Maratha Vidya Prasarak Samaj's

ADV. VITTHALRAO HANDE COLLEGE OF EDUCATION, NASHIK

(NAAC Reaccredited "A" Grade, CGPA-3.26)

&

SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE

Jointly Organizes

National Level Seminar On

"ADVANCED TRENDS OF ICT IN EDUCATION"

On Saturday 23 rd & 24 th December 2017

Special Issue of an International

SCHOLARLY RESEARCH JOURNAL FOR INTERDISCIPLINARY STUDIES

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Hon. Dr. Tushar Shewale
President
M.V.P. Samaj, Nashik.

Message for National Conference

I am glad to know that the College of Education, Nashik has organized a National Level Seminar on **'Advanced Trends of ICT in Education'** on 23rd and 24th December 2017.

My best wishes for the National Level Seminar.

With warm regards.

Dr. Tushar Ramkrishna Shewale

Hon. Shri. Manikrao Boraste
Sabhapati,
M.V.P. Samaj, Nashik.

Message for National Conference

I am glad to know that the College of Education, Nashik, has organized a National Level Seminar on **'Advanced Trends of ICT in Education'** on 23rd and 24th December 2017.

I congratulate all the organizing committee and staff members the for this National Seminar.

I express my wishes and whole hearted support for the grand success of this National Seminar.

With warm regards.

Hon. Shri. Manikrao Boraste

Hon. Smt. Nilimatai V. Pawar
Sarchitnis
M.V.P. Samaj, Nashik.

Message for National Seminar

I am very much pleased to know that College of Education, Nashik has arranged a National Level Seminar **'Advanced Trends of ICT in Education'** on 23rd and 24th December 2017

Now a days technology has taken prior position in every persons life and people are becoming techno savy.

Godfrey Reggio has said that, ***'It's not that we use Technology, We live Technology'.***

To have such manifestation of perfection through education, teacher has to be very well versed with modern technology. If teacher use advanced trends & technology in teaching learning, it will help the coming generation to be competent to achieve national objectives. Therefore, the initiatives taken in this regard by College of Education is really a matter of great honor.

On behalf of M.V.P. Samaj, I appreciate the staff members of this college for organizing a National Level Seminar on a very essential theme of the time.

Best of Luck for the grand success of the Seminar. My best wishes to all the experts and delegates of the Seminar!

Hon. Smt. Nilimatai V. Pawar

Dr. Sanjeev Sonawane

Professor and Head of Department,
Faculty of Education and Extension SPPU,
Pune.

Message for National Seminar

I am happy to know that a National Seminar **'Advance Trends of ICT in Education'** on 23rd and 24th December 2017.

In the age of innovation and productivity, knowledge and technology has come to occupy a centre stage in national and international policy debates. Nations are focusing on ways to improve knowledge generation and sharing; and creation and flow of new technologies. In this scenario, it has been duly recognized that implementation and adoption of ICT in a education at all levels, would certainly contribute and enhance its productivity, efficiency and growth in all fields of education.

This Seminar on ICT will be very much useful for the teachers and teacher educators to discuss and exchange their ideas on recent technological trends and techniques.

I express my best wishes for this Seminar.

Dr. Sanjeev Sonawane

Dr. Chandrakant Borse

Principal,

College of Education, Nashik

Message for National Seminar

M.V.P. Samaj's College of Education, Nashik is organizing a National Seminar **'Advance Trends of ICT in Education'** on 23rd and 24th December 2017.

It gives me immense pleasure to pen down welcome address for the National Seminar. ICT is used in every walk of life from education to day to day life needs. The emergence of Information and Communication Technology (ICT) has fundamentally changed the practices of not only business, governance or education but every spheres of human endeavour.

The higher education system in India continues to suffer due to inadequate access to technology and inequity. However, the application of ICT in higher education has not only brought about diversification in higher education but has also fostered new avenues for international mobility of traditional and non-traditional students.

ICT play vital role as a strong agent for change among many educational practices i.e. conducting on line exam, pay online fees, accessing online books and journals. Thus the developments of ICTs in education have a strong impact on. ICT in education improves teaching learning process, provides the facility of online learning to thousands of learners who can not avail the benefits of higher education due to several checks, such as, time, cost, geographical location.

Though ICT is important it cannot be replace teachers role Teaching learning process should be blended with optimal use of ICT with available resources.

'*Technology will Never Replace Great Teachers But Technology in the hands Great Teachers is Transformation'*. **George Couros Reeomos**

Our college has taken the privilege of this transformation in teacher education through this seminar on New Trends in ICT in Education. We have provided a social platform for teachers, teacher educators, research scholars to share their knowledge, experience, research and innovative ideas on use of ICT in teaching learning process and we get an overwhelming response. The output of the seminar was that we all come to the common point that "*Technology should be an important ingredient. It may be and should be a tool of social development".*

Dr. Chandrakant Borse

Dr. Kishor Chavan,
Co-ordinator

Message for National Seminar

Today's era is ICT era. There are many drastic changes continuously taking place in this field. These are happening due to innovations and development in technology. Education field has a great impact of these technologies. Because of this, classroom environment and teaching learning strategies are changing. It is required for teachers and teacher educators to have knowledge and skills of upgrade ICT. It is not only having impact on teaching learning but also on evaluation and research. Use of ICT has become an integral part of schools, colleges and teacher training institutes.

Education field is being benefited by mobile and social media as advanced information, knowledge and innovations are easily available. Different apps are useful in teacher's day to day work. As a result, teacher's work has become easy, interesting and effective. Therefore, it is very important for us to acquire knowledge and skills about advancement in ICT. So We have Arranged the Seminar on '**Advanced Trends of ICT in Education'**.

Dr. Kishor Chavan

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A STUDY OF THE IMPACT OF ICT ON SOCIAL LIFE OF PEOPLE

Prof. Prakash Ahire & Prof. Shweta Varade

Abstract

Author discussed about how ICT has effected people from all walks of life, how it has effected jobs and living conditions. The impact of ICT on society is great. As more and more people begin to work from home, or jobs become de-skilled, computer based, the social implications are going to be very serious.

***Keywords** : ICT , Social impact , Internet , social life*

Introduction: Back in my day we got along fine without all of this technology'- let's admit it we've all heard our parents; grandparents or teachers say this, haven't we. However this specific statement brings up this very important question 'Would we cope without technology in today's world?' In almost every work place across the world, ICT is used on a day to day basis. ICT is taught to children as young as primary school age and even the forces such as the army and the police use ICT majorly. Every week the media seems to be plastered with the news of a new tablet, phone or laptop. A new way to communicate or a new problem seemingly solved. Complex little pieces of technology that promise to make your life simpler, a world, quite literally, at your fingertips. Almost every single one of us now owns one of these clever devices, and they are never out of reach. In this paper author observed how ICT affects society. Information communications technology (ICT) has the power to transform society. It plays a key role in India Sustainable Development Goals, providing the infrastructure needed to achieve them. It also enables financial inclusion through m-commerce and allows people to connect with millions instantaneously. The author has observed the following good and bad points on social life of people the impact of ICT has changed how we socialize today. There are many positive points but there are many bad points.

Good Points of the Social Impacts of ICT: There are many good points to the social impact of ICT.ICT has brought has brought the world together through social networking sites.ICT has made researching information easier, as information can be found by looking over the internet. This helps people who haven't got a local library near theylive. Through social networking people can speak to family and friends from across the globe. This helps people who can't travel to visit family or friends.ICT has created many jobs for people to apply for, ICT skills are now required for almost every job and with internet access wildly available, people are able to communicate and work away from an office which has made working from home a more popular choice. In some rare cases this does happen. Take for example small businesses, or larger teleworker companies where people are allowed to work from home. Leisure time does not always increase, the managers and the companies require the workers the same amount of time spent on the job, so people should become more productive and a lot more work will be done. A bonus of this would be that as leisure time increases, the leisure industry will grow, and more people would use the leisure time, which would improve the workers morale .Another effect of ICT on the society is the introduction of home shopping over the Internet, this aspect could possibly result in people never leaving their homes, doing everything from home, possibly resulting in house bound individuals who could not leave their houses even if they wanted to. Continuing on this vein, talking about working at home, the amount of required offices may be reduced. This would both result in fewer buildings in the city centre and reduce traffic pollution from people who are no longer required to commute to work.

There are definite upsides to home shopping however, people who cannot currently leave their houses, the physically disabled people or people who are too busy to do anything to do shopping .

Bad Points of the Social Impacts of ICT: There are many bad points to the social impact of ICT. Many of them affect us in the shortterm and others in the long term. Children and Teenagers spend

most of their free time using computers, which affects their social development as they will lack the social skills to speak confidently in school or work, as they would rather text on mobile phones or use an instant messenger than talk to their friends face to face. Some children are also lacking in reading skills as local libraries are being closed down due to children not being interested in reading or going outside. This affects them progressing well in school.ICT can also affect people's personal health, as they aren't getting enough exercise as they are spending most of their free time indoors on computers instead of going outside. Small local businesses are being affected by the effects of ICT as people would rather shop online which is causing smaller businesses that aren't online to close down as they are losing revenue and can't afford to stay open. The environment is also feeling the effects of ICT as some people are not disposing their old electronical devices in a proper manner which is causing more landfills to show up in India. Another way ICT affects the environment is computers are using electricity and with so many being used in homes and businesses more energy is consumed, which leads to many issues such as climate change. Many older people are feeling pressured and overwhelmed with learning how to use new technology and with many services such as Banking, Bill paying and shopping rapidly becoming internet based, some older people are struggling accessing these services. This can affect them financially as many internet goods and services offer cheaper rates and prices than their physical counter-part. ICT doesn't just affect individuals, it also affects many people in rural areas around the India as Broadband access is not available to them because they live too far from a telephone exchange and the telephone and cable companies feel it is too expensive to lay down cables. ICT has caused many legal impacts. Many media forms such as Movies and Music have become easily available across the internet, which has led to copyright material to become easy to steal. There has also been many file-sharing web services have been set up, which allows users to share copyright material which makes it freely available. Plagiarism has become a common problem because of ICT; because of the internet it has become very easy to copy and paste information from a web page into a document. Plagiarism has affected schools, colleges and universities as students are submitting work that they are passing off as their own. There are also ethical impacts to ICT. With personal information being stored on computers, personal privacy has become an issue. Almost all aspects of our lives is recorded on computers, this includes our medical records, what we buy in supermarkets, who we call and text on mobile phones and what we search for on the internet using search engines. Personal information relating to living individuals held on computers is covered by the Data Protection Act (1998). The Data Protection Act creates rights for those who have their data stored and responsibilities for those who store, process or the person who has their data processed has the right to: View the data an organization holds on them, for a small fee, known as 'subject access free . Request that incorrect information be corrected. If the company ignores the request, a court can order the data to be corrected or destroyed, and in some cases compensation can be awarded. Require that data is not used in any way that may potentially cause damage or distress. Require that their data is not used for direct marketing.

Conclusion: In this paper we studied the impacts of information technology in our lives so far. We also studied the future of our society with more sophisticated developments in information technology and its applications in our society. We also discussed the negative effects of information technology .But we believe benefits from information technology far outweigh the negative aspects of information technology. As we discussed we can access information for our studies or research very quickly these days. Also the global communications have become unbelievably quick through email services. We strongly believe in future also information technology would bring much more conveniences in our lives than any negative impacts.Still due to online communication people don't

ready real life communication and introvert. Many health problems arises due to ICT .So author suggests to use ICT in such way that which should not affect real social life which is enjoyable .

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USE OF BLOGS FOR TEACHING LEARNING PROCESS:

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Abstract
In today's era blog is important to create communication in student and teachers outside the classroom. All students have equal opportunities to share the thoughts. So that students become reactive and teachers always make them busy in studies. Parents can also take part in that. So that they can understand what the status of our children is, also monitor the children if he/she is doing study well or not. Also students can create their own blog so that teacher can notice all blogs of student and if there are any instructions needed they can comment on blog, thus student will not go out of control and they will publish the data only which is necessary. So it will be useful for students to make blog proper. Also one more advantage is that students can access material regarding their studies at any time, at any place.

Introduction of ICT based learning: ICT is the information and communication technologies. In today's era ICT based learning means teaching and learning with ICT. Now days there are many devices using that teaching learning process is becoming very efficient for teachers and students.ICT devices can create interactive session in class and make lesson very enjoyable. It helps students to improve their performance and concentration. For e.g. if teachers will take help of power point presentation for teaching then students will pay more concentration as they can see something because most of time only listening lectures they get bored. So this is one way to use ICT device in classrooms. Another is use of video slides, subjects like science in that we can show them experiments in video form; in math sometime we can show them how to do square in 5 min, like there are many concept in math which can be shown, geography related many videos are there like we can show them what is earthquake, how it happens, tsunami, flood, and the affected areas after that disaster, also in history to show them historical places, this is another way to use ICT in teaching learning process.

Fig.1. ICT based teaching learning

Need of ICT based learning:

- To access educational information anytime, anywhere.
- Collaborative Learning.
- For making teaching – learning process more meaningful.
- ICT is powerful tool for education.
- Individual learning.
- Improve knowledge retention.
- Technology encourages students for learning process.

Advantages of ICT based learning:

- No restrictions.

As you can access it any time so there are no restrictions its depend on you when you want to access the data or your study material.

- Lot of fun.

Using ICT in classroom session becomes interactive, nothing is boring in that so students and teachers will also interested in such a type of learning. No boring session so lot of fun for both of them.

- Expert lecture

You can organize expert lecture without paying more money. In e- learning this is possible you can keep online expert lecture so that there will be some change for students. And also you can have interaction if you have microphone with that.

And if any student is absent on that day or any student want to listen that lecture

Again then it is possible through recording so this is advantage for students.

- Fast communication

Through internet you can communicate to the other state or country students, you can take part in collaborative projects this was not possible before internet. World is becoming big community so it is important for our student. As it is unique learning method.

Types of ICT based learning:

- Blended Learning.
- Social Media and learning.
- Use of Blogs for teaching learning process
- Use of mobile app in teaching learning process.
- e – Learning etc.

Introduction: Firstly, what is blog? Blog means nothing but just a diary. All we have a diary and we write in that about our day, our passion, Great thoughts and etc .Thus blog is also a diary but it is online diary. We will always upload the information on that. Blog is the place to express yourself to the outside world, whatever your opinion, your idea, your thoughts will be expressed by you to the world. Blog is a one of form of social networking. We know the websites, so in simple words blog is our own website in which you are updating the information of day to day life. Blog is an abbreviation of weblog. Blog is the way to listen to the voice of you to the world. Blog is diary but also it is one of advertising brand. People who want to do the business they can create their own blog and make advertise of own company.

Blogs are on particular subjects or they can be on a particular topic. We have to give the name to our blog which should be short so that it is easy to remember. Now the name of blog is most important thing, because that name will describe what is our blog, entire description of blog is depend on that name, only reading that name one should understand that what blog is consist of? For e.g. if your blog is related to the new ideas and inspiration then you can give name like find your way, productivity theory, make it sparkle, Nothing is impossible only mindset is required etc. if your blog is related to fashion, beauty then name will be like beautycurve, Fashion Haley etc. if blog is about education then name is never ending search, Free teach for teachers, etc. thus only reading name reader should understand blog contents.

Types of blog:

1. Personal blog – written by individual.
2. Collaborative blogs – written by more than one author.
3. Organizational blog – it can be for not for profit organization.
4. Edublog – blog for teaching learning process.

Edublog: Edublog means educational blog which is created for educational purpose. It supports student and teachers. If any teacher creates any blog then he may upload all the material regarding studies for e.g. ppt's, notes, assignments, unit test, and any other information. So that the students can access that data whenever they want, at any where or anytime they can get the data. Also if they have any queries regarding the study they may put their query on the particular blog and so that teacher can give them quick response and they will get quick solution at any time. Parents can also connect to the teacher's blog so that if teachers put any assignment then parents can monitor the children if they are doing their assignment or not. And also it is one way of communication between parents and Teachers. Parents can understand what are expectations from teachers, how to complete them so that it will be useful for children's future. If students create their own blogs then teacher can observe the students progress by monitoring the blog. And they can notice the learning needs of student. Student may ask their doubts on blog.As students asking the doubts then teachers also clearing their doubts, thus information on student's blog and teacher's blog is growing. This is right way on which students are going. And teachers are also supporting them.

