in agriculture and rural development. It alsothrows a light on NABARD's past and present performance and its schemes forrural development.

Keywords:- *NABARD, Rural Development, Agriculture, Finance, Agriculture Credit,*

Objectives of study:-

- Discussing about Role of NABARD in rural development
- Study the various projects undertaken by NABARD
- Evaluating the projects that contributes to rural development of country
- Analysing the future projects of NABARD for rural development
- Making conclusion

NABARD BANK

The National Bank for agricultural and rural development commonly known asNABARD is an apex development financial institution in India, headquartered at Mumbai with branches all over India Some key areas of focus for NABARD currently include crop productivity initiatives, soil and water conservation, initiatives to maintain tribal heritage/way of life in remote rural areas as well as shgbank This agency also operates as a co-coordinator of various rural financing activities across the complete range of organizations that work at the grassroots level. Apart from financing such institutions, NABARD also acts as a liaison for a these institutes with the Indian government, state Indian agriculture is facing the problems like failing or stagnating growth of factor productivity, raising input costs, fall in profits, emergence of climate risks, growing regional disparities, volatile prices, unfavourable trade making farming un-remunerative. This is further exacerbated by the marginalisation of farm holdings. Small and marginal holdings constitute 85% of the total land holdings and occupy 45% of the area in India.

PROJECTS OF NABARD The National Bank for Agriculture and Rural Development (NABARD) has supported 46 innovative projects, through its NABARD-SDC Rural Innovation Fund (RIF), as on February 2014. The fund was set up jointly with the Swiss Agency for Development and Co-operation (SDC). These projects were sponsored so as to create more jobs in the rural areas of Tamil Nadu.

According to NABARD, RIF supports innovative, risk-friendly projects in the farm, non-farm and micro finance sectors that have the potential to promote sustainable livelihood opportunities in rural areas.

NABARD RURAL INNOVATION FUND SCHEME

NAI DHARTI It is a non-profitable, voluntary Organization, dedicated towards upliftment of unprivileged and deprived girls and women through various programmes offering shelter, education, developmental opportunities, training and economic empowerment.

SELF HELP GROUP BANK LINKAGE PROGRAM The SHG Bank Linkage Programme is a unique NABARD initiative that encourages leading banks in India to provide financial assistance in the form of loans to rurally-based shgs. This is mainly in the form of micro-financing provided by these lending institutions in order to ensure overall development of the rural poor. As per data obtained in March 2006, Indian shgs represented an estimated 3.3 crore Indians who needed to have their account linked to this program.

OFF FARM DEVELOPMENT BY NABARD The off farm development focus of the bank has been on providing greater credit flow to unbanked rural areas and provide greater credit linkage to village, cottage and small industries. Additional beneficiaries of this unique program would include rural handloom, traditional crafts and artisans as well as handicrafts and services industries that operate out of the rural areas

NABARD Initiates Operations at WATERSHED WORKS The NABARD-sponsored watershed works program on the Manair river basin that encompasses 11 villages in the Gambhiraopetmandal areas. This project is being managed by the Gambhiraopeta PACS and Karimnagar DCCB with NABARD providing assistance in the project along with participatory role in the development of the watersheds included in this landmark project. The scope of this project covers an area of 11,850 acres with an estimated cost oRs. 3 crores, which has been provided by NABARD. Key features of this project would include drilling of bore wells, recharge of open wells, farm ponds network, bunding as well as trenching.

SOLAR SCHEME Supported by NABARD NABARD is currently providing ongoing support for the use of solar energy to ensure sustainability of the rural areas through a capital-linked scheme of providing subsidies under the auspices of MNRE (Ministry of New and Renewable Energy). Such capital subsidies will be provided for key areas of importance to rural areas such as lighting in villages and setting up of photovoltaic water pumping systems.

VRAJLALSAPOVADIA RURAL INFRASTRUCTURE DEVELOPMENT FUND

NABARD in alliance with the Swiss Agency of Development and Co-operation has introduced a rural innovation fund under the name VrajlalSapovadia RIDF (Rural Infrastructure Development

Fund). NABARD has played a role in maintaining the aim of this fund and also of ensuring that this fund is used in key projects across rural areas

ACHIEVEMENTS OF NABARD:-

The following is a short list of some of the key ACHIEVEMENTS and actions that NABARD has achieved or is carrying out in India: Development of the cottage industry :NABARD has played a pivotal role in redeveloping India's cottage industry such that these rural industries have become a key driver of growth and change in the rural areas.This unique institution also serves as the supreme agency that is involved in financing a range of organizations that are involved in the disbursement of credit to rural regions for carrying out a range of development activities. NABARD also funds other companies that are involved in providing development support to rural industries all over the country.NABARD is also a leading organization involve in taking measures towards building of new agencies and institutions involved in creating credit delivery systems specifically targeted at Indian villages and their residents. These measures include end to end overview of monitoring, rehabilitation centre formulation, credit institution restructuring, training new personnel and much more.This agency also operates as a co-coordinator of various rural financing activities across the complete range of organizations that work at the grassroots level. Apart from financing such institutions, NABARD also acts as a liaison for a these institutes with the Indian government, state

FUTURE PROJECTS OF NABARD:- NABARD has played a pioneering role in Financial Inclusion by extending formal banking services to the unreached rural poor by evolving supplementary credit strategies in a cost effective manner by promoting Self Help Groups (SHGs), Joint Liability Groups (JLGs), Farmers' Clubs (FCs), etc

- With the Reserve Bank in the process of finalising financial inclusion plans for commercial banks, NABARD has undertaken a similar exercise for Regional Rural Banks (RRBs) and Cooperative Banks.
- Farmers' Club Programme
- Similarly, the projects sanctioned under FITF include:
- Smart card based pilot project in Tamil Nadu to help RRBs and NGOs in registration, loaning process and micro financing to SHGs;
- Project on smart cards in three districts in Andhra Pradesh to facilitate payments to beneficiaries of NREGS and social security pensioners. Services are being extended through the BC model with the help of a biometric card and mobile device;
- Pilot project to establish financial inclusion hubs at 10 primary agricultural cooperative societies (PACS) in Andhra Pradesh;
- Pilot for installing four ATMs in North East;
- Financial inclusion project for implementing COIN software developed by National Informatics Centre (NIC) in Sikkim State Cooperative Bank;
- Pilot projects for extending Banking services through Banking Correspondents (BCs) and enabling technology in Rajasthan, Himachal Pradesh, Uttarakhand, Gujarat and Uttar Pradesh;
- Pilot project for installing 4 ATMs in Andaman & Nicobar;
- Pilot projects by RRBs for ICT Solution using BC / BF Model in Arunachal Pradesh, Assam, Jharkhand, Karnataka, Uttar Pradesh, Bihar Tripura and Mizoram; and

- Grant assistance to IIT-Kanpur for implementation of R&D project on Interoperability of Fingerprint systems in IIT-Kanpur.
- NABARD-UNDP Collaboration
- This apart, NABARD and UNDP have entered into collaboration for financial inclusion in seven focus states viz. Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Orissa, Rajasthan and Uttar Pradesh. This collaboration is part of the Country Programme Action Plan (CPAP) signed between Government of India and the UNDP.
- SHG-Bank Linkage Scheme
- Micro Finance Development and Equity Fund (MFDEF)
- Grant Support to Partner Agencies for Promotion and Nurturing of SHGs
- Pilot Project on SHG-Post Office Linkage Programme

Special Initiatives in Backward Region

- Rajiv Gandhi MahilaVikasPariyojana (RGMVP)
- Priyadarshini Project
- Watershed Development
- Wadi Model

PROBLEMS FACED BY NABARD

- Financial Inclusion

  There is a need to implement the Banking Correspondent/Facilitators Model by banks in unbanked areas so as to lower transaction costs for banks and clients as also set up a large number of micro ATMs so that cashless transactions within a common technology platform, is possible in rural areas.
- Poverty Alleviation : Today 48% of our people are living below the poverty line and there is a need to address issues such as endemic starvation, hunger, child mortality and women's health issues. These social issues can be resolved only after urgent poverty alleviation. The need for rural employment (on-farm and non-farm sectors) is acute as is the need for environmental sustainability.
- Food Security Issues : A major challenge facing NABARD is tackling the problem of hunger and malnutrition affecting one-third of the population. There is also the need to narrow the gap between producer costs and consumer prices so that farmers margins are enhanced through effective marketing support.
- Microfinance Issues : there is no regulatory body to oversee the operations of these MFIs and self-regulation does not seem to have any telling impact. All this adds to problems brewing in the microfinance sector. Further, banks seem to have opted for lending funds to MFI's in bulk as these qualify for priority sector lending norms and are not perturbed by the problems being created by MFI's which are piling up, leading to an explosive situation later.

CONCLUSION: NABARD role regarding rural development has no description .Effective implementation helps in overall development of rural areas that improve the quality of life of rural people

National Bank for Rural and Agricultural Development (NABARD) has to play a constructive role in ensuring that the coordination between the States and the institutions involved in rural development is smooth and result-oriented. Also an awareness programme should be arranged

for benefecearies.NABARD should introduce insurance schemes for cropos depending on the monsoon .

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BREAK THROUGH TECHNOLOGY-BANKING AND FINANCIAL SECTOR

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Abstract
The banking and financial sector have witnessed the technological inventions on a great level. From the paper work oriented traditional banking to the digitized banking services the banks have taken every invention of technology to the utmost level. Technology has changed the accounting and management system in the financial sector. And it has now made the financial sector to work with ease and convenience. Though implementing technology requires finance but once it is implemented it makes the work very easy and rewards of it are countless. This paper puts light on the use of technology at grass root level and also it attempts to present the developing trends and its challenges that recently emerged in the banking sector with special importance on digitization. It will be useful to the academicians, banking and insurance personnel, financial advisors, professionals, students and researchers. Common readers will also be impressed and find it informative.
Keywords*: Technology, Banking Sector, Financial Sector, development, Electronic.*

Introduction: Technology means use of techniques, skills, methods and processes used in the production of goods and services or in the accomplishment of objectives, such as scientific investigation. Technology can be the knowledge of techniques and processes. Today information technology has given us endless opportunities to maximize the profit in the financial sector. Information technology had made the impossible to possible and made the things affordable at a less cost. The simplest form of technology is to develop and use the basic tools and make the work convenient. Technology has many effects. Due to use of technology the economies have become advanced and global. Banking and financial sector started deploying technology intensive solutions from the year 2012-13 to enhance customer experience and increase revenue.
In financial sector main aim of technology is

- Enhancing core banking and financial value
- Revamping the digital agenda
- Moving from information to insight
- Dealing with a changing risk regime
- From cash to electronic modes of payment
- Grappling with financial inclusion
- Empowering the investors
- Accelerating innovation

The various elements of technology in the banking and financial sector are internet banking, business intelligence, customer management, risk management and information security, technology in training and e-learning, financial inclusion etc. The ability of technology to bring services to people wherever they are and whenever they need them is the biggest driver of achieving comprehensive financial inclusion. Electronic transactions are accelerating the drive and new developments, which include data mining and data warehousing, cloud computing and data retrieving.

Objective Of Study

- To study the importance of technology to the common man
- To know whether technology is investor friendly
- To examine the efficiency of technological based products offered by the banks in India and the effect of Digitization on economic development.
- To find out limitations of technology at basis level

Review Of Literature: Adapa(2010) described that the traditional mode of delivering products and services by banks to the consumers' is through physical bank branches i.e. a single distribution channel. The author also studied that financial services industry is metamorphosing due to the advent of internet, rapid technological evolutions, deregulation, globalization as well as the impact of changing competitive and regulatory forces. In order to cope with the quick changes in the business scenario, banks started to rely on distribution channels as an alternative strategy for differentiation and gaining further competitive advantage. Thus, it is clear that in newly industrialized nation's electronics banking is gaining its momentum as the banks operating globally have declared e-banking as one of the core strategies for future development.