Need:

- To start communication with outer world.
- Attract students towards education.
- Easy to publish contents regarding studies
- Network with new teachers and students.
- Turn complications into neat one.
- Connect teachers with parents
- Connect teachers with students
- Connect student with student of different place.
- To access study material anytime, anywhere.

Advantages:

1. **Networking with people of outside world:** One of the most important advantage is that it connects the people with outside world. Interact people from different country, different culture and still make friendly nature between them. Help to get new ideas.
2. **Improve writing skills:** If you create your own blog then it makes you habits to write the blog daily. And as it is social networking one type of fear is there about mistakes so we write carefully thus it improves writing skills.
3. **Make a master in chosen subject:** Blog is created on particular subject, so we always keep blog updated with latest any technology, any new idea regarding that subject. Thus it makes you a master if you writing continuously on a particular subject.
4. **Presentation skills may improve:** As we always keep our blog updated we put information, upload ppts, and make video tutorials for blog so we try to make good presentation or video. Thus it improves presentation skills.
5. **Connect with social media:** In blog we can add many social media sites like Facebook, Twitter, LinkedIn, Google Plus, and Instagram etc, and share our content through it.

Limitations:

1. **Length of blog name**
   Length of name of blog is 90 characters.
2. **Length for sub-domain name**
   Length of sub-domain name is 37 characters.
3. **Description on the header**
   Long blog description is up to 500 characters.

4. **Number of members per blog**
   100 members are allow per blog
5. **Number of blog readers**
   For personal blog 100 peoples
6. **Number of post.**
   There is no restrictions, if you upload too many post in a day then you will receive notice, then you have to bypass by solving captcha.
7. **Info about me**
   Long info about me is up to 1200 characters.
8. **Info about hobbies and passions length**
   You can write about hobbies and passion length in 2000 characters.
9. **Number of blogs**
   You can create at least 100 blog on one google account.
10. **Image storage limit**
    1 GB of storage is available but if we add google driver then it will give extra 15 GB space.

Applications

1. Blog for business: To make business popular and for growing business this is latest way.In today world every business man has their own blog and they are getting benefit from that.

2. Blog for education: Teacher can use a blog to publish instructional material so that student can access that anywhere and also students can make comment. Teachers can let student make their own blog for particular subject or for several subjects. And also they can assign any task to students through that. Assigning task will be related blog such as publish any article and share that with friends.

3. Earn money: Blog is one of way of income. If we spend more time on blog to update blog, continuously publishing any important post , any information, news, or videos related to technology or some inspirational then there will be more visitors for blog and if more readers will their then you can earn money through that. One advantage is that if you are doing job at any company for income then you have to work there for given time but if you will earn money through the blog then there is no limitation of time.

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STUDENTS AND SOCIAL MEDIA

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Abstract
Social media has been shown to have a positive impact towards learner hence making the process of teaching and learning is more meaningful social networking tools can provide opportunities for student to find information, correct their own material communicate and interact with each other. People have always been looking for ways to connect and network with each other. In this age of digitization, people have found way to socially active on the internet. Which is possible with the advent of the numerous social networking platforms and apps? Social media addition will rise in future. In this paper discuss some of the most popular media sites that are being explored by the world today.

Introduction: "Social Learning" tools is a phrase that reflects main goal of using social networking functionality in the education setting. The innovative use of social media doesn't stop here; the Youth's also use it for making blogs, making professional links, announcement and making class announcements, sharing information with students, parents and educators etc. Social media as a teaching tool has natural collaborative element. Students critique and comment each other's assignment work in team to create content and can easily access each other and the teacher with to start a discussion. Social media and internet have provide to be the most powerful tool and information can reach a large number of people in short time.

Popular Social Media Sites

1 – FACEBOOK: This is easily the largest social networking site in the world and one of the most widely used. And, Facebook was perhaps the first that surpassed the landmark of 1 billion user accounts. Number of active users per month: 1.59 billion approximately

2 – WHATSAPP: Despite having been acquired by Facebook in 2014, this instant messaging platform exists as an independent entity.Number of active users per month: 1 billion approximately

3- QQ: Tencent QQ (more popularly known as QQ) is an instant messaging (chat-based) social media platform. It became international (with more than 80 countries using it), after it was launched in China.Number of active users per month: 853 million approximately

4 – WECHAT: This is an all-in-one communications app for messaging and calling (similar to WhatsApp) that enables you to connect with the people of your choice. It was also developed by Tencent in China and can easily work alongside QQ. As per the BI intelligence report, the number of WeChat users are fast catching up with the number of WhatsApp users. Number of active users per month: 697 million approximately

5 – QZONE: QZone is yet another social networking service developed by Tencent. It enables you to share photos, watch videos, listen to songs, write blogs, maintain diaries and so on.Number of active users per month: 640 million approximately

6 – TUMBLR: Tumblr serves as a social media cum micro blogging platform that can be used to find and follow things that you like. You can also use it to post anything, including multimedia, to a short-form blog. Moreover, it gives you the flexibility to customize almost everything.Number of active users per month: 555 million approximately

7 – INSTAGRAM: Instagram was launched as a unique social networking platform that was completely based on sharing photos and videos. This photo sharing social networking app thus enables you to capture the best moments of your life, with your phone's camera or any other camera, and convert them into works of art.This is possible because Instagram allows you to apply multiple filters to your photos and you can easily post them to other popular social networking sites, such as

Facebook and Twitter. It is now part of the Facebook empire. Number of active users per month: 400 million approximately

8 – TWITTER: This social networking site enables you to post short text messages (called tweets), containing a limited number of characters (up to 140), to convey your message to the world. With the growing craze for online shopping, Twitter also makes it possible to promote your businesses and even shop directly through tweets. Number of active users per month: 320 million approximately

9 – GOOGLE+: Owned by the tech giant Alphabet (Google), this interest-based social networking platform enables you to stay in touch with people by sharing messages, photos, videos, useful links to sites and so on. It also extends support for video conferencing through Hangouts and allows businesses to promote their brands and products through Google+ business pages.Number of active users: 300 million approximately

10 – BAIDU TIEB: Baidu Tieba (known as Postbar internationally) is a social forum network based on the keyword searches in the Baidu search engine. This discussion forum works on the unique concept of allowing you to create a social network group for a specific topic, using the search, or even to join an existing online social group.Number of active users per month: 300 million approximately

11 – SKYPE: Skype, owned by Microsoft, is one of the most popular communication-based social networking platforms. It allows you to connect with people through voice calls, video calls (using a webcam) and text messaging. You can even conduct group conference calls. And, the best part is that Skype-to-Skype calls are free and can be used to communicate with anyone, located in any part of the world, over the internet.Number of active users per month: 300 million approximately

12 – VIBER: This multi-lingual social platform, which is available in more than 30 languages, is known for its instant text messaging and voice messaging capabilities. You can also share photos and videos and audio messages, using Viber. It offers you the ability to call non-Viber users through a feature named Viber Out.Number of active users per month: 249 million approximately

13 – SINA WEIBO: This is a highly popular microblogging social platform in China that is known for its hybrid mix of Twitter's and Facebook's features. Number of active users per month: 222 million approximately

14 – LINE: LINE is a globally available messaging social network that enables you to share photos, videos, text messages and even audio messages or files. In addition, it allows you to make voice and video calls at any time of the day. Number of active users per month: 215 million approximately

15 – SNAPCHAT: This is an image messaging social platform that enables you to chat with friends by using pictures. It allows you to explore news and even check out live stories that are happening around the world.Number of active users per month: 200 million approximately

16 – YY: YY is a major video-based social networking platform in China that enables group video chats. In such chats, more than 100,000 members can watch a single person doing an activity. Such an activity can be anything from giving a tutorial video to singing karaoke, which helps the users earn virtual currency that they can later convert into cash. Number of active users per month: 122 million approximately

17 – VKONTAKTE (VK: VK is one of the largest social networking platforms in Russia and has quite similar features to Facebook. Number of active users per month: 100 million approximately

18 – PINTEREST: This is a photo sharing and visual bookmarking social media site or app that enables you to find new ideas for your projects and save them. So, you can do DIY tasks or home improvement projects, plan your travel agenda and so on by using Pinterest. Number of active users per month: 100 million approximately

19- LINKEDIN: LinkedIn is easily one of the most popular professional social networking sites or apps and is available in over 20 languages. It is used across the globe by all types of professionals and serves as an ideal platform to connect with different businesses, locate and hire ideal candidates, and more. It boasts over 400 million members.Number of active users per month: 100 million approximately

Conclusion : Students are capable of using social media in diverse and novel ways. Young people are simultaneously experiencing life with the global and local Spheres. It is agreed that online learning through social media give a good feedback and advantages that can inline in education setting and of course with a proper guidance so that it is used appropriately social medias are everyday life of any individual, so it is obvious that it is a flourishing field.Social media sites have also grown in numbers by leaps and bounds. As per the statistics approximately 2 Billion users used social networking sites and apps in 2015. And with the increased use of mobile devices, this number is likely to cross the 2.6 billion mark by 2018.

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INTEGRATION OF ICT: A CHALLENGE BEFORE SCHOOLS.

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Abstract
Information and communication technology in India has undergone various innovations and transformed society over the last few decades. The rapid growth of ICT has become one of the most important topics discussed by scholars in education. This is due to ICT that has made teaching and learning dynamic. This paper examines some key challenges faced by schools in integrating information & communication technology into teaching and learning through the research tools of questionnaire and interview, and observation techniques .this paper throws light on some findings and recommends some essentials steps for integration of ICT in education.

Keywords: *ICT, ICT integration, Education.*

Introduction: ICT is the newest version to enhance the minds of millennial. **ICT Integration is** defined as the use of ICT to introduce, reinforce supplement and extend skills (Pisapia, 1994)**.** With the global network newer avenues and resources of learning, available technology exposure & adoption among students is higher and learning is no longer confined to the four walls of the classrooms. While ICT continues to advance worldwide, it experiences lag in its implementation. ICT is seen as a solution of many problems but another side of the coin is it encounters a number of problems of implementation & being a hurdle in optimum use of it in achieving the set goals in education. There are some more or less the common issues at varying degrees witnessed through various experiences worldwide. ICT doesn't work the same way all the times for everyone. It is subjected to various factors determining its efficiency. Even though it is widely accepted that ICT is a powerful tool for diffusion of knowledge and flow of information, it is not equally accessible & beneficial to all on the equal footing which leads to knowledge & technology divide.

Literature review: Literature by Bryderup and Kowalsk also informed that the development of ICT school plan with clear goals and defined means to realize the goals was a crucial step towards actual ICT integration and a visionary leader was a major requirement as well.J. Meenakumari and Dr. R. Krishnaveni in their study (2011) in "Transforming higher educational institution administration through ICT" have identified a comprehensive set of functional areas of e-administration. The study revealed that demographic factors do not have a major impact on e-administration in higher education institutions. It is also evident from this study that integration of ICT into knowledge administration for the teaching-learning process is more in comparison with Research Methodology. Susan Mathew K. (2011) in her study "Impact of Information & Communication Technology on professional development and educational needs of library professionals in the Universities of Kerala" reveals that most of the library professionals have a positive approach onwards the application of ICT based services in libraries.

Statement of the problem: Integration of ICT and its challenges before some schools in Nashik district is to be investigated.

The hypothesis of Research: Using successful observation and investigation via questionnaire and interview of computer literate personnel we can find remedies on Integration of ICT in School.

Research Methodology: The research method selected for this paper is case study method**.**

Research Tools: Questionnaire and observation are the tools used for research tools used for this paper.

Population : 120 students + 20 teachers=140 persons.

Sample size: 40 students +10 teachers=50 persons.

Questionnaire and Data analysis:

Questions	**Positive response (%)**	**Negative response (%)**
1) I know computers and its functions.	100	0%
2) I repair my own computers.	10	90
3) I install software on my own.	5	95
4) I can create teaching aids with computers.	20	80
5) I prepare notes for my students from the internet.	50	50
6) I always use a computer in my classroom.	90	10
7) I use internet for my personal use.	80	20
8) I can construct a learning website.	10	90
7) I use internet lab with my students.	30	70

The objective of this study was to investigate the impact of ICT equipment availability and accessibility & teachers training in ICT use on the integration of ICT into the curriculum related activities by teachers. The data was collected by interviewing principals, educators & policy makers, and structured questionnaires from participants in schools located in Nashik district.

Research findings and Discussion: The study findings were presented based on the investigation on the subjects taught by teachers who participated in the study, teachers computer literacy, the impact of the use of computers on students learning and teachers perceptions of the reasons for success in ICT integration, and technological constraints.

Advantages of integration of ICT in school education:

Images can be used in teaching and improving the retentive memory of the students, Teachers can easily explain complex instructions and ensure students' comprehension, Teachers are able to create interactive classes and make the lessons more enjoyable which improves students attention and concentration. Availability of various learning apps makes the teaching-learning & evaluation process easy, effective, progressive & dynamic. Connectivity options provided by ICT helps parents being aware of students performance & school activities By maintaining transparency in its functioning ICT can reduce and minimize the problems & conflicts between schools, management, parents & teachers ICT can be efficiently used in distant learning programs through online study material, teleconferencing, video- conferencing tools.

Demerits of integration of ICT in school education:

Distraction from learning & visiting unwanted sites

Negative physical side effects as vision problems, backache, migraine-like health issues.

Over-reliance on ICT limits students critical and analytical thinking Superficial understanding of the downloaded information

Isolation from society & self -centric attitude can be developed in certain cases.

Barriers to the integration of ICT in school education: Infrastructural & Technical constraints: adequate infrastructural setup, availability of funds, electricity, ventilation, safety, mechanism to deal with contingencies, slow Internet connectivity, obsolete computers, troubleshooting & software problems, Human/ psychological factors: rigid mindset and lack of preparedness, lack of competence, unwillingness to adapt with new changes, dissatisfaction about inadequate monetary motivation associated with increasing responsibilities, lack of well-trained staff and many other such factors.

Linguistic barrier: most of the software and websites are not available in local languages which in some cases constrains the students from better comprehension.

Recommendations for eliminating the hurdles in the integration of ICT in education & enhancing its performance:

Comprise quality teacher training at regular intervals to update them with the new arrivals & trends of ICT & their operating, accessibility, advantages ….etc. Due respect & better pay for teacher's contribution in handling extra responsibilities, Suitable Infrastructural setup sufficient number of computers and internet connectivity with parental control, uninterrupted electricity supply, proper ventilation, safety mechanism to deal with contingencies, technical breakdowns & linguistic barriers, speedy access to educational software and websites, determining needs and purpose of ICT & decide preferences of use of technology & ICT tools, blending advanced ICT tools & conventional means in education as per the need & purpose to minimize the technical barriers, resolving financial & Funding issues, balancing d financial liabilities and resources...., etc.

Technosavy approach, Tracking learning progress and efficiency of ICT in teaching-learning process, Assessing, analyzing and eliminating unproductive expenses and waste of time and energy Feedback options/evaluation plan/system, Identifying benefits and flaws of ICT integration process, Critical thinking & problem-solving approach Extensive research on the learning outcomes and educational equity. Cost-effective strategy. Explore innovative ways to improve students subject matter competencies Educational policymakers and planner, legislators, education administrators & other stakeholders must be clear about what educational outcomes are being targeted. We cannot forget that the potential of each technology varies according to how it is used, so proper selection of ICT tools & their optimum utilization is needed to be prioritized. An increased moral degradation – cyberbullying & another antisocial behavior is an emerging challenge that has compelled many policymakers & educators to put restrictions on the use of technology. Hence monitoring mechanism, proper vigilant surveillance, parental controlling, spreading awareness about cyber laws are the need of the hour to avoid distractions of young generation from their set educational and ethical goals & to keep a check on moral issues.