Berges, Guillen, Moreno Ontiveros (2014) described the financial crisis of 2007 which triggered a break with banking practices of the past. Even though the crisis occurred, a broader set of economic, geopolitical, and technological forces were already reshaping the financial industry's transition from the twentieth to the twenty-first century. While these changes in the financial and global climate have led to a major renovation of banking regulations and increased scrutiny of banks, they have also revealed opportunities for the development of a banking sector fit for the future. The author identifies the main drivers of change at the heart of this wholesale transformation of the financial services industry. Examines the complex challenge for financial institutions to de-risk business models, reconnect with customers, and approach stakeholder value creation. Untangling the severe mutations that have taken place in the banking sector. Author studied in context the changes within larger trends that extend beyond the confines of the financial crisis. Banks are more vulnerable than ever to the crosscurrents of economic, demographic, regulatory, and technological change. The author studied the areas for technology adoption in banks which includes, mobility; Location based marketing, Interactive customer experience, integrated payment systems, Digital Social Networks, peer comparisons and other related technologies for socially based banking.

Importance Of Study: Banks have adopted cloud adoption, disruptive technology have changed the face of financial sector, big data, block chain, artificial intelligence and cloud computing have increased the business level in the banking sector. Demonetisation is pushing India towards a cashless society, and the banks prepare to deal with the increased influence of electronic transactions, cloud provides the required data to meet the demands of banking and financial sector. The present study will find out the use of technology by a common men and its usefulness to them.

Technological products offered/used by Banks

a. UPI-The launch of UPI by the National Payments Corporation of India (NPCI) has opened the gates for innovation in the open banking space. UPI will empower payment service providers to create state-of-the-art products/offerings without being limited to the underlying account relationships.

b. Cloud Computing- Indian banks are coming around to the idea that the business quickness provided by cloudcomputing outweighs the concerns. Business models for emerging banks and financial technologies will also be largely driven by the cloud-first strategy.

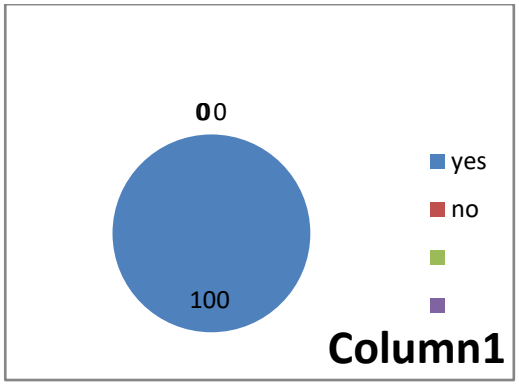
c. Blockchain-The recent Emirates NBD and ICICI Bank partnership to launch a blockchain pilot network for international remittances and trade finance is a pioneer for advances in this technology.

d. Artificial Intelligence-Artificial intelligence (AI) has the potential to transform both front office and back office jobs with its self-improving programs. Apollo Munich, Birla Sun Life, ICICI Lombard GIC, Maruti, Yes Bank and many others are actively using AI in daily business thereby improving productivity and scale. AI platforms do huge repetitive tasks and improve 24x7 functioning by servicing even NRI customers, in any times zone. AI is an opportunity companies can use to their advantage.

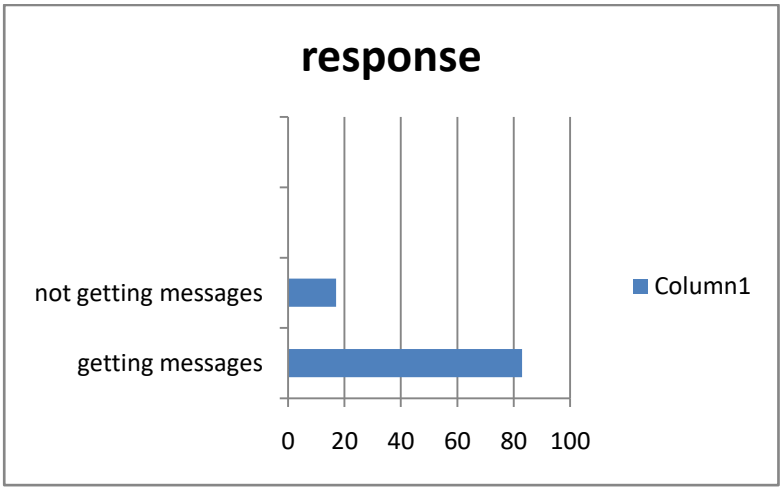
Methodology : To fulfill the objectives questionnaire was prepared and asked from the random respondents to find out their responses towards it. The primary data was collected to satisfy the objectives. Numbers of respondents were 100 and data was collected randomly

Data collection and analysis

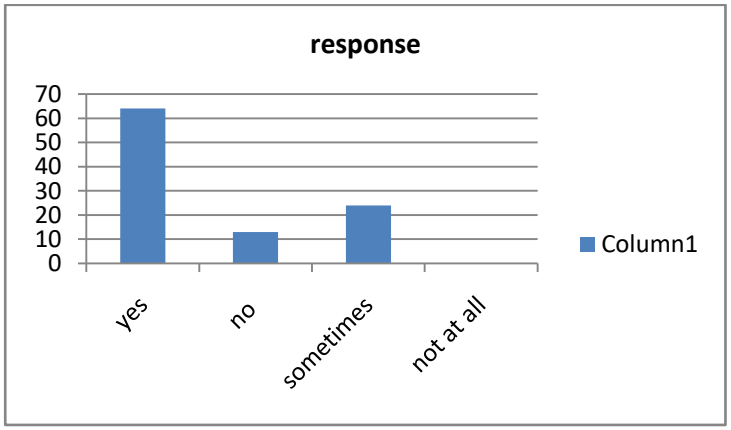
People using mobile phones



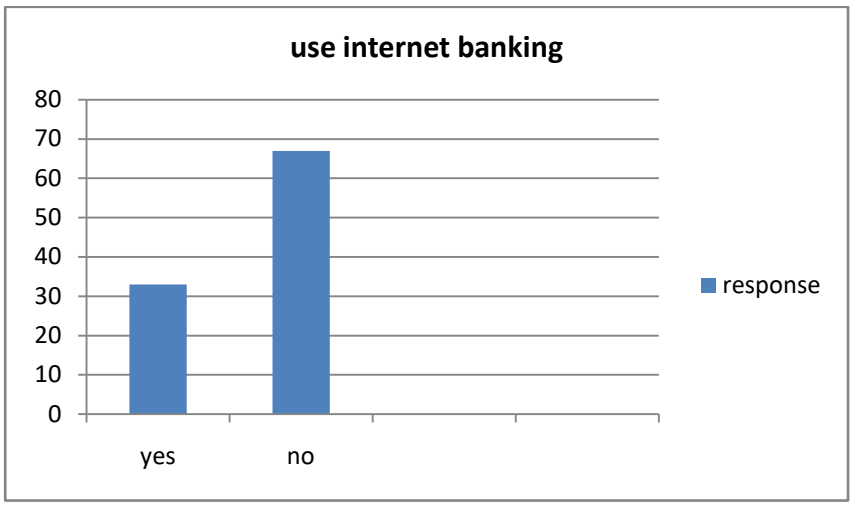
DO YOU GET ANY MESSAGES FROM YOUR BANK REGARDING WITHDRAWAL AND DEPOSIT OF MONEY IN BANK