Conclusion: The findings reveal that, even though ICT has got worldwide recognition, it encounters some common problems with some variations in education. It experiences lag in its implementation and remains inefficient in rendering its maximum potential. In the past couple of decades, India's gradual rise as a knowledge power in the global economy is attributed to the quality of intellectual & human capital it has produced. This period is also marked by profound changes in education delivery & innovation. However, the various ICT initiatives do not comprehensively address the preparedness of all the human factors involved in it for education & ICT integration. It encounters a number of challenges ranging from investment to accessing the technology, efficiency, bad governance, high cost of implementation, lack of adequate resource and infrastructure, inappropriate methods of using ICT ,no well defined purpose of ICT, pedagogy, , inadequacy of funds & resources, short of well trained staff, quality research and innovations, acquisition of technology, regular updating, management and professional & technological support, accessibility. In addition, some factors negatively influence teacher's readiness for the effective use of ICT in education like lack of proper

regular training. While some teachers had received some form of ICT training, it was evident that such training has had minimal or no impact at all on the abilities and confidence of the teachers to use ICT in their teaching. Training by experts with regular intervals as per up gradation in technology, Providing opportunities of professional development, specified goals, meaningful and effective ICT integration plan, availability of funds, resources of raising funds, analysis & evaluation of the teaching & learning processes. Whereas ICT can play a significant role in equalizing opportunities for marginalized groups & communities, the paradox is that for those groups that are unable to cross the digital divide, ICT is yet another means to further marginalize them. The causes of the failure of ICT are deeply embedded in the complex historical & socio-cultural context of India. Unless ICT becomes part of bridging the gap between the digital divide & eradicating the issues of its effective integration in education, the advantage will not deepen. In the present scenario, the said broad intertwined issues must be addressed when considering the overall impact of ICT on education and the government, NGOs, policy makers & educators can initiate strategies addressing these paradoxes.

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ROLE OF TEACHER EDUCATOR FOR THE USE OF ICT

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Abstract
As world is moving rapidly towards digital information, the role of ICT teacher educator in education becoming more and more important and this importance will continue to grow and develop in 21st century. Information& Communication Technologies are the power that has changed many aspects of the lives. The impact of the ICT on each sector of the life across the past two-three decades has been enormous. The way these fields act today is different as compare to their pasts. The use of ICT has basically changed all forms of endeavour within business, governance and off-course education.ICTis technology that supports activities involving information. Such activities include gathering, processing, storing and presenting data. Increasingly these activities also involve collaboration and communication.This paper highlights various impacts of ICTteacher educater on contemporary higher education and also discusses potential future developments.

Introduction: The education & perhaps the teacher educator has vital role in building the society. ICT education determines standards of society. The quality education helps to empowering the nation in all aspects by providing new thoughts. The quality education is basic need of the society& the students. There are number of effective teaching & learning methodologies in practicewhich depends on the local culture and the particular of ICT available with how they configured and managed. The understanding, management and configuration of the available technology might vary the concept of ICT from a collection of tools and devices used for particular tasks, e.g., publishing, course delivery, transaction processing ,an organised set of equipment (like a workshop) for working on information and communication components of integrated arrangements of devices, tools, services and practices that enable information to be collected, processed, stored and shared with others components in a comprehensive system of students , information and devices that enables learning, problem solving and higher order collaborative thinkingwithin the students.

Requirements: In the 21st century also there are million students still out of school and many of them nearly are illiterate. What were the requirements that were not met to the expected extent? This paper points out some area regarding this subtheme are ,

1. The supportive policy context:

The socio-economic context had changed drasticallyrequiring an entirely different supportive context. Some of the followingsome changes have been mentioned as ,

1. The political, social and economic shifts.
2. The rapid development of the Internet for the organization of life, commerce, entertainment and education.
3. The emerging new economy based on intangible capital and calling for much increased adaptability to rapid change of entrepreneurial capabilities and attitudes.
4. Dramatic developments in the life sciences with far-reaching implications.
5. The voluntary and enforced movements and mixing of students and cultures.

2. Building national technical capacity:

For the same some points are noted as,

1. Formal schooling has been the main preoccupation in the field of education, entailing neglect of non-formal avenues of learning.
2. Many countries have been slow to re-define their educational needs, in particular concerning educational content reflecting cultural diversity and corresponding to the specific needs of each society.

3. The inequalities within education systems have been increasing, with the result that the poorest of the poor, minority groups and students with special learning needs have hardly been taken into account or may even have been excluded from the mainstream of education.

4. Early childhood education has shown little development and still favours theBetter-off urban populations, rather than those for whom an educational head start in life would be most beneficial.

Objectives of ICT Implementation in school management education though teacher educator :

1. To update the conception of teachers about the methodology of collaborative learning for updating of knowledge.
2. To contribute in the methodology of collaborative learning by ICT as a research.
3. Increasing the richness of learning experiences of basic education and training in other essential skills required for students.
4. To know the technological tools more employed in the process of teaching learning process by professional growth.

Role of ICT teacher educator in Higher Education:

1. To increase variety of educational services & medium
2. To promote equal opportunities to obtain education & information.
3. To develop a system of collecting & disseminating educational information.
4. To enhance the ICT technology literacy.

Guideline in learning process through Teacher Educator of ICT :

1. Role in conventional learning process: In this learning emphasis the particular course structure/syllabus for many years. Accordingly the subject wise textbooks & reference books have been written. By using relevant material to the subject teachers supposed to teach through lectures and presentation using ICT technologies but teachers used different methodology like lesson plans, tutorials, unit tests & different way of assessment to evaluate student performance.

2.Competent Course curriculum / Structure: The role of ICT teacher educator in the education at higher levelis recurring and unavoidable. Keeping pace with technological development and the changing competencies required of both students and their teachers requires a state-of the- art curriculum and appropriate teacher development.

3. Development of plans and policies: The school's vision and teaching philosophies are carried out & are translated into development plans and policies. In the detailed steps of such plans and policies, goals and objectives are further defined providing interim and long-term targets. Policies are set, a budget is allocated, facilities are determined, roles are defined, tasks are delegated, and an evaluation plan is created to define the direction for ICT development.

4. Change In The Way of Learning: We discussed ICTs are cause to make a move from a teacher centred learning to competency based learning. Universities are also responsible to make supporting

changes in the way students are learning. Traditional way of learning is based on Transmissive modes. Use of ICT in education also affects the way students learning. The following points are particular forms of learning ,

a. Students Cantered Learning: With the help of technologies it is possible to promote transformation of education from teacher centredto students centred . e.g. 1) Increased use of web as a source. 2) Internet users can select the experts from whom they will learn. 3) Process will become problem – based learning. 4) The proliferation of capability, competency and outcomes oriented curricula. Shortly ICTs in education acts as a change agent. It supports independent learning which is the role of ICT teacher educator for student.

b. Supporting Knowledge Construction: The emergence of ICTs as a learning technology unknowingly insists to think on alternative theories for learning. The conventional teaching process has focused on teachers planning and leading students through a series of in structural sequences to achieve desired outcome. This way of teaching follows the planned transmission of knowledge though some interaction with the content as a means to consolidate the knowledge acquisition. It depends on the process of personal understanding. In this domain learning is viewed as the construction of meaning rather than memorization of facts. Use of ICTs provide many opportunities through their provision and support for resource based, student centred learning. It acts to support various aspects of knowledge construction and as more and more stud. Employ ICTs in their learning process, the more pronounced impact of this will become.

5. The Impact of ICT on place 'When' & 'Where' to learn: In the past, there was no or little choice for students in terms of method & manner in which programs have been delivered. Students typically being forced to accept what has been delivered. The educator of ICT will provide many applications with options & choices in the same case as listed below ,

a. Any place learning: The use of ICT has extended the scope of offering programs at a distance. The off-campus delivery was an option for students who were unable to attend the campuses. Today, many students are able to make this choice through technology – facilitated learning settings

b. Any time learning: In case of geographical flexibility, technology, facilitated educational programs also remove the temporal constraints. It is the good opportunity for stud. To undertake education anywhere, anytime & any place.

The role Teacher Educator in ICT to enhancing the development of basic education and Literacy: We take the same broad definition of ICT to include radio, television, satellite, fixed and mobile telephone, fax, computers and CD-ROM's and the internet. The ICT's can be divided into two groups as traditional or old ICT's (namely, radio and TV) and the new ICT's (namely, the Internet and telecommunications). Learning through new ICT is also called e-learning. Recent studies show the enormous potential of e-learning, especially in industrialized countries with following advantages ,

a) Access to the learning programme any time convenient to the learner.
b) Learners can be at any place to log on.
c) Asynchronous interaction providing participants and tutors with time to prepare their responses leading to thepoint interaction and ontrack, thoughtful& creative conversations.
d) Enhanced group collaboration creating shared electronic conversations which can be more thoughtful and permanent than voice conversation.
e) Faculty teams with different specialties can be put together and innovations of teachers can be shared among themselves for improvement and adaptation.

The role of Teacher Educator in ICT to support basic education:

a) Supporting education in schools: ICT can provide access to information sources, enable communications, create interacting learning environment and promote change in methods of teaching. Quality and access to up-to-date and relevant materials can be improved while offsetting

some costs of textbooks. However, the improvement in quality resulting from the new ICT is yet to be justified with the cost in developing countries. Radio is still the most cost-effective ICT for enhancing quality in school education. However, with the falling cost of hardware , maintenance and Internet access and increasing e extension of telecommunications and power infrastructure, it is expected that the benefits of using new technology in the schools of developing countries will exceed the costs.

b) Educational Implications of Advanced Organizers:

1. Develop an understanding of a body of knowledge. Explore new information and relationships. Access prior knowledge. Gather new knowledge and information. Share knowledge and information generated. Design structures or processes such as written documents, constructions, web sites, web search, multimedia presentations.
2. Problem solves options.
3. Concept maps encourage understanding by helping students organize and enhance their knowledge on any topic. They help students learn new information by integrating each new idea into their existing body of knowledge.

c)Enhancing educational management: The area of new ICT''s are more relevant. Computer software programs are being used in time tabling and school management to improve the use of staff time, student time and space, thus reducing costs significantly. Old ICTs are still cost-effective for provision of education to out-of-school children and youth in developing countries. New ICTs have a very large potential for teacher education in larger quantity and better quality. A combination of old ICTs to widen coverage and access and new ICT''s to provide interactivity are supposed to be cost-effective for teacher education.

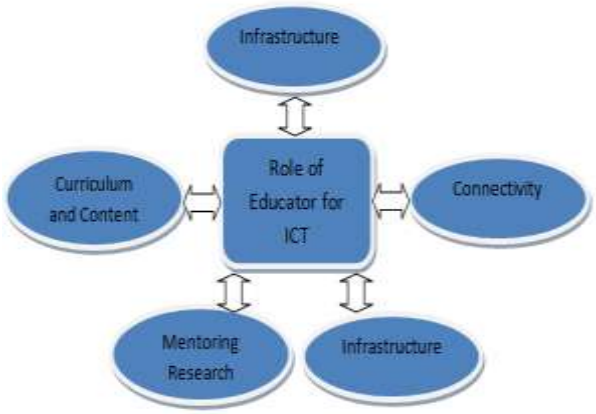

Fig. A Role of Teacher Educator for ICT

Conclusion: The role of Teacher Educator for ICT education is recurring and unavoidable. Rapid changes in the technologies are indicating that the role of ICT in future will grow tremendously in the education. By observing current activities and practices in the education, we can say the development of ICTs within education has strongly affected on ICT also focuses modification of the role of teachers. In addition to classroom teaching, they will have other skills and responsibilities. Teachers will act as virtual guides for students who use electronic media. Ultimately, the use of ICT will enhance the learning experiences of students. Also it helps them to think independently and communicate creatively. It also helps students for building successful careers and lives, in an increasingly technological world.

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WHATSAPP: TODAY'S CALL AS AN EFFECTIVE EDUCATIONAL STRATEGIES

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Abstract
This paper aims about mobile application WhatsApp, its meaning, how it functions as a learning tools for learners. Main focus is what are the different educational strategies using whatsapp and how it is used for learning and the rationales why teachers should use the whatsapp for teaching-learning process. Advantages and disadvantages of whatsapp also discussed in brief.
Keywords: *WhatsApp, Educational Strategies, Real-time communication.*

Introduction: In this era nowadays mobile technology is frequently used for different educational purposes throughout the world. Online courses that incorporate mobile technologies are becoming a more frequent component in teaching-learning process, and the number of web-based mobile courses has increased. The information and communication technologies shared between online students through social interactions on mobile tools promote opportunities for online learning. Mobile educational technologies provide online learners with opportunities to communicate and share knowledge. In this context, how do we use mobile technologies such as WhatsApp in online for teaching learning process, for educational interactions and various educational purposes? Is it better to use mobile technology to achieve educational goals? Students can learn equally well from online lectures as in-class. WhatsApp is an instant messaging application for smart phones. It allows users to exchange images, videos, and audio or written messages using their Internet connection.

Today, WhatsApp provides students with the ability to create, to collect, to process and for disseminate the educational content.

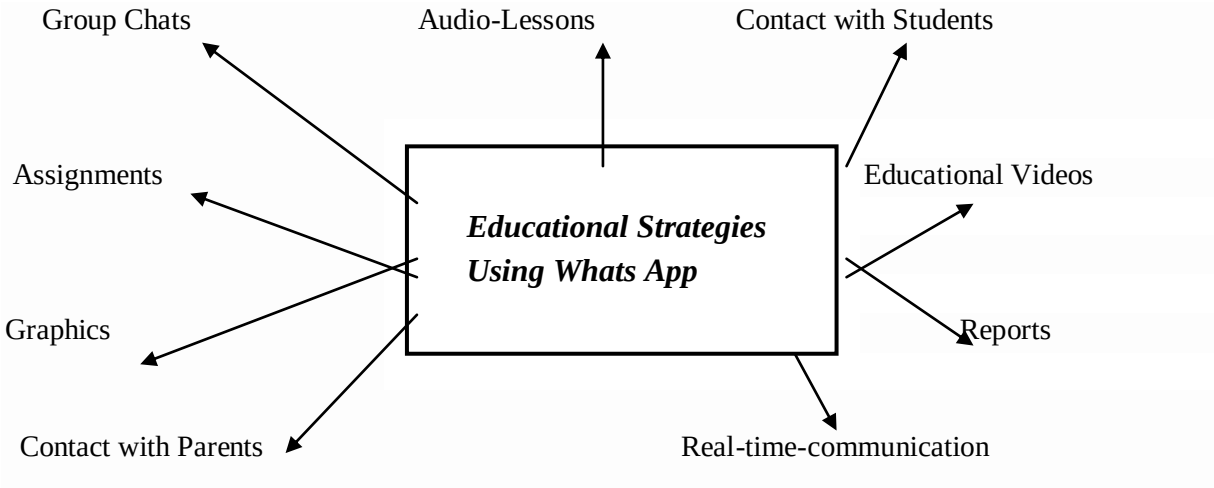
What's WhatsApp?

WhatsApp is an immensely popular, simple and versatile messaging app. It is a mobile social application shapes individualized learning among students. It helps them to learn at their own pace. Students are not punished for being slow or fast in their progress of learning as every learner is allowed to move to suit their circumstances. WhatsApp can be used as a learning tool. WhatsApp is a facilitator of communication and a means of dispersing educational resources and information to students. It can provide a channel through which teachers can achieve faster and more seamless communication with their students. It can also increase the level of communication between students and create another venue for learning. Obviously, a messaging app is not a teaching tool on its own. Therefore WhatsApp should be regarded as a means to an end rather than an end in itself. Fortunately, there are a few strategies that educators can use to leverage WhatsApp to enhance the education experience. WhatsApp is a free messenger application that works across multiple platforms like iPhone and android phones, and this application is being widely used among undergraduate students to send multimedia messages like photos, videos, audios along with simple text messages. Since internet facility is required for using WhatsApp, lots of information can also be accessed in real time, and sharing that information through technology is both instantaneous and convenient.

According to Bere, WhatsApp messenger has the collaborative features like multimedia, group chat, unlimited messaging, cross platform engagements, offline messaging and no any charges involved.

As of July 2017, more than 1.7 billion people were actively using WhatsApp, which makes it the world's second-largest social network.

Educational Strategies Using WhatsApp



Group Chats: Teacher can create learning groups and virtual classes for learners so that they can connect with the classroom. It helps the teacher to facilitate discussion outside the classroom.

Audio-Lessons: Recording of a lecture that can be sent to every student in the class over WhatsApp. This can facilitate learning because the students can listen to the lecture over and over again and hear lectures that they missed.

Contact with Students: Teacher can stay in contact with students outside the classroom and remind students of upcoming activities in the school and class or reach out to those that miss lectures.

Educational Videos: A teacher can create video lessons or lectures using solutions such as YouTube that students can share via WhatsApp.

The students can learn deeply through video over and over again to make sure they get the lesson. An interesting variation on this strategy is to create video problems for the students to solve or work on away from the classroom. This can help get students more interested in homework by creating a visual involvement.