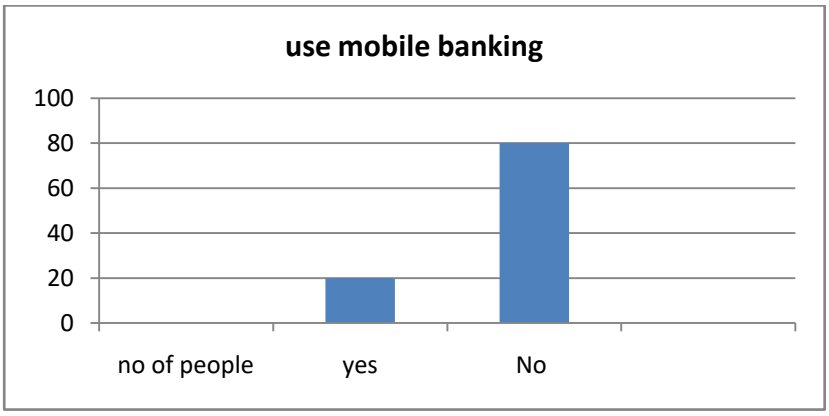
IS THAT USEFUL TO YOU



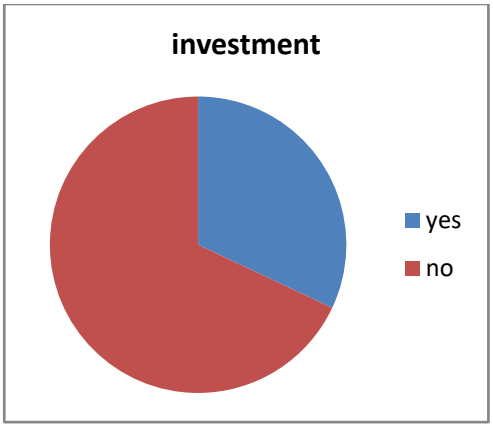
DO YOU USE INTERNET BANKING



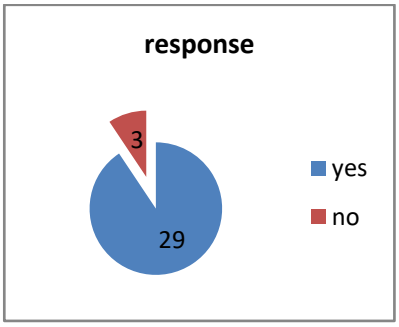
USE MOBILE BANKING



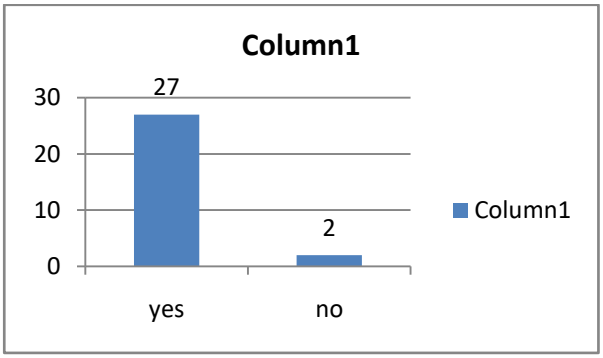
DONE ANY INVESTMENT IN SHARES AND DEBENTURES



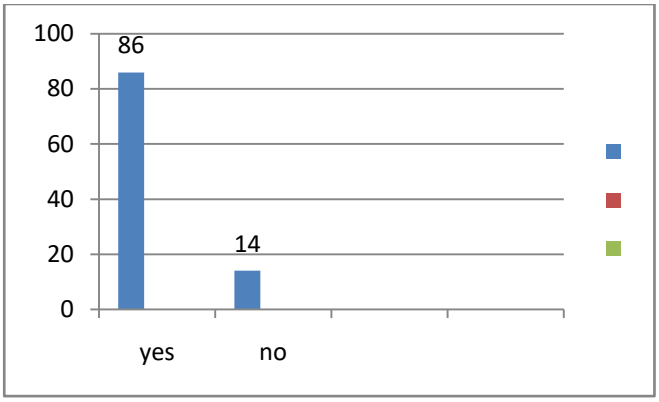
GET ANY INFORMATION FROM SEBI AND THE COMPANIES REGARDING YOUR INVESTMENT



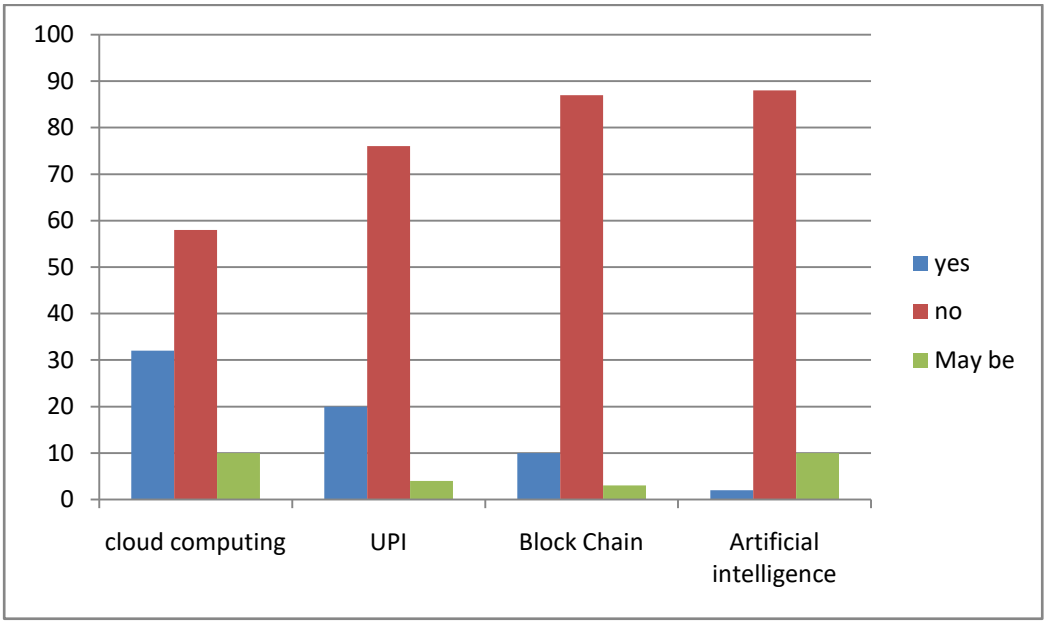
IS THAT INFORMATION USEFUL TO YOU



IS IT CONVENIENT FOR YOU TO USE THE WEBSITE OF YOUR BANK EASILY



ARE YOU AWARE OF TECHNOLOGICAL PRODUCTS OFFERED/USED BY BANKS



Analysis: From above we can analyze that use of mobile banking, net banking and website browsing is not done by many people where as common use of digital technology is done by many of the people. Use of technology for common man is at very nascent stage due to this the output of the banks is also less in consideration to the technological use. Lot of investment is done by financial institutions in the area of technology but utilization is done at very low level.

Conclusion: Technology has played a big role in reducing fraud in banks which protects its clients. Banks use a technology which verifies signatures before a customer's withdraws large sums of money on a specific account and this reduces on the errors or risks which might arise due to forgery. Due to centralized information system,banks transfers information from one branch to another at ease. Paytm is accepted by a growing number of small businessman thanks to the government's relentless push to get consumers off its cash-focused economy.Banking, financial service and insurance (BFSI) sector in India leads the usage of artificial intelligence (AI)-powered chatbot. Since its launch, HDFC Bank's AI chatbot "Eva" has answered some 2.7 million customer queries from more than over 530,000 users. Banks have installed ATM

machines in various areas due to this a customer does not have to go to the main branch to make transactions. This facility has also enabled anytime banking, because customers can use ATM machines to deposit money on their accounts. The total number of ATMs in India is reduced by 1,684 between June and October of 2017, as per report from the Reserve Bank of India (RBI).Remote banking has helped people in rural areas improve on their culture of saving money. Credit cards or smart cards have made the banking industry more flexible than before. However,The Unified Payments Interface (UPI), a mobile-based payment system that allows instant transfer of funds between two banks, continues to grow in.Another big product of digital technology is Aadhaar biometric where all commercial banks, urban and state cooperative banks, payment banks, ATM operations and authorized card payment networks migrate to an Aadhaar-based biometric authentication method for electronic payment transactions by March 2018 as per requirements of Reserve Bank of India. The government claims Aadhaar is needed to fight corruption and improve security as the country increasingly shifts to cashless transactions Technology has been embraced many countries including India. Not only banking but all the financial transactions are digitized and this had helped our nation to become a digital economy.

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ENVIRONMENTAL FACTORS INFLUENCING HORMONAL DEVELOPMENT OF ORGANISMS

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Abstract

Environmental stressors greatly influence oraganisms at biologically, physiologically level. In this review we try to focus on the nature of the major environmental stressor such as climate (heat, cold, wind, humidity), nutrition and endocrine disruptors and management.The local geoclimatic, seasonal changes, external conditions such as light, temperature, humidity, affect composition of secondary metabolites,

Key words *– physiology environmental stressors, secondary metabolites.*

Introduction :- The environmental factors of climate, nutrition and management are considered as major factors on organisms health and production. Although it is well known that phenotype or external appearance are influenced by both genotype and the environment still a gap exists in understanding the mechanics by which environmental factors change or modify phenotype and development of organisms. The objective of this review is to synthesize several key factors that influence the endocrine system of organisms. The review also summarizes the current knowledge of managerial, Climatic and nutritional disorder and also in doing so to focus light on areas that require further study including the mechanism that allow factors to disrupt endocrine functions.Environmental factors influencing endocrine System in animal :

Managerial factors.

a. **Housing:-**housing conditions definitely effect the hormonal development of animals. At the same time it also effects the productivity in animals which include stress or factors.
b. **Ventilation:-** Insufficient ventilation and cooling systems can shoot up the stress by extra exposure to heat and cold
c. **Density:-**placing animals in high density situations result in an acute rise in plasma cortisol concentration that is detrimental to growth. However animal house in lower density situations are less stressed.
d. **Social Factors :-**Social stress due to hierarchy activates the adrenal cortexes, increase cortisol and catecholamine production and in long term can effect cardio vascular function fertility, immune suppression and neurologic dysfunction. Norepinephrin and epinephrin as neurotransmitters of the sympathetic autonomic nervous system are also effected by stress.

Transportation :- It is also a major factor that causes stress. Transportation causes the release of glucocorticoides from the adrenal glands. This results in immunosuppression and changes in the regulation of glucose homoeostasis. Peripheral lymphocytes secrete ACTH during times of stress. This secretion was increased in animals transported for longer hours and remained at elevated when animals rested on the transportation trail. But also lymphocytic ACTH level returned to pre-transport level when the animals were off loaded and rested in stalls.

Hormonal and nutritional factors :- There are direct connections between nutrition and the endocrine system . Nutritional condition and energy reserves are important to the hypothalamic and hypophysis gonadal axis integrity in animals. Many hormones that are influenced by digestive physiology including secretin, GH, insulin, insulin like growth factor I and II carry out important roles in animal reproduction. Leptin a peptide hormone produced by adipose tissue is essential for puberty and post partum reproduction and animals. Leptinemia and expression of

leptin in tissue are also affected by stage of pregnancy and lactation colostrum intake, insulin level, glucose, gluco-corticoides and GH. Fatty acids & photo period, Environmental Stress can directly effect reproductive functions.

Climate and physiological outputs. There are a number of climate related stressors or factors like cold, heat, humidity; rain, ice, wind that can affect the ; endocrine System and influence the performance of an animal such as reproductive system. Continous exposure to heat has physiological effects such as increase in plasma progesteron which results problem in breeding. Animals stalled in refrigerated barns had serum cortisol concentration Lower than animals housed outside. Heat can also affect an animal potential to produce meat and milk.

Environmental factors influencing Secondary metabolites in plants.

Introduction:- plant secondary metabolites are the compounds that have crucial role in the maintenance of life processes in the plants.They are also important for the plants to interact with the environment for adaptation and defense. In higher plants wide variety of secondary metabolites are synthesized by primary metabolites. For eg. Carbohydrates, fats, lipids, amino acid. They are needed in plant defense against herbivores and pathogens. Secondary metabolites also contribute to the specific odour i.e smell, taste & colour, They are the source of additives, flavours, pharmaceuticals and industrially important pharmaceuticals, chemical include calcium, ABA, SA, polyamines, the production of these compounds is very often low and depend upon the physiological and developmental stage of the plants. Some of the natural products include drugs such as morphine, codeine, cocain, quinine.

Factors influencing secondary metabolites There are many abiotic factors which are potentially harmful for the plants.Environmental factor like UV radiations high light intensity, wounding, nutrient deficiencies temperature and herbicide treatment often increase the accumulation of secondary metabolites. The concentration of various secondary plant products are strongly dependent on the growing conditions and have impact on the metabolic pathways responsible for the accumulation of the related natural products.

Salt stress :- salty environment lead to cellular dehydration which causes osmotic stress and removal of water from the cytoplasm as a result in a reduction of the cytosolic and vacoular volumes. Salt stress creates ionic and osmotic stress in plans resulting in accumulation or decreased of specific secondary metabolites in plants. Anthocyanins increases in response to the salt stress. On the other hand anthocyanin level decreases in the salt-sensitive species.

Drought Stress :- It is one of the most significant stress that affect plant growth and development. Drought occurs when the water availability in soil is reduced and there is continuous loss of water. It arises due to deficiency of water, it is a major cause to ensure survival of agricultural crops and sustainable food production, it also influences change in the ratio of chlorophyll a and chlorophyll b. and carotenoids. Plant tissues containing anthocyanin are usually rather resistant to drought.

Influence of heavy metals on secondary metabolites Metal ions and oxalate also influence production of secondary metabolite. Eg. The trace metal nickel (Ni) is essential component of urease enzyme needed for plant development. But increased level of Ni concentration reduces plant growth. On the other land Ni has been shown to inhibit accumulation of anthocyanin. In an attempt to enhance beta lines production the hairy roots were exposed to metal ions.

Temperature :- low temperature is one of the most harmful a biotic stressor affecting temperate plants. These, plants have adjusted to fluctuating temperature by adjusting their metabolism during autum increasing their content of a range of cryo-protective compounds to maximize their cold tolerance. During over winters temperate plants metabolism is redirected to wards synthesis of molecules such as sugar alcohols, soluble sugars, low molecular wt. Nitrogenous compounds. Cold stress increases phenolic production and their incorporation into the cell wall either as suberin or lignin. Melatonin applied to cucumber seeds improves germination during chilling condition. Recently, the effect of cold stress on polyamine accumulation was reported. When leaves of wheat are exposed to a cold temperature accumulation of spermidine is to a lesser extent. However cold tolerance was reported with increased level of polyamines.

Light – light is a physical factor which can affect the metabolic production a positive co-relation between increasing light intensity and levels of phenolics has been reported UV light from 280-320 nm stimulate anthocyanin synthesis when it was combined with red light. Effect of light irradiation on anthocyanin in cell suspension cultures was reported. Moderate light intensity induced higher accumulation of anthocyanins the culture exposed to 10- d continuous irradiance showed the lowest pigment content. UV has been seen to increases in flavinoids in Barley and polyamine in cucumber. Reports have also suggested that photoperiod regimes influence endogenous indoleamines in cultured green algae.