Graphics: Teacher can send graphics, pictures, diagrams or charts directly to students even when they are not in the classroom. This could helps as a learning materials.

Reports: For sending academic report cards directly to the parents' phones so they can be apprised of the students' performance at all times

Real-time Communication: WhatsApp is useful for real-time communication between students and teachers, and also between teachers and parents.

Assignments: Send out problems or assignments to students even when they are not in class. For example, a math teacher could send out a problem to solve every day, even during vacation.

Contact with Parents: A teacher can use WhatsApp to quickly contact parents when a student is not in class.

Teacher should use whats App: Rationales

Whatsapp allows free unlimited messaging from any phone that has a data plan or direct internet connection or Wi-Fi without a data plan. It can be used to send educational videos, educational audio messages and educational pictures, tables, diagrams and graphics. Nowadays nearly about each learner has a Smartphone, so it's a ideal solution for teacher community for interacting with lower income students. Those students and parents who does not use landline phone, e-mail, face book and other modes for communication but they are having a smart phones, so it can be good means for reaching to parents and students.

Advantages and Disadvantages of WhatsApp

WhatsApp Advantages

1. Sending and receiving messages for free to any part of the globe including text, photos, videos or audios limitlessly,

2. Its user friendly features,
3. No advertisements and completely free for use.
4. You can share your location, photos, status, images, documents, videos with your friends.
5. Instantly send a message to anywhere in the world.
6. Easy to use, even a novice mobile user can use it.
7. Video calling available.
8. Whatsapp calling made it more reliable.
9. It imports the contacts from your phone and tells you that how many of your friends are using WhatsApp.
10. You need not spend any money for chatting and sharing with your friends except the internet charges.
11. It shows that the receiver has received and/or read the message.
12. Whatsapp started providing end-to-end encryption feature, which makes your WhatsApp communication highly secure.

WhatsApp Disadvantages

1. Only smart phones are supported, many people still don't have them.
2. It can be annoying sometimes due to constant messages.
3. You must have access to internet to send and receive messages for free
4. Your profile picture is visible to every person having your contact number.
5. WhatsApp is addictive. Once you get addicted to it, it's very difficult to get over WhatsApp addiction.
6. You need to share your number in case you want to add someone and communicate.

Conclusion: The mobile learning technology helps students to create a learning community, to easily construct knowledge and to share it with other members of a WhatsApp group through instant messaging. In addition to the social interaction between students in the group, we should not discount the interactions of students with their online instructor. The presence of the online instructor in the WhatsApp group has an added value in the learning process. The online instructor facilitates learning.

WhatsApp instant messaging is a free application, which is advantageous. Mobile system text messaging allows the user to send and receive messages synchronously and asynchronously. The WhatsApp instant messaging system is simplistic, intuitive, and very easy to use. User's have the chance to continue chatting with their buddies without slowing down the device.

Learning is becoming more personal and is becoming increasingly based on online social interactions that enable collaborative, networked and portable processes. Learning is becoming ubiquitous, durable and increasingly at odds with formal education. Increasingly, different types of learning happen outside of the classroom through social cooperation and collaboration between students to improve construction and knowledge sharing.

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BLENDED LEARNING MEANING OF BLENED LEARNING

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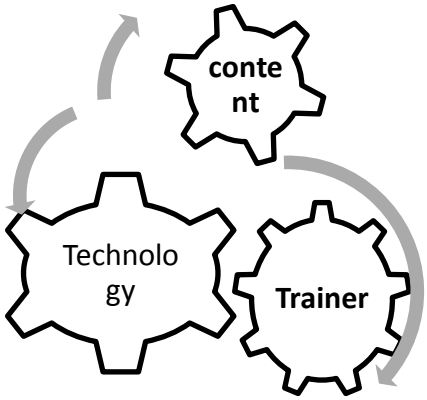
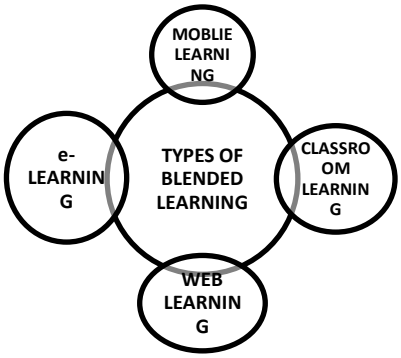
The term blended learning is self explanatory. It usually means mixture of two or more things; i.e. mixture of various learning styles, models, types etc. Blended learning is an education program (formal and non formal) that combines online digital media with traditional classroom methods it requires physical presence of both teacher and student, with some elements of students control over time, place, path, or pace. A mix of face to face and online learning, lesson set to own pace, increased opportunities to differentiate. A different learning problem requires different solutions. Each learner has a unique learning style and unique requirement. Every problem has unique characteristics .In pre-digital age, combinations of different learning context were used for learning. In 21st century learning environments increasingly incorporate e-elements into varied instructional context. Today, the blended learning is mix of following elements



Thus the blended learning is learning that is facilitated by effective combination of different models of delivery, models of teaching and styles of learning and applying them in an interactively meaningful learning environment.

TYPES OF BLENDED LEARNING:

Following are the types of blended learning



There is no fixed formula for the use of technologies in blended learning program .Variations exists due to the nature of the course content, the learning objectives and learner profiles.

ADVATAGES OF BLENDED LEARNING:

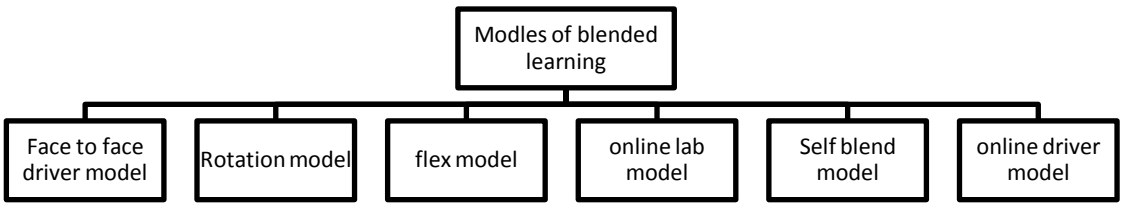
- Increase students interest,
- Keep students focused for longer period of time.
- Provides students autonomy.
- Instil a disposition of self advocacy.
- Allow instant diagnostics information and students feedback.
- Prepares students for the future.
- It makes students more excited to learn.
- It enables students to learn at their own pace.
  In addition to these following are also the advantages of blended learning.
- Covers all learning styles,
    - Flexibility
    - Effectiveness
    - Efficiency
    - Extended reach
    - Personalization
    - Cost effectiveness

DISADVATAGES OF BLENDED LEARNING:

- Ineffective use of learning technology tools can waste resources.
- Learners must have basic technology knowledge or high willingness to learn.
- High technology set up and maintenance costs.
- Abusing internet privileges for non-school related activities**.**

IMPORTANCE OF BLENDED LEARNING: Blended learning is important because it breaks down the traditional wall of teaching. Blended learning also offers flexible time frames that can be personalized to each person, offering them the ability to learn at their own pace .It provides instruction that matches students skill. It expands learning time. It prepares them for real life**.**

MODELS OF BLENDED LEARNING; Following are the six models of blended learning. These models varies by teacher roles, physical space, delivery methods and scheduling.



Face to face driver model: Face to face teachers deliver most of the curriculum. A physical teacher employs online learning in a technology lab or back of classroom supplement.

Rotation model: Within the given course students rotates on fixed schedule between self-paced online learning and sitting in a classrooms with a face to face teacher.

Flex model: An online platform delivers most of the curriculum. Teacher provides on-site as-needed support through in-person tutoring or small group session.

Online lab model: An online platform delivers entire course but in brick-and-motor location. Often student participate in an online lab program also take traditional courses.

Self-blended model: Students choose to take remote online courses to supplement their schools traditional curriculum. This model of blended learning is extremely popular among high school students.

Online driver model: An online platform and teacher deliver all the curriculum .Students works remotely and face to face check-ins are available or mandatory.

BLENDED LEARNING STRATEGIES: There are some instructional strategies can be used stand-alone or they may be combined with others to provide the kind of training. The strategy aims to:

- Enhance student's access, experience, engagement and outcomes through an effective blend of face to face and digitally enabled learning opportunities.
- Apply and maximise blended learning opportunities in making our offer to students flexible across pace, place and mode.

Instructional strategies	**Description**
Imagery	Imagery is mental visualization of object, events and arrays. It enables internalization visual images that relate to information to be learned Imagery helps to create or recreate an experience in the learners mind. Imagery involves all the sense; visual, kinaesthetic, auditory and tactile.
Modeling	A contrived, simplified version of an object or concept that encapsulates its salient features.
Brainstorming	Brainstorming is a valid and effective problem-solving method in which criticism is delayed and imaginative ways of understanding a situation are welcomed, where quantity is wanted and combination and improvement are sought. Brainstorming can occur with individuals or in group setting, and involves generating vast number of ideas in order to find a effective method of solving the problem.
Case studies	A problem solving strategy similar to simulation that works by presenting a realistic situation that requires learner to respond and explore possible solutions.
Drill and practice	Repetition of a task or behaviour until the desired learning outcomes is achieved. Allows for transfer of knowledge from working memory to long- term memory.

Thus blended learning is about empowering educators with the appropriate tools to support personalized pathways for learning. For example, the tools in blended learning environments can support flexible pacing, differentiated instruction, immediate interventions and anytime, everywhere learning. Blended learning enables personalized learning at scale, helps foster student-cantered instructional approaches and facilitates student co-design with their teachers of how to approach meeting their learning goals.

BLENDED LEARNING

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The meaning of "blended learning" has changed over time; only definitions from 2006 and later are to be considered current. Consequently, a suggested composite definition is: "Blended learning" designates the range of possibilities presented by combining Internet and digital media with established classroom forms that require the physical co-presence of teacher and students. The coherence and consistency of this definition is illustrated through examples from the literature, and via a decision tree offered as a heuristic. "Blended learning" appears to have been in use since the popular advent of the Internet and the World Wide Web in the late 1990s. From 2006 to the present, blended learning has been understood as a combination of face-to- face and technology-mediated instructional forms and practices. At the same time, the phrases "face-to- face" and "technological mediation" themselves may generally benefit from further definition and contextualization. As a result, this paper traces out the etymology of the evolving meaning of the term "blended learning," and it also maps out analytically the significance of the opposed terms that have come to be seen as "blended" in it. It offers these etymological and analytical accounts in order to provide clarity on the current meaning of "blended learning." "Blended learning" designates the range of possibilities presented by combining Internet and digital media with established classroom forms that require the physical co-presence of teacher and students. Blended learning, in other words, is almost any combination of technologies, pedagogies and even job tasks. It includes some of the oldest mechanical media (e.g., film) and theories of learning (e.g., behaviorism), as well as the newest. What is 'blended learning'? It is the use of two or more distinct methods of training. This may include combinations such as: blending classroom instruction with online instruction, blending online instruction with access to a coach or faculty member, blending simulations with structured courses, blending on-the-job training with brownbag informal sessions, blending managerial coaching with e-learning activities. Mediated social interaction refers to the interaction between two or more individuals, normally separated in time and/or space, enabled by various communication technologies. Mediated social interaction may take various forms, depending on how many people are involved in message construction and reception…Face-to-face communication thus takes place in the form of both oral and non-verbal communication, but not in written form. Significantly, this description also indicates that non-verbal communication in face-to-face settings can extend to and encompass aspects of the context that the speakers inhabit, since this context is shared by speakers for a period, however brief or lengthy. At the same time, this account of face-to-face communication also suggests that oral communication, and even some kinds of non-verbal communication, does not need to occur strictly in a face-to-face setting. This communication can take place through the mediation of audio technologies such as teleconferencing or audio/visual media. Blended learning is a hybrid teaching strategy that combines technology and teacher instruction in the 21st century classroom. In blended learning, students are given a certain level of control over the time, place, pace, or path of online instruction. Students can skip forward, rewind or pause online content. In some cases, students can choose the time of day at which they learn or even the place in which they learn - whether it's in a coffee house, library or classroom. Emerging research shows promise for the blended learning strategy for students who have grown up consuming personalized digital content. Blended learning can empower students to learn in ways that work best for them. It also allows teachers to delve into deeper learning through small-group work, or one-on-one discussions with students who need it most

But what are the learning situations that warrant a role-play exercise?

- Situations where trainers want to allow the learners to view events from a different perspective. For example, making a middle manager think like a customer support agent, or making an employee think like a customer.
- Situations where you want learners to experience in an online environment events which are not possible in a live environment. For example, letting a man experience sexual harassment as a woman.
- Demonstrate the various stages of a project, from inception to launch.
- Teach learners effective interpersonal skills.

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BLOGGING IN EDUCATION – A POWERFUL TOOL FOR TEACHERS, STUDENTS AND ALL LEARNERS

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What is a Blog?

Blog is short for web log. It's a bit like an online diary or journal, except blogs aren't necessarily private; instead they're created for an audience. And just like a diary or journal, a blog is relaxed, making it an easy and comfortable way for students to get writing. Blogs are written on all kinds of topics from A to Z. Readers can usually leave comments, which lead to discussions about the blog's content. For example, a blog about flipping your classroom can lead to a discussion between novice and experienced teachers about common questions, advice, tips, and clarifications.

Tips To Use Blogs in the Classroom: Here are some tips for blogging in today's classroom.

1. **Guidelines and Expectations:** before starting an outline of your blogging guidelines and expectations check with your school for a written guideline. From here you can develop clear goals, guidelines, and expectations for you and your students. For example, your school may or may not allow photos of students on blog pages or they may require written permission from a parent to participate in a blog. You and your students need to know the rules before blogging begins. Guidelines can be published and updated right on your class blog for easy access by students and parents.
2. **Integrate Classroom Curriculum:** Blogging can be used across the curriculum. From math and science to history and health, blogging is great way to take literacy across the curriculum.
3. **English is for Everyone:** Blogging not only requires subject knowledge, it also takes good writing skills. Even if you're using blogging in a math or science class, you should set some time aside to teach a bit of writing and grammar.
4. **Commenting:** The comment section of a blog post is where students can share thoughts and opinions and have a discussion about the published content. Initially, it is a good idea to teach students the dos and don'ts of commenting. Start off by writing the first two or three blog posts and have students comment according to your set of criteria. For example, encourage students to contribute quality comments while discouraging put downs and inappropriate language.
5. **Be Realistic:** Building a blog takes time so set your sights small. For example, start off with a class blog focusing on one topic where students can contribute posts under your supervision. Choose something the kids are passionate about or want to raise awareness about. For example, a classroom blog could be about an endangered species such as the orangutan or about the importance of eating healthy. Once a topic is exhausted, create a new classroom blog on another topic. The old blogs remain static but available for readers. By starting with a classroom blog, students build the skills they need to create their own blogs effortlessly.
6. **Read other Blogs:** Take the time to read other classroom and student blogs. This will give you and your students concrete examples of the finished product and give you ideas when creating your own blog.
7. **Be Consistent:** Blogging takes commitment. If posts are haphazardly published, reader base and student interest will most likely decline. The idea is to keep building and expanding. In the beginning, set a goal of a post every two weeks per student and gradually increase submissions, as the students get more comfortable with blogging.

8. **Plagiarism:** Explain to students that plagiarism will not be tolerated. Student contributions must be their own work. Don't post copyrighted images. Do post copyright free images. Include a site here.
9. **Network with other Bloggers:** Encourage local and global collaboration by having students network with bloggers and follow other student blogs. Although it is important to give students a choice when selecting a blog they want to follow, it is best to provide them with a set of criteria to help with their selection.
10. **Dive into Social Media:** If any of the blogs related to your classroom are made public, then you'll want to get more readership by connecting your blog with social media sites, such as Facebook, Twitter, and Pinterest. Word of mouth is always the best advertising.

Advantages of blogging

1. Networking with various people worldwide.: One of the important benefits of blogging is its feature that helps us to network with a wide range of bloggers from different walks of life across the globe. Interacting with people from different country and culture may lead to friendly relations with them that may help you start new ventures like starting a new business with someone outside of your country.

2. Blogs help you to improve your writing skills: If you start to write a blog, all of a sudden you get into the habit of improving your writing skills and style. You may feel that you are going to be criticized if you make a mistake. Automatically, you will start trying to improve your writing skills while writing more and more posts for your own blog.