Phytohormones – the production of secondary metabolite via plant tissue and organ culture has been reported by many researches. Many efforts have been made to improve the productivity of the plant tissue culture based on hormones, media composition and light exposure The influence of different growth regulators on biomass accumulation and anthocyanin content in solid state and liquid state batch. Cultures of Daucus carota was studied while growth regulators such as 2,4-D, AA and NAA supplemented at different levels supported growth as well as anthocyanin synthesis. Calcium is an ubiquitous molecule involved in various Signal transduction path way in plants calcium have been found to increase in response. In stress such as light, salinity cold and drought. The influence of calcium on anthocyanin accumulation was studied. Recent report suggested that exogenously administered calcium enhanced somatic embryogenesis in in-vitro cultures of C. Canephora. Exogenously applied melatonin stimulates root growth and raises endogenous Indole 3-aceti acid in roots of etiolated seedlings of Brassica juncea.

Influenc of climate change on secondary metabolite - climate change is the major threat to biodiversity and one of the main factors affecting human health and well-being over the coming decades, cold weather crops like rye oat, wheat and apples are expected to decline their productivity by about 15% in the next 50 yrs. Plants extremely sensitive to such changes do not adapt quickly. Ozone exposure has been shown to increase conifer phenolic concentration but low exposure had no effect on monoterpene and resin acid concentration. However ozone was found to have positive effects on the quality of potatoes by reducing sugars and increasing vitamin C concentration on the other hand ozone has been found to reduce the oil, protein and carbohydrate contents in rape seeds. Plant growth at high CO2 level exhibit significant changes of their chemical composition. The best example of a CO2 effect is the decrease of the (N) concentration in vegetative parts as well as in seeds and grains resulting in the decrease of protein level.

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A COMPARATIVE STUDY ON ROLE OF RESEARCH IN EDUCATION

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Abstract

Research play an eminent role for understanding today's globalised scenario in the form different cultures and the impact of culture on values, attitudes, ideals personality development and human behavior along with this it also contributed for development of industry by introducing creative and innovative models of technologies which ultimately contributes towards industrial revolution and because of this interest in educational research has vastly increased in recent years and now realized that research is necessary in order to provide a basis for educational planning and to assess the effects of such planning on economic development.Research form as basis of practical knowledge in the field of education and Industry.In practice, many have found that the teaching and learning toolkit to be highly beneficial during the process of provision mapping and reviewing.Research is not only a concept that gives practitioners, managers and policy makers respect and it also believed that research in education create professionals and make them always learning, finding out things, analysing information, adapting their behavior according to information received, looking to improve and adapting to modern demands in the field of education, which is essential for industry and other sector of economy.

Keywords: *Research, Education, Industry, Research Park,Madison, Cambridge, Edinburg, Oxford*

Introduction: Research in education has made significant progress in the era of curriculum development and reforms in it enabled understanding learner'smentality and helps adopting dynamic methods of instruction for individual learners. Research has contributed immensely for understanding of different cultures and the impact of culture on values, attitudes, ideals personality development and human behavior. Apart from this it also contributed for development of industry by introducing creative and innovative models of technologies and because of this interest in educational research has vastly increased in recent years and now realized that research is necessary in order to provide a basis for educational planning and to assess the effects of such planning on economic development. Another aspect toward looking research is that how it important for social education, the development of children and the teaching methods. Some may claim that many issues in education cannot be solved by empirical research but it can provide essential input for making wise judgments about educational matters.Conducting small-scale research in school can have profound impact in a number of ways. This also gives a new approach a trial run and enables any tweaks to be made before rolling out a larger scale initiative. Research gives teachers more confidence so that they can take initiative in practice and the approach can be successful with children what they thought to the students. But India is lagging behind in the economy and industry because of low level of education system in universities. In universities we focus more on theoretical knowledge rather than practical knowledge. We should understand Universities in nation like a heart in body.

Objectives of the study

- To compare the role of research in education with abroad universities.
- To analyze the current progress made by education system in the field of research.
- To suggest the measures for overall development of education system.

Hypothesis of the study

Research plays a very eminent role in development of Industry and education.

- Research form as basis of practical knowledge in the field of education and Industry.

Methodology: The data used in this paper is collected from secondary source that is from various journals, news papers, magazines, article, web links, books have been used as source of information. The study is an experimental analysis the role of research in education in the study area. The scope of study is restricted to only higher education system of the few universities.

Significance of the study: In a rapidly growing business world which is fueled by continuous innovation and dynamism it appears that most strategies do become less relevant over time as the environment changes, whereas most of these strategies give us sense of a complex world and in reality these strategies are also helpful for academicians and practitioners to understand what happened, looking backwards in retrospect, relative to providing forward looking insights.Research in education is deed for innovation, development of faculty and academician and essential components for sustainability but while framing policies for education system it is found out that our universities ignoring the role of research in higher and technical education. Educationisbase of development of any economy their youth, development of industry and overall functioning of nation. The descriptive paper aims to study the role of research in education and how it is too essential for industrial development and other sector of the economy. As education system of every economy is backbone for development of respective nation. But there are various issues and challenges affecting to introducing research and the areas where already introduced. This study is done to find out about the how research can lead economy in industrial development. Also tried to compare how research played prime role for development of western countries. Study is also tried to know about the current trend/situation going on in this sector.