3. Mastering a subject: Another advantage of having a blog is its ability to make you a master in a chosen subject.

4. Flexibility of working hours: If you are engaged in blogging as a work-at-home job, the flexibility of working hours makes it suitable for you to find out time for your other day to day activities.

5. Your photographic skills may improve: Once anyone becomes a blogger, he or she may start interest in several other things related to blogging to improve their own blog.

6. Your videography skills may improve: Like I mentioned earlier about photography, your video skills will get enhanced once you start blogging.

7. Your presentation skills may improve: When you make video tutorials for your blog, you may try to make sure that you are presenting the video with good language that is clear and understandable. This may definitely lead you to take that extra step to improve your presentation skills.

8. Blogging as a source of income: Most people start blogging just for expressing their personal opinions. Later on some begin to take an interest in searching for various ways by which they can earn income from it.

9. Blogs promote small scale business: Blogs play an important role in today's business. Even a small scale business run by a single person can be promoted using a blog. For example, if you are working as a LIC Agent then you easily publish your plans.

10. Blogs promote large scale business: There is no need to mention that all large scale businesses have its own blog along with their website. They update every detail of their product or service using their blog.

11. Blogs make it easy to connect with social media: Most of the blogging tools help us to easily share the contents in the blog with social media sites like Facebook, Twitter, LinkedIn, Google Plus, Pinterest, Instagram, etc.

12. Blog as a source of information: Some technical blogs are the valuable source of information and people know that they can gain valuable information related to the technical aspects of a computer,

software or mobile phone. So they keep coming back to the blog again and again for valuable information.

13. Blog as a helping tool for carrying out certain day-to-day activities: There are millions of blogs out there in the blogosphere and those involved in blogging definitely have an idea of the contents in other blogs they follow. There is a possibility that people may look for blogs that help them to carry out certain activities like troubleshooting their computers, mobile phones and even for getting better ideas on cooking their daily food.

14. Blogs may act as a portfolio: Photographers, artists, cartoonists, etc. find blogging as an excellent platform for creating portfolios for their work. They find it easy to build and manage a portfolio in this way so that their work get easily attracted by other people. This may make it easier for them to get hired while searching for jobs in the same area.

15. Blogs may help you to become a professional writer or blogger: Many writers who have already published their writings in the form of novels or short stories and having certain level of reputation as a writer may also run an online blog. These blogs act as an additional support to establish themselves as an expert writer when they get more exposure through blogs and fan pages in social media.

16. Blogs may lead you to start a new career: If you attend an interview for a particular job, your chances of securing the job may increase if you possess a blog specialising in subjects the interview demands.

17. Blogs are very easy to set up: It is very easy to set up a blog. You don't have to be very good in the technical aspects or in software for starting a blog.

18. Blogs help you to increase your knowledge in different fields: As I mentioned earlier about the video and photography skills, you may gain interest and get involved in areas like web designing and programming languages like HTML, PHP, MySQL, etc.

19. Gaining popularity and respect from others: When your blog starts gaining more readers, you may also start getting more popularity. You may soon start getting known as a blogger in your immediate vicinity. People at your office or business may start seeing you as a blogger or probably a writer in some cases. This may eventually lead to gain respect from your colleagues, friends and relatives.

20. Blogging as a hobby: During the initial stages, blogging was a platform for people to share their views on any topic of their choice. So people started using it as a hobby. Most of those blogs were personal ones.

21. Blogs are easy to update: Another important feature of a blog is its easiness to update its content at any time you want. Decades back before the coming of internet, it was nearly an impossible task for an author to change the contents of the book once it was published in the print form. The only option available for an update was to publish another edition. It can be analysed that the emergence of internet and the development of World Wide Web made a drastic change in the way an author can approach the whole process of writing.

22. Blogging may change your attitude towards life: Blogging changed my way of thinking and attitude towards life. So I believe it may be the same with most other bloggers. If you are nearing the stage of establishing yourself as a blogger, you start seeing everything in a different light. You may feel that you are getting appreciated for your work by others.

23.Good exercise for your mind : If you are blogging with passion without allowing your mind worry about monetizing your blog, definitely you will be getting some exercise for your mind that will keep your memory power in good condition.

24. It is possible to become a successful blogger without higher education: Many people have a belief that blogging is for those people who have higher educational qualifications from the

university. If you are among them thinking in that way, I would definitely tell you that you are wrong. Even if you do not have a college degree, you can be able to become a successful blogger through hard work and dedication provided you have the necessary writing skills.

25.Location is not a problem for blogging as a career: Blogging as a career can be done staying at any location in the world. This is one of the greatest advantages of blogging. I live in America even though my native country is India. If I choose to do blogging as my full-time career, I can have the advantage of doing it either from India or America.

26.Travelling around the globe: You never know one day you will be travelling to different destinations in the world. Travelling to exotic locations around the world seems to be an impossible task for many of us. But, you cannot predict where blogging can take you in future.

27.You may become an Online marketer/Digital Marketer: The chances of becoming an online or internet or digital marketer is another opportunity that may knock you when you blog consistently.

In this way blog is very useful for everybody.

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STUDY OF SCHOOL STUDENTS PREFERENCE TOWARDS USE OF MOBILE APPS FOR LEARNING

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Abstract
The pedagogy of teaching is continuously evolving in this digitized era. Students of this generation are techno savvy. They are self motivated to learn and they keep on exploring various e-resources for knowledge up-gradation. In this scenario, the educational providers and teachers are trying to meets the needs of learners using Information and Communication Technology (ICT) through E-Learning.M-Learning or "Mobile Learning" is considered and referred as subset of E-Learning where learning takes place by using mobile devices. The novelty in mobile apps has obligated educationalist to look for their aptness to offer learning through apps for sustaining in the field. Students generally usemobile apps at home for self learning. In the present study, an attempt is made to analyze schoolstudents'preference towards use of mobile apps for learning in Nashik City, India.The data for research was collected from 50 Units (sample respondents) schoolstudents studying is various English medium schools in Nashik city, Maharashtra, India. From the study it is found that, learning becomes easy and interesting through mobile apps. Mobile Apps always facilitates any time personalized learning. School students prefer to use mobile apps for learning.
Keywords: *M- Learning, Mobile Apps, Students, Preference.*

Introduction: Technological innovation and advancement has changed the conventional system of education. The pedagogy of teaching is continuously evolving in this digitized era.Digitalization has bought revolution in the teaching- learning process.The learners have to constantlywidenand augment their skills in this competitive environment for their employability. In this era, where technology plays a vital role one must constantly elevate oneself digitally. Students of this generation are techno savvy. They are self motivated to learn and they keep on exploring various e-resources for knowledge up-gradation. In this scenario, the educational providers and teachers are trying to meets the needs of learners using Information and Communication Technology (ICT) through E-Learning.E-Learning means "The delivery of a learning, training or education programme by electronic means. E-Learning involves the use of a computer or electronic device (e.g. a mobile phone) in some way to provide training, educational or learning material."[1] M-Learning or "Mobile Learning" is considered and referred as subset of E-Learning where learning takes place by using mobile devices. Mobile learning is, "any sort of learning that happens when the learner is not at a fixed, predetermined location, or learning that happens when the learner takes advantage of the learning opportunities offered by mobile technologies" (MOBIlearn., 2003). With the use of mobile devices, learners can learn anywhere and at any time (Crescente and Lee, 2011). "A mobile application, most commonly referred to as an app, is a type of application software designed to run on a mobile device, such as a Smartphone or tablet computer. Mobile applications frequently serve to provide users with similar services to those accessed on PCs. Apps are generally small, individual software units with limited function."[2] The novelty in mobile apps has obligated educationalist to look for their aptness to offer learning through apps for sustaining in the field. India has the second largest mobile phone user subscription base in the world, with over 900 million mobile phone users (Raman, 2015). "However, in India blend of mobile technology into education, especially environmental education, is reserved as most educational institutions have a 'no mobile' policy in place"[3].So, the school students generally use these apps at home for self learning.

Review of Literature:

August Tsai (2011) has proposed hybrid E-Learning model that integrates teaching-and-learning methods that have been found to be effective in the past in order to remove the limitations on time, location, and tutor's availability that are imposed by a physical classroom.

According to Singh (2010) The M-Learning community is still fragmented, with different national perspectives, differences between academia and industry, and between the school, higher education and lifelong learning sectors.

According to Means *et al*. (1997), student motivation is enhanced through online collaborative research that includes online communication with peers and experts in other states and countries.

Objectives of the Study:

The following objectives were undertaken for the present research study:

1. To study about mobile apps used for learning.
2. To analyze school students preferences towards mobile apps used for learning in Nashik city, India.

Hypotheses of the Research Study:

Following hypotheses were tested for the present research study:

Null Hypothesis:

H_0: Schoolstudents do not prefer to use mobile apps for learning.

Alternative Hypothesis:

H_1: School students prefer to use mobile apps for learning.

Research Methodology: The following methodology was adopted and conclusions were drawn accordingly.

Research Type: Descriptive and analytical research type adopted.

Methods of Data Collection: For the present research study both primary and secondary methods were adopted. Primary data was collected through structured questionnaire. Secondary data was collected from published books, internet, journals etc.

Sample Design: The present study is based on the primary data collected from 50 Units (sample respondents) school students studying in various English Medium schools in Nashik city, India. These 50 respondents' were selected by using convenience sampling technique.

Data Analysis: The following is the analysis based on the responses given by 50 Units (sample respondents)'school students.

Demographic Analysis of the Respondents':

1. 50percent of the respondents were females and 50percent were males.
2. All the respondents' were between 12-16 years of their age (Class V to Class X).
3. All the respondents' were studying in English medium.

The Researcher Has Measured Following Perspectives Of The Respondents':

1. All the respondents were aware about smart phones and were familiar to use the same.
2. All the respondents had access to smart phones (15 per cent Own; 20 per cent Siblings and 65 percent Parents)
3. All the respondents were aware about mobile apps available for learning.
4. All the respondents used search engines for completing school projects.
5. 82 percent respondents' have downloaded app for learning.
6. All the respondents who have downloaded app for learning have used trial versions, free apps only none of them have paid for the same.

7. 68 per cent of the respondents have downloaded Mathematics learning App, 48 per cent Science, 32 per cent Languages and 28 per cent History/ Geography (The respondents were liberated to give more than one selection.)
8. All the respondents were of the opinion that learning becomes easy and interesting through mobile apps.
9. According to 84 per cent of the respondents, mobile apps always facilitates any time personalized learning whereas 16 per cent said most of the time sit facilitates any time personalized learning. (Those who have downloaded app)
10. 76 percent of the respondents' always prefer to use mobile apps for learning, 8 percent said they prefer sometimes, whereas 16 per cent said most of the times they prefer to use mobile apps for learning. Difference in the proportions of responses is extremely statistically significant, at p = 0.0001, Chi-Square value-204.800, Degrees of Freedom (df)-4.

Testing of Hypothesis:

H_0: School students do not prefer to use mobile apps for learning. As observed (the perspectives measured No: 10); difference in the proportions of responses is extremely statistically significant, Hence H_{0a} is not accepted at p = 0.0001, by applying Chi square test to test the homogeneity of proportions of responses of the respondent school students.

Inference: School students prefer to use mobile apps for learning. Hence, the alternative hypothesis, H_1: School students prefer to use mobile apps for learning is accepted.

Findings:

1. All the respondents' were aware about smart phones, mobile apps, had access and were familiar to use the same.
2. All the respondents used search engines for completing school projects.
3. Most of the respondents' (82 percent) have downloaded trial versions and free apps for learning.
4. Most of the respondents' have downloaded Mathematics app for learning.
5. Learning becomes easy and interesting through mobile apps.
6. Mobile Apps always (84 per cent) facilitates any time personalized learning.
7. Respondents' always (76 percent) prefer to use mobile apps for learning.

Conclusions: School students can enhance their learning experience by using various mobile apps which are user friendly. From the research study, it can be concluded students are familiar and aware about various mobile apps available for learning. They regularly use search engines for their project work. Learning becomes easy and interesting through mobile apps. Mobile Apps always facilitates any time personalized learning. School students prefer to use mobile apps for learning.

Suggestions:

1. Teachers must guide the students regarding the mobile apps which are best for their learning so that they can subscribe for continuous learning.
2. Schools must provide technical support to use mobile apps.

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CHALLENGES OF USING ICT IN EDUCATION

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Abstract
In this modern era of science and technology e-learning has gained prior position in every walks of human life. Education system is now days take in technology as part and parcel of teaching learning process. Recent trend shows that technology enhances learning process as result knowledge is a boundless. But in the wide sea of knowledge students are swimming aimless as the don't know what thing are useful for them and this is the challenge before them to use technology in a premium mode. This Paper highlights the challenges of teachers, students and policymakers who use technology in every aspect of teaching learning process.

Introduction: In order to compete in the global competitive economic environment, a highly skilled and educated workforce with aptitude and skill in the application of Information and Communication Technology (ICT) is essential [1]. It is important that all sectors of the education understand the benefits of investing in ICT and the infrastructure that is required for introducing ICT. There is a need for government to partner with private sector for resource mobilization to fund the use of ICT in education [2]. This calls for policies that promote broad access to skills and competencies to learn ICT [2], which can be achieved by providing broad based formal education, establishing incentives for firms and individuals to engage in continuous training

1 ICT in Education: According to United Nations Development Programme, ICT"s are basically information handling tools-a varied set of goods, applications and services that are used to produce, store, process, distribute, and exchange information. They include „old" ICTs of radio, television, and telephone, and the „new" ICTs of computer, satellite and wireless technology and internet. In the current era of liberalization, privatization and globalization, knowledge is expected to play a key role in the social and economic development and to compete on global standards. On the one hand we are facing issues such as demand supply gap in education, access, resource constraints and inclusive growth, and on the hand we have to address issues such as quality of education, and competing on a global scale. The use of ICTs provides an opportunity to utilize the booming ICT sector in India to channelize the resources for enhancing human capital of India. Diversity of the population further necessitates the implementation of ICTs in education. Media technologies can be classified into two categories, synchronous, and asynchronous. Synchronous media can be used when all participants are together at same time, whereas asynchronous media can be used even if the participants are at different time and places.

Table 3: The Four Rationales for Introducing ICT in Education

Rationale	**Basis**
Social	Perceived role that technology now plays in society and the need for familiarizing students with technology.
Vocational	Preparing students for jobs that require skills in technology.
Catalytic	Utility of technology to improve performance and effectiveness in teaching, management and many other social activities.
Pedagogical	To utilize technology in enhancing learning, flexibility and efficiency in curriculum delivery.

Table1: Types of ICTs use in education

Synchronous Media Asynchronous Media Audio Graphics Audio and Video tapes and CDs Audio Conferencing E mail Broadcast Radio and television Computer file transfers Teleconferencing Virtual conferences Computer Conferencing Multimedia products, off line Web based learning formats Source: UNESCO

Educational Instructional Broad Audiences Clearly defined target Awareness Oriented Clear Objectives Learning is broad, multidimensional Learning is specific Assessment is summative Evaluation is critical and formative Source: UNESCO

1.2 MOOC: Massive open online courses (MOOC) are a new trend in higher education. The availability of such courses from the best in the world like Harvard, MIT, and Stanford can make a significant change in the higher education sector (Economic Times, 2012). These courses can become a potential agent for empowerment of people through skill enhancement at affordable costs and providing flexible delivery mechanism. Online courses have the potential to revolutionize higher education just like ICT and ATM‟s have revolutionized banking sector.

2. Internet Usage: The no. of active internet users in rural areas has increased by 29% from December 2011 to June 2012. There were 31 million active rural internet users as on June 2012 (IAMAI, 2012).The active users are defined as the one who have used internet at least once in a month by Internet and Mobile Association of India. The rural internet users are expected to reach 38 million by December 2012. Though 4.6 % penetration rate in rural India is not very high, but it growth rate (29%) is encouraging. Growing awareness, penetration of cyber cafes, cost effective mobile handsets with ability to access internet provides a supportive environment for the proliferation of the internet. There were 99 million urban internet users in India. Daily internet usage has increased from 28% of users to 54% in 2012. School going kids, college students and young men form the largest segment of internet users at 70% (IAMAI, 2012). Total internet users are expected to reach 150 million by December 2012. (IAMAI, 2012)

3. Recent Trends: NPTEL: National Programme on Technology Enhanced Learning is an initiative of seven IIT‟s (Indian Institute of Technology- Bombay, Delhi, Guwahati, Kanpur, Kharagpur, Madras and Roorkee) and Indian Institute of Science, Bangalore. The programme is funded by ministry of human resource development. The initiative is aimed at students of undergraduate engineering studying in different affiliated universities and colleges. The site provides good quality learning resources. The network is starting online courses from January 2013 (NPTEL, 2012). The mission covers 378 universities and 18,064 colleges, with the aim of digitization and networking of all educational institutions, develop low cost and low power consuming access to ICT, making larger bandwidth available for educational purposes (UGC, 2012). As a part of this mission The National Knowledge Network (NKN) has been launched to cover1000 institutions to provide digital campuses, video-conference classrooms, wireless hotspots, and laptops/desktops to all students of professional/science courses, and Wi-Fi connectivity in hostels (UGC, 2012).

Aakash: A low cost computing device (tablet) has been developed by IIT, Bombay called Aakash. The Aakash will be provided to 500 colleges for enhancing interactive sessions and promoting online learning environment. In first phase 14,000 aakash2 tablets are being tested in 250 colleges. The plan is to supply 1,00,000Aakash tablets to engineering college students to improve quality of education (Money Control, 2012). The proposed new versions of Aakash are planned to provide different range of functionalities from animations to scientific computing, and will encompass the entire educational spectrum covering schools, colleges, and professional studies (IIT, Bombay, 2012).

EDX: The world‟s renowned universities Harvard and Massachusetts Institute of Technology (MIT) have jointly started offering online courses by the name of EDX. It will also allow institutions to use

edX to research how students learn and how technology can transform learning–both on-campus and worldwide (EDX, 2012).

Coursera: It is a social entrepreneurship company that partners with the top universities in the world to offer courses online for anyone to take, for free. (coursera.org, 2012). The initiative is supported by 33 participating universities.

Loud Cloud offers e-learning technologies. It has tied up with Centurion University of Technology and Management, Orissa to offer distance education from June 2013. The technology of the company is also being use at Career Education Corp, Grand Canyon University and Jefferson County School District in Colorado, USA. Presently the company offers its services to 1, 50,000 students in India and US (Economic Times, 2012).

Benefits of ICT in education to the c Stakeholder Benefits

Student	• Increased access • Flexibility of content and delivery, • Combination of work and education, • Learner-centred approach, • Higher-quality of education and new-ways of interaction.
Employers	• High quality, cost effective professional development in the workplace, • Upgrading of employee skills, increased productivity, • Developing of a new learning culture, • Sharing of costs and of training time with the employees, • Increased portability of training.
Governments	• Increase the capacity and cost effectiveness of education and training systems, • To reach target groups with limited access to conventional education and training, • To support and enhance the quality and relevance of existing educational structures, • To ensure the connection of educational institutions and curricula to the emerging networks and information resources, • To promote innovation and opportunities for lifelong learning.

Source: UNESCO, 2002.

Potential Drawbacks-cum-Challenges to Using ICT in Education: While using ICTs in education has some obvious benefits, ICTs also bring challenges. First is the high cost of acquiring, installing, operating, maintaining and replacing ICTs. While potentially of great importance, the integration of ICTs into teaching is still in its infancy. Introducing ICT systems for teaching in developing countries has a particularly high opportunity cost because installing them is usually more expensive in absolute terms than in industrialized countries whereas, in contrast, alternative investments (e.g. buildings) are relatively less costly (UNESCO, 2009).

The four most common mistakes in introducing ICTs into teaching arei) Installing learning technology without reviewing student needs and content availability; ii) imposing technological systems from the top down without involving faculty and students; iii) using inappropriate content from other regions of the world without customizing it appropriately; and iv) producing low quality content that has poor instructional design and is not adapted to the technology in use (UNESCO, 2009).

Some risks of using ICT in education which have to be mitigated proper mechanisms:

1. It may create a digital divide within class as students who are more familiar with ICT will reap more benefits and learn faster than those who are not as technology savvy

2. It may shift the attention from the primary goal of the learning process to developing ICT skills, which is the secondary goal

3. It can affect the bonding process between the teacher and the student as ICT becomes a communication tool rather than face to face conversation and thus the transactional distance is increased
4. Also since not all teachers are experts with ICT they may be lax in updating the course content online which can slow down the learning among students.
5. The potential of plagiarism is high as student can copy information rather than learning and developing their own skills there is a need for training all stakeholders in ICT.
6. The cost of hardware and software can be very high.

Internal barriers to ICT implementation in schools in locations include: 1. Lack of trained teachers A major obstacle in the use of ICT in rural education is the lack of knowledge and skills. There is dearth of dynamic teachers formally trained in ICT. **2.**Unfavorable organizational culture and poor attitude and beliefs often in developing nations, the educational organizations and school management fail to perceive the importance and seriousness of the role of ICT in education enhancement. **3.** The teachers‟ attitudes and beliefs are outdated and orthodox. They are unaware and rigid and not willing to adapt to the change.**4.** Shortage of time In schools, teachers are usually burdened with multiple tasks other than teaching. **5.**Issues of maintenance and upgrading of equipment Maintenance and upgrading of ICT equipment's in rural schools is subject to their limited financial resources. Largely, the government initiatives are restricted by budgetary constraints. **6.**Insufficient funds Appropriate and latest hardware and software facility availability determines the effective and efficient usage of technology. In developing countries, technology implementation into education systems is a difficult task as it requires a magnum of funds, infrastructure and support facilities. **7.** Challenge of language and content A large proportion of the educational software produced in the world market is in English. Majority of online content is available in English.

Crucial external barriers in the implementation of ICT in schools are: 1.Shortage of equipment's There is lack of computers and computer-related resources such as printers, projectors, scanners, etc. in government schools. The ratio of computer per student is insufficient. The option of private schools is very few or missing in these regions. **2.** Unreliability of equipment Even the basic ICT equipment 'sand computers possessed by schools are unreliable and undependable. The schools lack up-to-date hardware and software availability. Old and obsolete equipment's are major hindrances to ICT adoption and application. **3.** Lack of technical support schools face issues related to technical know-how, absence of ICT service centers, and shortage of trained technical personnel. **4.**Resource related issues and internet Rural schools usually face trouble with respect to the availability of ICT related resources such as supporting infrastructure, uninterrupted electricity, supplementary resources like multimedia, projectors, scanners, smart boards, and so on. **5.** External factors inhibiting the usage of ICT in rural schools are social and cultural factors inherent to these regions, lack of initiative by community leaders, corruption and burglary.

ICT INITIATIVES IN EDUCATION IN INDIA : The government of India has announced 2010-2020 as the decade of innovation with special focus on ICT enabled education and acquiring of ICT skills for students. The motive of the national policy on education is to create an environment of integrated development for education and economic empowerment of rural students. Important initiatives and strides have been taken in the sphere of education:**1.** Computer literacy projects for teachers and students. **2.**Mobile classrooms through IT buses. **3.** E-Learning centers and kiosks for enhancing online education for social and economic change in rural society. **4.** Community Telecasters to meet the needs of ICT learning outside formal school setting **5.**Bicycle-based connectivity in rural areas.**6.**National award for teachers using ICT in schools in the teaching.

Conclusion : The increasing use of information and communication technologies (ICTs Although ICT has the potential to improve education system of a country to a great extent, yet it is not the case in the developing countries. There are multiple issues and challenges confronting the implementation of ICT education in schools and educational institutions in these countries and the problems are much more magnified in case of schools located in remote villages and rural areas. For rural schools in specific, the introduction of ICT faces hindrances in the form of internal and external barriers.

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HUMAN RIGHTS DEFENDERS AND NEW TECHNOLOGIES: THE CHALLENGING IMPACT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY ON HUMAN RIGHTS PROTECTION

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Introduction: The concept of Human Rights has arisen from that of natural rights of all human. The belief that every person by virtue of his humanity is entitled to certain natural rights isa recurring theme throughout the history of mankind. It can be traced back thousands of years from the Vedas to the Hammurabai Code to the Magna Carta, the French Declaration of Human Rights, and the American Bill of Rights. The Persian Empire (Iran) established unprecedented principles of humanrights in the 6th century BC under the reign of Cyrus. Three centuries later, the Mauryan Empire established principles of civil rights. Religious documents – the Vedas, the Bible, the Quran and Analects of Confucius also referred to the duties, rights and responsibilities of the citizens. In 1222, the Manden Charter of Mali was a declaration of essential human rights including the rights to life, and opposed the practice of slavery. This paper aims to explore the use and abuse of information and communication technologies (ICT) as a simultaneously problematic and liberating development for human rights defenders at risk due to the nature of their work on the ground. ICT tools and services have been recently acknowledged as liberating and empowering to the work of defenders around the world, assisting them in order to work more efficiently and effectively, but also generating a new wave of campaigning and online activism derived from increased awareness, accessibility and globalization in an information-driven world. However, ICT issues also provide an essentially practical – rather than academic or theoretical – obstacle with regard to the enforcement and protection of human rights around the world. From cyber-censorship in Asia, to intelligence gathering in the para-military conflicts of Latin America, to the reprisals visited upon those exploring the freedoms provided by new technologies in the Middle East, activists face challenges as a result of the connection of their work to ICT.

What is a Human Rights Defender?

Human rights defenders are a relatively new concept at the international organizational level. Although outspoken individuals have spoken out for the rights of others since time immemorial, human rights defenders were only given official recognition on an international level with the adoption by the General Assembly of the *Declaration the Right and Responsibility of Individuals, Groups and Organs of Society to Promote and Protect Universally Recognized Human Rights and Fundamental Freedoms* on 9 December 1998. Known colloquially as the 'Declaration on Human Rights Defenders', this for the first time recognized the significance of human rights defenders and the work that they do, and acknowledged the legitimacy of their efforts towards the implementation into practice of the lofty rhetoric of instruments such as the Universal Declaration of Human Rights (UDHR). Perhaps more significantly, the Declaration embodies the recognition by States of human rights defenders and embodies a governmental commitment to protecting and promoting the position of human rights defenders and their activities within the national sphere.

There is no fixed definition of a human rights defender; the Declaration itself avoided a definition, which is naturally to be commended given the danger that a fixed categorization could be used restrictively[1]. Rather, the Declaration in its Annex acknowledges "the important role of international cooperation for, and the valuable work of individuals, groups and associations in contributing to, the effective elimination of all violations of human rights and fundamental freedoms of peoples and

individuals..."[2]The basic concept of a human rights defender is set out in Article 1: "Everyone has the right, individually and in association with others, to promote and to strive for the protection and realization of human rights and fundamental freedoms at the national and international levels."[3] The UN Fact Sheet which elaborates upon the Declaration describes 'human rights defenders' as "a term used to describe people who, individually or with others, act to promote or protect human rights"[4]. Front Line, the International Foundation for the Protection of Human Rights Defenders, refers to defenders as "people who work, non-violently, for any or all of the rights enshrined in the UDHR."[5]The concept of human rights has undergone a revolutionary change since the Magna Charta of 1215 to the rights contained in the Unites Nation Convention. The charter of United Nations which came into force in October1945 begins with the determination of the people of member nations to save the succeeding generations from the scourage of war and to reaffirm their faith in the fundamental human rights and the dignity of human being. Human rights defenders thus comprise all individuals who work in the defence of the rights of others, individually or in associations, nationally or internationally, full or part-time. They are often human rights professionals, lawyers, journalists, trade unionists, teachers, writers, protesters, community representatives, advocates, investigators, or relatives of vicitims of violations, but they do not necessarily restrict themselves to these categories. The significance of human rights defenders lies in their commitment to the implementation of human rights standards into practice; of holding states accountable to the letter of their domestic laws and to the human rights instruments and treaties which they have ratified. Human rights defenders find themselves at the coalface of human rights protection, documenting, monitoring and publicising rights violations in their country or community, holding authorities to account through local complaints mechanisms, legal cases or public criticism in their own countries as well as holding their countries to account at the international institutional level.

(II) Increased human rights activism and usage of ICT: The internet and social networking tools have undoubtedly transformed the basis and nature of the much of the work carried out by human rights defenders, who along with social and political activists are increasingly turning to such tools as a new form of communication, collaboration, publication and protest on a global basis. Much of the 'buzz' around online platforms connected to the Web 2.0 phenomenon has been generated by the role of social networking activities and applications such as blogging, Facebook, Twitter, Skype, Youtube and Myspace in the world of politics. The newly-found force for mobilisation was perhaps demonstrated most forcefully – and reported on widely – during Barack Obama's presidential campaign. The media marvelled at the Obama campaign's ability to enlist and communicate with millions of supporters on an astonishingly cost-effective basis. The possible implications and uses of such techniques and applications from the perspective of human rights defenders are obvious. ICT provides a user-friendy, cost-effective basis upon which to publicise issues, raise awareness, mobilise support and volunteers, and generate public campaigns. This, by now, is a well-established practice amongst social movements, in particular anti-globalisation protesters[14]. Such campaigning has been seen to be particularly effective in the sense in which it fosters a sense of collective identity and community, and sustains a sense of solidatiry, in that activists can identify with a common experience through their collective grievances. ICT allows defenders to communicate between themselves and with the international community in a way that was not possible through the use of phone, fax or postal services. Low-cost communication services such as Skype and equipment such as webcams, portable internet devices and even wifi have allowed frequent and fast sharing of information, conference calling and consultative work. These technologies in turn have revolutionised international human rights work in terms of creating networks of interconnected activists (many prominent human rights organisations are composed of coalitions of grassroots organisations), which in turn has led to

increased reportage (particularly of human rights violations and incidents taking place on the ground), education (providing training, sharing information and ideas on best practice, circulation of materials), campaigning (organising petitions, coordinating email campaigns or letter writing), organising protests or marches (often through word of mouth or covertly by email/text message) and formulating policy (discussion forums, etc). ICT has allowed human rights defenders to easily and cheaply overcome simply practical difficulties such as physical isolation, in the case of indigenous defenders for example[15.]In fact, online community members even find that their campaigns allowed greater interaction with those who opposed their views, in a way which was constructive and connective.ICT tools have undoubtedly been effective in terms of adapting and improving upon traditional methods of campaigning and activism, in that they provide new mechanisms which allow customary activities to be carried out more efficiently. In a human rights context, the advent of email has been revolutionary in allowing for almost instant reporting of human rights violations and rapid issuing of urgent appeals and communications for human rights activists at risk. Amnesty International's letter writing campaigns, for example, now largely take place online through email rather than via their traditional postcards. The expansion in recent years of Urgent Action programs, based on the rapid issuing of urgent appeals and communications to government authorities and international institutions by organisations such as Amnesty International, Front Line, Human Rights First and the Observatory for the Protection of Human Rights Defenders ('the Observatory') is testament to the power of modern communications technology. International organisations can act within hours of receiving reports of violations, widely publicising cases and pressurising national authorities[18]. This can be particularly effective in cases of imminent risk such as when a human rights defender may be at risk of torture in the hours or days following arrest or where a defender has been subject to death threats and requires urgent protection or security measures. These actions foster an atmosphere of scrutiny and accountability for national governments and local authorities; when aware that their actions are visible and open to international scrutiny and criticism, authorities may be encouraged to act in a manner consistent with legal obligations and to conform to public opinion. It is here that one of the key empowerment techniques provided by ICT becomes apparent: in an era of surveillance and disciplinary society, ICT allows those under state surveillance to turn the tables and observe their oppressors

Much of this new activity – the explosion in amateur reporting, documentation of human rights abuses, criticism of authoritarian regimes, discussion of previously taboo or prohibited topics such as homosexuality or women's rights – is derived directly from the unprecedented capacity for freedom of expression that ICT tools provide, and it is this amplification of freedom of speech which may be the supreme and ultimate legacy of the ICT revolution with regard to human rights activism.

The most prominent example of the power and impact of ICT-based reporting in recent times is that of last year's post-election violence in Iran. Despite the Iranian authorities' attempts to restrict

In the Iranian context, the outpouring of information and activism spilled over to international civil society, the diplomatic community and even to the ICT service providers themselves. Twitter itself – in what can be seen as either a well-timed, cynical act of self-promotion or a dynamic and flexible response to its users needs - publicly announced that it would be delaying a routine upgrade to avoid any disruption to its service, in recognition of "the role Twitter is currently playing as an important communication tool in Iran. Perhaps more intriguingly, it later emerged that Twitter had made this decision after a request by the US State Department.demonstrating that inevitably, one must remember that ICT services are not themselves the activism, but merely the tools, which remain as open to political manipulation as any other[25].