Role of research in universities abroad: Research enables teachers to chase teaching methods which have proven impact on learner's outcomes. In practice, many have found that the teaching and learning toolkit to be highly beneficial during the process of provision mapping and reviewing. On the campuses of universities like Madison, Cambridge, Edinburg, Oxford etc. it is found that research companies are revolving around them, companies of these countries set-uptheir offices in campuses in search of new technological ideas for commercialization. Universities of these countries not only attract the scholars but also industries, entrepreneurs and VCF companies from across the world and the prime reason behind is that universities globalized their operations for matching the needs of education, technology and students. Studentsof these universities feel pride as they are part of these universities. When ittried to figure out the reason how these universities having more demand than our it is identified that these universities providing qualitative research in universalities and also first class researcher who focus on need of modern industry so as to make commercialize their research findings. Universities of these countries opened continuing education departments since 1980, in service personnel. They offer short term refresher training courses leading to Ph.D and research work conducted by them at work place and counted it for the award of degree, even students given flexible criteria to choose a wide variety options with combination of economics, engineering and music or even made possible for them if they want to transfer from one university to another they can be for same degree course and credit for the same can be approved by another universities, the logic behind is that they found continuingeducation has become so common and students who arein service or part time studying in universities are ten time better than the

students learning full time in practical approach. During the study it is also expelled that the faculties of these universities are large in numbers and posses Ph.D and doctoral qualification. Some of the universities like:

Name of Universities	**No. of Students**	**No. of Faculties having Ph.D and Post Doctoral Qualification**
MIT	11000	1000
Karlsruhe	25000	1000
Boston	18000	1300
Harvard Universities	10338	2671
Northeastern	13510	800
Harburg University	10000	1000

The Current area of their research and education found digital learning nanotechnology, sustainable energy, environment, climate adaptation, and global water and food security, looking to big data, cyber security, robotics, and artificial intelligence, human health, including cancer, HIV, autism, dyslexia, biological engineering and poverty alleviation, advanced manufacturing and innovation in entrepreneurship.Companies like Yahoo, Google and Cisco were born in these universities because their project idea was based on Ph. D thesis and for this facility of venture capital fund provided to professors and Ph. D scholars which enable them start new ventures based on technologies which they develop during the research period.

Role of research in Indian higher education system: In India some universities provide practical exposer to research work but it is found that qualities of research suffered due to problems of the extent to which researchers are free to initiate research rather than to conform to an organized program of research, the balance between pure and applied research, the relationship of research institutions to universities, and the extent to which interdisciplinary research can be carried out. The recruitment and training of educational researchers in the universities is based on theoretical proposal he has submitted to universities without understanding the need of system which is seen absent in primary level.In India we found that we follow long practice of bad heritage to copy or follow what others achieved as milestones. That is why and how we are prone to copy semester system, choice based education system which ignoring the facts require in current education and industries universities follow credit based system but they should know "education is not for credit but credit is for education".We also found that the role of research in Indian higher education is not based upon practical aspect and when we compare that with others it looks like our research is based on any of following:

- Dogma
- Theory
- Ideology
- Convenience
- Prejudice

Despite of passing half century nosignificant research effort made by Indian higher education not revealed final solutions to what extent such research can be bring in to practical level we constantly face problems of class, size andgrouping for instructional purpose.Today research is considered as a primary and a vital function of a universityacross the world andtherefore Indian universities trying to develop this standard in our universities too, but will Indian economy need

to develop thisstandard in our universities? If yes, then at what cost?And how?It is found that Indian universities are undertaking pure basic research as experimental and theoretical work to acquire knowledge without looking for long-term benefits or strategies.

Comparison: When we compare the role of research in education that with foreign universities we found almost every university situated in abroad giving more focus on continuing education departments, patent and technology licensing departments which have not seen in many Indian universities.National Council for Applied Economic Research, New Delhi has published the result of survey in which it is found that out of the 657 Indian companies in the study which wastarted in 1997, 57% were manually operated and 38.7% were semi – automated. Same report revealed that 80% of the companies in Japan were fully automated and 20% were semi-automated during same period. In India we found education is a political football and can be used for propaganda and political purposes. We think that there is a moral aspect to the profession and to follow system of belief blindly is wrong. Education should serve to liberate, and promote democracy and equality of opportunity. Looking to other universities we find they have established research park in which many research based companies adding their strengths to become more competitive, in India we find no such type of facilities available at university level except few universities which are also not available at sufficient infrastructural facilities. One of the strongest strength of foreign universities during studyfound is that they form a strong Alumni association which managing and maintaining Research Park.When we compare in terms of number of researchers and technicians engaged in R & D Activities', India has merely 119 researchers, whereas Japan has 5287 and the US has 4484 researchers per million of population. Even in absolute terms, the number of researchers in India is much smaller compared to the US, China, Japan, Russia, and Germany. The number of technicians in India is however not as small. It suggests that R & Developments in India have more technicians per researcher compared to most of the other countries the numbers of doctoral degrees awarded in science and engineering in India is little over 6000 doctorates, compared to 9000 in China and 25000 in the US.The major difference between foreign universities and Indian universities is that we gives more importance to those theories which come and go and not a single theory of this can be operate in isolation. We should understand learners and learning process and success is influenced by a multitude of factors, like knowledge, information, innovation, social backgrounds, personality, age, gender, location etc. Indian government has started many ambitious projects, like Make in India, Digital India, Start ups etc. but for making these project successful need leaders who are having knowledge of engineering, technology, entrepreneurship, commerce and industry. Success of these projects depends upon research, innovation, entrepreneurship in universities and colleges.

Conclusion: Contemporary higher education needs to be differentiated academic systems andnecessary to make all higher education institutions are research universities also some postgraduate institutions need to be universities and should link with industries and allow research practitioner to work in new areas of research and development in technologies which match with international market along with that more focus should be given on practical approach and take more initiatives to link up with industries.There is need to be develop small number of research universities, but they at important place in the system because when we compare the role of abroad research universities with Indian universities we find that Indian

universities are not having links with well established industries and wherever it has some corporate offices are in nature of bureaucratic and politically influenced. Consequently what is thought in universities is not wanted and what is wanted is not thought. There is severe mismatch between demand and supply. Research is not only a concept that gives practitioners, managers and policy makers respect. But it believed that research in education create professionals and make them always learning, finding out things, analysing information, adapting their behavior according to information received, looking to improve and adapting to modern demands in the field of education, which is essential for industry and other sector of economy. "Universities have been the source of research for more than 200 years, and need to continue as such. Only they need to societal institutions which will be carry out basic research, and supported by the government accordingly, because whenever possible we refer to research for our studies to support and conclusions.

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