Hence the Iran example highlights the fact that ICT as a medium is not infallible: in a situation like that of Iran, it is impossible to distinguish the political from the peaceful, which can generate particular difficulties in a human rights context, especially for international monitoring organisations who seek to remove themselves from particular political agendas in a bid to retain a reputation for partiality. From a journalistic point of view it is difficult to verify information, to distinguish bias or agenda or to trust second hand accounts. In the context of human rights defenders, the ICT revolution does not always gain headlines. An under-reported but steadily increasing movement behind the scenes involves the use of blogging, online debate, creative output and community-based networking to quietly empower those with a less prominent voice in society. This has been particularly useful for women's rights defenders, notably in societies and cultures where it is less acceptable for women to take a role in public life. Bypassing internet and communications restrictions imposed by the Iranian government, *OneMillion Signatures* has maintained an active online presence and has become widely knownoutside Iran. The arrests, detention and harassment of its members are regularly reported by international organisations, in particular Front Line, Reporters Without Borders, the Observatory, Human Rights First, the International Campaign for Human Rights in Iran, Women Human Rights Defenders International Coalition, and others[29]. One of the campaign's key strengths has been to maintain a functioning website, updated regularly with information about the campaign's activities and the harassment of its members. Continuous efforts by the Iranian authorities to hack and block access to the website requires the campaign to frequently change its web address and to maintain different addresses for those accessing the site from inside and outside Iran. Front Line reported on 14 October 2008 on the 16th occasion on which campaign's website had been blocked. A more light-hearted example of women's rights defenders in action is that of the Pink Chaddi Campaign. Demonstrating the particular usefulness of ICT services to stimulate and encourage innovative human rights activism on a simple premise, a group of young Indian women terming themselves the " women's rights defenders required no more than a Facebook account, some postage stamps and some free time. In early 2009 members of Sri Ram Sena (SRS - Lord Ram's Army), an ultra-conservative Hindu organisation, assaulted several young women in a pub in Mangalore, a college town in the southern state of Karnataka. Pramod Mutalik, the SRS leader, said that his followers were "custodians of Indian culture" who had prevented the women at the pub from going astray, and the group furthermore threatened to attack unmarried couples who celebrated Valentines Day[31]. In response, a group of young Indian women founded the Consortium on Facebook and launched a campaign encouraging supporters to send pink *chaddi (*panties) to Pramod Mutalik for Valentines Day, and to mark the date by going to a bar with friends. The campaign received international attention, and triggered a national debate within India about the nature and availability of women's rights and the role of women in Indian society[32]. The Facebook page was an internet sensation; it gained upwards of 59,000 members and an estimated 40,000 pairs of underwear arrived at SRS' headquarters[33], demonstrating the power of a simple ICT-based idea to launch a nationwide campaign and trigger substantial debate on human rights in society. It is in relation to cases such as this that one can identify the emergence of entirely new new spheres of activity and influence as a direct result of the ICT revolution.

(III) The backlash: authorities' responses to ICT activism: The explosion of ICT usage amongst human rights defenders and the limitless possibilities for engagement, campaigning and freedom of expression provided by the internet are naturally of grave concern to authorities and governments worried for their own continued dominance. Thus ICT tools and services are, in a sense, victims of their own success: human rights defenders work in publicising their causes, and criticising the authorities are too effective to be allowed to continue.

The Pink Chaddi campaign falls into this category; the success of the Facbook campaign led conservative activists to adopt the campaign's own methods. The Consortium's Facebook page was repeatedly hacked, the names of its members removed, pornographic material and lewd commentary posted, and the group was renamed with racist and offensive slogans. The creator's account was eventually blocked by Facebook for reported abuse, allegedly after repeated emails to It was stated in Section (I) that increased opportunities for, and greater means to, freedom of expression could be ICT's most important contribution towards the development and expansion of civil society. Correspondingly, authorities are in many instances concerned with limiting that liberty through a variety of means. Internet censorship and the restriction of access to certain websites and services are well-known and have been frequently discussed and criticised, particularly with regard to China[35]. However, efforts to restrict human rights defenders from making full and free use of ICT tools and services take a variety of forms and are not restricted to physical interference with internet services through the use of legal restrictions, firewalls, etc. Suppression of defenders' use of ICT varies on a regional basis, not only in intensity and scale but also in terms of particular trends and patterns of harassment, intimidation and reprisals. The sections below will look to the regions of the Middle East and North Africa (MENA), Europe and Central Asia, Latin America and Asia to give a very brief overview of the some of the regional trends of harassment of defenders due to their use of ICT and to briefly illustrate the variety of means by which use of ICT can be transformed into a dangerous or subversive activity for human rights defenders.

A. Middle East and North Africa (MENA): Severe restrictions upon freedom of speech and expression are enforced in many states across the MENA region, and are amongst the most significant challenges for human rights defenders operating in the area. Often, it is not the use of ICT tools or services specifically which is the impugned or dangerous activity in the Middle East, but what is stated or expressed *through* ICT as a medium. Monitoring or documenting human rights violations, filing complaints against state authorities, suggesting changes or improvements in government behaviour and practices, or merely discussing human rights issues can result in criminal charges, arrest, detentionm abuse or harassment for human rights defenders. In such a repressive atmosphere, human rights defenders have increasingly turned to the internet as a means of debate, discussion and publication. However, governments in turn have expanded the scope of laws traditionally used against writers and journalists in order to criminalise and reign in bloggers and users of other internet-based tools. Provisions making it an offence to insult the monarchy or government, criticise the state (often described as a form of treachery or betrayal publicise "false news" or "propaganda", or "promote terrorism" are frequently used to criminalise what in effect amounts to the exercise of a legitimate right to freedom of expression. Front Line noted with particular concern the deterimental effects of targeting bloggers and cyber-activists, given that human rights organisations are not allowed to function in many states in the region[36]. Amnesty International reported that in 2008 Syria, a government intolerant of virtually any dissent, targeted bloggers accused of "spreading false news" or "weakening national sentiment" under vaguely-worded laws designed to suppress freedom of expression, while authorities in Kuwait and Oman were seen to increase controls on freedom of expression through the internet. In Bahrain, the authorities routinely blocked access to parts of Facebook deemed 'subversive', particularly pages linked to the Bahrain Centre for Human Rights[38]. The governments of Tunisia and other states routinely blocked critical internet sites and cut internet connections between local human rights NGOs and the outside world[39], while the authorities in Iran supplemented their attempts to block internet access by detaining and prosecuting bloggers and internet activists[40]. Some recent, illustrative examples of human rights defenders harassed for their activities online include MrRa'ifBadawi, a Saudi Arabian blogger who set up a website in which he

criticised the religious police for human rights violations. Mr. Badawi was arrested and interrogated by the Saudi Arabian Prosecution Service in relation to his human rights writings in March 2008, after which he was charged in absentia with "setting up an electronic site that insults Islam", a criminal offence which can carry a sentence of up to five years in prison and a 3 million riyal (US$800,000) fine. Although the case has not gone forward, the charges against him have not been dropped and since then he has been subject to a travel ban, had his bank accounts frozen, and his website has been repeatedly hacked[41]. In a similar case, Syrian blogger Mr. KaremArbaji was sentenced to three years in prison on 3 September 2009 for "publishing mendacious information liable to weaken the nation's morale", a criminal offence under Article 286 of the Syrian Penal Code. Mr. Arbaji had been detained for over two years prior to his trial and had reportedly been subject to torture whilst in detention. His crime was most likely to have voiced opinions on a forum, Akhawiya, which has since been blocked[42]. In Oman, journalist and cyber-activist Mr. Ali al-Zwaidi was charged with using "a system or a device or a means of communication to direct a message while knowing it is untrue or causes harm to a person or a service" under Article 61 of the Telecommunications Law of Oman, which carried a sentence of up to one year in prison or a fine of one thousand Omani riyals (approx. US$2,600).

B. Europe and Central Asia: Freedom of speech remains a problem throughout former Soviet states, and investigative work remains a particularly dangerous activity; human rights defenders reporting on human rights abuses are routinely killed. Most prominent among them in 2009 was Natalya Estemirova, an award-winning defender who ran great personal risk to investigate and document abuses in Chechnya in assocaition with the organisation Human Rights Memorial. On 15 July 2009 she was forced into a car by several men, and her body was discovered later that day with two shotgun wounds to the head[44]. At least six human rights defenders were killed in 2009 in Russia alone[45]. In general, defamation campaigns in state media presenting HRDs as anti-patriotic or as serving Western interests became more frequent in 2009. Turkmenistan was singled out in particular for its efforts to restrict national media, exclude international press and harass journalists: the internet is monitored by a special police branch[46]. Turkish courts were criticised specifically for their excessive adminstrative scrutiny of human rights organisations, which often led to court rulings ordering them to shut down their websites[47]. A particular trend emerging amonst Eastern European states to restrict human rights defenders' and organisations' use of ICT is criminal prosecution for possession of unlicenced computer software. From the authorities' perspective, this can be an effective strategy in terms of harassing, threatening and intimidating defenders, as it impedes their work through the confiscation of expensive equipment and infrastructure, and creates financial difficulties as a result of the imposition of large fines. Furthermore, public condemnation and imprisonment of "offending" organisations has the effect of stigmatising the defenders, discouraing others from joining their work and turning public opinion away from their activities. To provide one example, on 28 August 2007 police officers from the Department to Combat Crimes in Relation to Information Technology raided the offices of the Nizhny-Novgorod Foundation to Support Tolerance, an organisation which provides support to migrants in Russia. The police confiscated four computers after declaring that the Foundation could not provide the licences for their software. On the 30 August, police also raided the offices of the Novaya Gazeta, an independent newspaper, to seize computers, followed by the attempted seizure of computers from the Nizhny-Novgorod Human Rights Alliance some time later[48]. In October 2009, Anastasia Denisova, President of the Youth Group for Tolerance "ETHniCS" was similarly harassed when officials from the local Economic Crime Department and a commerical firm known as "SPECTR" raided her office to search for counterfeited computer software. The officials seized computers which did not in fact belong to the organisation, and the address in the complaint which

provoked the search did not correspond to the address of the raided office. In August 2009, Ms. Denisova had been travelling with a photo-journalist when they were stopped by customs officials who confiscated 20 GB of information from the journalist's laptop and who searched Ms. Denisova for any electronic information devices[49]

C. Latin America: Human rights defenders in Latin America are particularly involved with documenting, publicising and campaigning for justice for vicitims of atrocities and abuses which have occurred in the context of the region's endemic civil wars, paramilitary conflicts and gangland warfare. In addition, serious atrocities are committed against indigenous peoples, often in an effort to displace them from their lands in order to gain access to valuable natural resources. For human rights defenders, such work can be extremely hazardous; activists are routinely subject to assassinations, kidnappings, death threats and other forms of intimidation[50]. In terms of ICT, prosecution for use of technology or for activities carried out with the help of technology is less common than in other regions. Rather, we see the inverse of developments in other regions as ICT has become increasingly incorporated into the activities of those who seek to suppress and harass human rights defenders, being recognised as a useful tool to more efficiently threaten, intimidate and silence activists. Hence threats are now frequently recieved via text message or email[51], such as the death threats recieved via text message by Ms. Luz ElsiaAlmanza, a defender working to end impunity for enforced disappearances in Colombia, in November 2009[52], or the death threats posted to the blog of Ms. Lydia CachoRibeiro, who works with victims of sexual violence in Mexico, in February 2009[53]. Worringly, ICT tools and services have been used systematically for surveillance and intelligence gathering of human rights defenders. In 2009 a wiretapping scandal unfolded in Colombia, where it emerged that the Department of Administrative Security (DAS), the state intelligence agency which reports directly to the President, had for years been illegally monitoring the communications of opposition politicians, judges, journalists and others, with a particular emphasis on human rights activists[54]. An official investigation by the Attorney General has led to the resignation of many senior DAS officials, accusations of murder against the former director, Jorge Noguera, and the dismantling of G-3, the secret unit which carried out the surveillance of those critical of the ruling government. This included prominent human rights organisations the Colombian Commission of Jurists, the Inter-Church Justice and Peace Commission, and the José AlvearRestrepo Lawyers Collective, in addition to international human rights organisations such as Human Rights Watch and the UNHRC. Defenders who have since accessed their files found photos of their families and children, transcripts of private phone calls and copies of emails[55]. In the context of human rights defenders, the involvement of the DAS in the scandal is extremely worrying given that it was simultaneously responsible for the government-run protection program, which provided bodyguards, mobile phones and secure transport to human rights defenders at risk. The implication that defenders' supposed protectors were likely spying on them is extremely problematic, particularly combined with the high incidence of corruption in Colombia which makes it possible that intelligence information could have been sold by corrupt security or police officers[56]. Much of the protection program has since been transferred to private security firms, but serious Asia's media and internet censorship is well known, particularly in relation to China. Technical interference with communications and restrictions on the use of technology are amongst the key ICT-related issues for Asian human rights defenders, not only in China but also in Vietnam, Malaysia and elsewhere. In North Korea, mobile phones were prohibited in general in 2004 and official policy has been to decline to make internet available in the country[58]. Interference and limitation of ICT usage is closely connected to limitations on freedom of speech and expression; the most frequent harassment, prosecution and stigmatisation of defenders relates to how they use ICT in order to criticise the authorities or discuss human rights issues. In China, human rights defenders

have limited access to many websites and internet services, including Skype, Twitter and Facebook, and emails are routinely monitored or interfered with. In addition, targeted attacks are also carried out against websites, blogs and email accounts in order to disrupt communications or impede defenders in their human rights activism. Google's decision to end its enforcement of China's internet censorship rules was ultimately triggered by Chinese hacking of the Gmail accounts of human rights defenders, and of information theft from its own "corporate infrastructure"[59]. Not long after this decision, five websites run by Chinese human rights defenders were interrupted by a denial of service (DDoS) attack for a period of some 16 hours, and infected with malware software on the websites. The group confirmed that it frequently suffers such attacks[60]. In January 2009, the authorities carried out a sweeping internet attack aiming to block internet sites carrying "harmful comments", in particular pornography. However, the attack also closed a website used by activists which was deemed to be harmful due to its current affairs content[61]. Such actions are doubly harmful to human rights defenders, as in addition to disrupting their human rights activities, they suffer a public stigmatisation by being publicly linked to pornography.

- Human rights defenders also suffer from more direct forms of punishment for their internet activism. Prominent Tibetan blogger TseringWoeser was held under house arrest in 2008, her detention coinciding with the beginning of the anti-Chinese protests in Tibet[62]. Woeser's period of house arrest followed the enforced closure of one of her blogs in 2007 after she posted a photo of the Dalai Lama on the site, and her blog has been repeatedly blocked on other occasions[63].

Yet China is not the only country in Asia with severe restrictions upon internet usage. In Vietnam, internal censorship and harsh repression of those who exercise freedom of expression is not as widely reported as that in China, but is equally worrying. It was reported in 2009 that access to Facebook[64]and Catholic websites[65]were frequently restricted. Internet activists have been arrested, prosecuted and imprisoned. Prominent amongst them is Bloc 8406, a loose affiliation of pro-democracy activists who published and distributed online an appeal for freedom of political association, along with a Manifesto for Freedom and Democracy in Vietnam. In 2009 alone, at least 11 of Bloc 8406's members and supporters were sentenced to prison terms[66], with many more subject to ongoing harassment[67]. Bloc 8406 members are noted for their attempts to circumvent internet restrictions: they have utilized digital telephone and encryption technology on websites provided by Voice Over Internet Protocol providers such as PalTalk, Skype and Yahoo!Messenger, for example[68].

(IV) Innovation, initiative and entrepreneurship – ICT as a creative force: The situations and cases described above are merely a representative sample of the kind of human rights violations taking place around the world in connection with ICT, and of the variety of shapes and forms these violations take. It is self-evident that ICT can potentially be viewed as a mixed blessing. Insofar as it offers an ever-evolving set of tools to aid and assist human rights defenders in their activities, ICT can also come as a wolf in sheep's clothing, frequently turned against defenders, as in Latin America, or generating new cycles of increased repression, as in

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ADVANCED TRENDS IN ICT

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Abstract
This paper deals with the advanced trends in ICT. We are in a digital era. It is difficult to think of any event in our daily life that is not using Information and Communication Technology. Our schools and classrooms are no exceptions. This course is meant for introducing you with these technologies with the intension that you meaningfully integrate technology in your practices related to teaching and learning. As an ordinary citizen as well as a teacher, you handle enormous data all the time. Data refers to facts, events, activities and transactions which have been recorded. Data is the raw material from which information is produced. Most of the decisions taken in and around the world by and large are based on the data and information. Information is the key guiding force of the world today.Traditionally also radio, television, and print media were the widespread technologies used for communication. The digital revolution has changed the way these traditional technologies function. The analog television has become digital television. In addition to the printed newspaper we also have electronic versions. Along with traditional radio, we also have online radio. All these have started appearing in the classroom to make the learning experiences rich.
Keywords-*Introduction, Mobile Learning, Cloud computing, One-to-one computing, Gaming, Redefinition of learning spaces, Smart portfolio assessment, Teacher as manager / mentor.*

Introduction- Basically, India was known as an agricultural country. But because of advanced technology and use of it in every field now India is known as third emerging power in the world. With due respect to the dream of Late Dr. A. P. J. Abdul Kalam vision 2020 now, India has strategically founded the place in world economics and world politics with the leadership of our Prime Minister Narendra Modi. There wasn't any use of technology in Education our Late Prime Minister Rajiv Gandhi took initiative and started the use of technology in all fields in general and in education in particular. Earlier there was Guru Shishya parampara in India. We have very rich and varied tradition in all aspect including science and technology. Such as in Mathematics, we had Bhaskaracharya. In advanced trends of ICT we as a teacher and as a citizen has to understand the following terms related to ICT such as meaning of ICT, Definition of ICT, Nature of ICT, Scope of ICT, Concept of ICT, Need and Importance of ICT, Role of Teacher, Role of Student and paradigm shift because of ICT in Education.

Facilities available on internet for communication- e-mail, chat, online audio-video conferencing, e-library, website, Google applications such as Google doc, Google drive, map, alert, talk, translate, image, groups, calendar etc.

E-learning, digital India, e-library, e-banking, e-business, cashless India.

Technology Trends-5-

1 Spreading intelligence throughout the cloud
2 Self managing devices
3 Communication beyond sight and sound
4 Fundamental technologies reshaping what network can do.
5 Weaving security and privacy into the Internet of things fabric

10 Global trends in ICT and Education-

1) Mobile learning
2) Cloud computing
3) One-to-one computing
4) Ubiquitous learning

5) Gaming
6) Personalized learning
7) Redefinition of learning spaces
8) Teacher generated open content
9) Smart portfolio assessment
10) Teacher as manager / mentor

Top 10 Communications Technology trends in 2017-

1 5G side's safety off the Hype curve and makes a nice boring landing.
2 Meanwhile spectrum allocations become not boring.
3 Internet of things takes off and we all becomes part of the boring collective.
4 Driverless everything, take me I am yours.
5 Security, privacy and hiding bodies in the cloud.
6 Distributed ledgers, the end of banks and the beginning of a new way to run network.
7Artificial intelligence, deep learning to boldly to where no machine has played go before.
8 Put it all together and let it live in a smart city.
9 New ways to communicate I: Molecular communication smells good.
10 New ways to communicate II: Lifi lights the way.

We cannot guess the future as there's no guarantee for what the future holds. However, by taking a closer look at current technology trends we can get a glimpse at what is to come in the eLearning Industry. Gamification, automation, and responsiveness are just some of the hot topics that we'll all be talking about over the course of the next year, and beyond. Staying up to date can keep your eLearning course relevant and relatable for modern learners and improve your corporate online training strategy. Now days the Learning and Development world is waking up to this idea that we need to move beyond just resource-based approaches for eLearning. We need to think about multi-pronged approaches that fit in different consumption windows and patterns, as well as delivering against needs.

Mobile Learning- The number of Smartphone users worldwide has crossed 2 billion in 2016. Your employees spend significant time on their Smartphone's. They use mobile devices to do a majority of the daily tasks including learning new concepts. Use the idea of micro-learning to tap the audience who love mobile. Through micro-learning, you can deliver bit size content to the learners when they need it. Use Live Stream micro-videos to catch users' attention. Rise in Mobile devices is a global phenomenon. Thus, you can use this strategy to engage more employees from developed as well as emerging economies. Google's Primer is the best example of training through micro-learning that is being used efficiently on a large scale.

Cloud computing- Social learning is not new. It has been there for quite some time. However, the changes in the structure of workforce have necessitated the need for social learning as an integral part of learning and development strategies. Two factors are driving the need to adopt the social learning in organizations. Firstly, today increasing number of companies are using distributed workforce. In the absence of physical proximity between the employees, internal social media networks for learning and development are playing a critical role in the seamless exchange of ideas. Secondly, the proportion of millennial in the workforce is increasing continuously. The millennial have grown up with social media and find the email a highly unproductive medium to communicate. Thus, they use social media frequently to share files, videos and communicate efficiently. Face book has recently launched "Workplace" that allows organizations of any size to adopt social media for learning and developmental purposes.

One-to-one computing- One to one computing is as very essential. In it, the instructions are delivered based on individuals' preferences and inputs. The training methods can be optimized by teaching only those concepts which are not known to a user. Also, the users can learn at their own pace. No two learners are same and therefore, adaptive learning accelerates the learning of individuals while lowering the cost of content delivery. Vendors are using adaptive learning to optimize the resources while delivering the maximum value to their clients.

Smart portfolio assessment- Smart portfolio assessment is done with the help of virtual reality, as it is about to change the training and development landscape across organizations. With VR, the learners can have an immersive experience. The concepts of augmented reality can be used to create a real environment for teaching complex concepts. For example, a real life case study based on leadership can be created in augmented reality and learners can play the roles of various characters in these cases to learn leadership lessons. To conduct such kind of lessons, the pupils need not be physically present. They can be located anywhere across the globe. They simply need to have a fast internet connection, a computer or mobile, and a 3D headset suitable for VR.

Teacher as manager / mentor- Teacher as manager of the classroom and in training and development, nothing is more important than measuring the outcome and taking the corrective measures to improve the effectiveness of the training process. Fortunately, the technology is proving to be very useful in measuring the effectiveness of training methods accurately. Companies are using innovative techniques and going an extra mile to gauge the success of their training and development programs. And, it is not just left to the HR. CEOs are increasingly showing their interest in improving the overall training and development strategies.

Conclusion- Trends don't pop-up out of nowhere. It is the continuous innovation that brings about new methods that work better than the others. Thus, effective methods go viral and become trends. As an astute professional, you need to keep a close eye on every development in the training and development space and other areas. Connect the dots and use newer techniques even from outside the learning and development domain to make your strategies unique and innovative. Use these five trends as a starting point to develop a learning & development plan that is modern and best suited for your organization.

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BLENDED LEARNING IN EDUCATION –OPPORTUNITIES & CHALLENGES

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Abstract
A present paper discuss about Blended Learning. A blended learning model should describe a planned and deliberate educational activity that integrates student-centred learning, classroom-based teaching and learning with mobile and web-based online approaches based on individual learners and their specific needs. Education provision initiative is all based on the need for online learning infrastructure, policy and practices to facilitate 21st century learning. We have to empowered students, so they will be act as leaders, coaches, mentors and technical experts. So Teachers were free from having to understand the technologies, so spent less time on technical instruction and more time supporting learning.
Keywords*: Blended Learning*

1. Introduction: The information society is challenges by recent trends in education system, the speedy, effective & global communication of knowledge has created new foundation for co-operation & teamwork, both nationally &Internationally, the increasing role played by information communication Technology in the development of society calls for an active reaction to challenge of the Information society.

2. Blended Learning Concepts and Need in Education: Blended learning is an education program (formal or non-formal) that combines online digital media with traditional classroom methods. It requires the physical presence of both teacher and student, with some element of student control over time, place, path, or pace.[While students still attend "brick-and-mortar" schools with a teacher present, face-to-face classroom practices are combined with computer-mediated activities regarding content and delivery. Blended learning is also used in professional development and training settings. Blended learning (BL) or hybrid learning describes a learning environment that eithercombines teaching methods, delivery methods, media formats or a mixture of allthese. It also refers to the integrated learning activities such as a mixture of online andface-to-face learning. In other words, BL is a mixture of e-learning and traditionaltypes of learning. It is mentioned as the integrated combination of traditional learningwith web-based online approaches, the combination of media and tools deployed in ane-learning environment and the combination of a number of pedagogical approaches. Elaborated BL as a set of learning strategies or dimensions that mixes various eventbased activities, including traditional instructor-led training, synchronous online conferencingor training and asynchronous self-paced study. Students learn from the Teacher-centred approach. Usually in a traditional classroom setting, students have access to the experts, involved in questions and discussion, exposed to social interaction and have the opportunity to learn from others. Some students prefer an individualized or less structured environment.

3.Nature of Blended Learning: We have used a range of learning activities and resources to assist learners to achieve learning objectives. Using Face-to-face presentations, visual material, paper-based assessments, online research and group activities have been the mainstay of classroom teaching for many decades. More recently mobile technologies and collaborative Web 2.0 tools have expanded opportunities for learning. Blended learning is really no more than a combination of all of these approaches. For some teachers, blended learning is describing what they have been doing successfully for years: that is, using a range of resources and activities to provide individualised, student-centred learning experiences for their students. The real difference today is the unparalleled access to the internet with its rich sources of information and services and more importantly, the connectivity it

offers students and teachers, particularly the ability to create online communities and support networks. For other teachers, blended learning represents a challenge. They are not comfortable with nor do they fully understand the technologies and media that their students use every day, or the potential that these can offer their learners. To assist teachers in implementing blended learning activities, this paper reinforces the concept that blended learning comes in many guises and isn't a "one-size-fits-all" educational solution. Definitions of blended learning range from the very broad where practically any learning experience that integrates some use of ICTs qualifies, to others that focus on specific percentages of online curriculum and face-to-face instruction..Most people agree that blended learning combines teaching and learning methods from face-to-face, mobile and online learning and that it includes elements of both synchronous and asynchronous online learning options.
The integration of new mobile technologies and online media is proving highly effective in helping schools meet the expectations of 21st century learners while addressing the challenges of limited resources and the special needs of many students, as the practice of mixing traditional classroom methods with technology is widespread.

4. Is Blended Learning for Everybody?

Blended learning comes in many shapes and sizes – there is no right way or wrong way, no correct formula or single "right" ratio of face-to-face, online time and self-paced activities in and beyond the classroom. Each approach is based on the needs of the students, the curriculum and the resources available. The increased integration of ICT, particularly Web 2.0 technology into classroom education provision has broadened the scope of delivery to include learners who choose not to attend classroom education as well as those who don't have the choice through their personal circumstances e.g. ill health.

- Inclusion of more differentiated/personalised instruction
- increased access to resources, experts and learning opportunities
- More authentic and student driven tasks being incorporated into the curriculum
- higher student engagement
- Greater opportunities for collaboration (especially beyond the classroom and involving the wider school community)
- Exposure to a wide range of Web 2.0 technologies and acquisition of contemporary literacy skills
- Better access to infrastructure and, anytime, anywhere learning.

5. Blended Learning vs other forms of Learning: We can see that blended learning has offers more to students in terms of communication between teacher and students, collaboration, and demonstration of learning. Please note that they refer to "dropboxes" in the table but any file share system could be used.

Goal	Classroom Learning	Blended Learning	E-Learning
Communication between teacher and students	• Full group lessons • Small group lessons or tutorials • Individual conferences • Marked assignments and rubrics	• Full group lessons • Small group lessons or tutorials • Individual • assignments • Digital course materials • Online discussions • E-mail • Instant messages • News	• Digital course materials • Online discussions • E-mail • Instant messages • News announcements • Online calendar • Online grade tool • Rubrics • Web conferences

		announcements • Online calendar • Dropboxes • Online grade tool • Rubrics	
Collaboration among students	• Learning centres or other room arrangements • Class discussions • Face-to-face group work	• Learning centres or other room arrangements • Class discussions • Face-to-face group work • Online group work • Online discussions • E-mail • Instant messages • Blogs • Electronic portfolios	• Online group work • Online discussions • Chat sessions • E-mail • Instant messages • Blogs • Electronic portfolios • Web conferences
Demonstration of learning	• Paper-and-pencil tests and assignments submitted in person • Live presentations, labs, performances, or exhibits of skill • Models, works of art, posters, and other physical submitted in person	• Paper-and-pencil tests and assignments submitted in person • Live presentations, labs, performances, or exhibits of skill • Models, works of art, posters, submitted in person • Blogs • Electronic portfolios • Online discussions • Assignments	• Blogs • Electronic portfolios • Online discussions • Online surveys and quizzes • Assignments, such as essays, worksheets, slide shows, photographs, and videos submitted to electronic dropboxes • Web conferences

6. Significance of Blended Learning on Students

Blended Learning requires greater student engagement and motivation for completing tasks. This has been attributed to familiarity with technologies already used by students outside the classroom and the novelty of some of the ICTs used in blended learning. Collaborative tools (virtual conferencing), social networking and gaming were especially popular. Students changed their behaviours to become more reflective, collegial and collaborative (engaging in peer coaching and team activities) and far more accepting of peer review and external feedback. Engaging in more reflective and self-monitoring tasks also enhanced their understanding. Alsostudents, who were reluctant to communicate openly with others, were able to speak freely and contribute to class conversations after Skyping neighbouring r schools. Students will enjoy seeing the different work produced by other students and often included some of the ideas in their own work.

7. Models of Blended Learning

1) Face-to-Face Driver Model: This is a 'softer' approach to blended learning. The lecture will always be in-person. An individual teacher will add content online to support the curriculum. For example, in-class lectures are supported by supplementary lectures and virtual world activities found online.

2) Rotation Model: The rotation model is a fixed schedule of in-classroom and online instruction. It alternates between an in-classroom lecture supported by online study and an online lecture with supporting classroom activities. For example, in week 1, students will have face-to-face lectures and activities will be online. In week 2, students will watch online lectures and the classroom will be used for activities.

3 Flex Model: Students learn primarily online, while the classroom is used for tech support.

4) Online Lab Model: Courses are taught fully online but supervised by an adult in the physical classroom.

5) Self-Blend Model: Students take extra courses online. This is common for students wanting to take advanced courses for college or at-risk students who need extra coursework to graduate.

6) Online Driver Model: This is also taught fully online. It is self-paced with teachers checking in on a student and providing support as needed.

8. Developing Blended Learning Pedagogy

"For our teachers, the initial challenge is more a matter of mindset than an academic change".

1) Teaching using a blended approach can be challenging for some as it may require the acquisition of different teaching skills.

2) Re-designing the curriculum and the inclusion of new teaching and learning opportunities, managing the learning content both online, in-class and beyond the classroom walls, and preparing students to work in blended modes.

3) Adopting a blended learning approach must start with a re-examination of the intended learnoutcomes? The teacher needs to design learning activities that support these intended learning outcomes, personalise or differentiate learning and then integrate these activities effectively with the required assessment tools.

4) Teachers should prepare their students for the blended learning style and discuss the new roles and responsibilities. Some students won't be used to working independently or may be unfamiliar with some of the technologies, so support mechanisms will need to be put in place for these students.

5) The capacity for teachers to incorporate new technologies into teaching and learning programs may be limited without an expanded time commitment, and better support from Other staff and additional professional development.

6) Professional development of Teacher options to be considered include adding new competencies to the curricula, assessment schemes more suited to blended delivery, and graduate training to encourage blended teaching and learning approaches across all curriculum areas.

7) It includes motivating and/or rewarding teachers for the innovative use of blended learning approaches to improve student outcomes plus support from peers and other experts.

8) Teacher training needs to include and refine competencies of teachers in taking on a more facilitative skills such as questioning, creativity, observation, differentiation and facilitating collaboration and networking opportunities for understanding of Blended Learning ,Also imparting of knowledge of online protocols (such as cyber ethics and intellectual property).

9. Challenges in Implementing in Blended Learning

Challenges in Implementing Blended Learning Strategies The trial projects have identified a number of challenges for teachers and students to implementing blended learning strategies:

- developing blended pedagogy

- teacher support and professional development
- technological challenges
- student preparation/support and transition
- assessment considerations
- Culture and innovation.

10. Advantages of Blended Learning

1) Provides personalized training experiences. Face-to-face teaching and technology working hand in hand offers student a customized training experience. If they are struggling with a particular teaching topic, they can access supplemental resources online or get the help they need from their instructor. They are also able to utilize specific multimedia activities that cater to their performance goals. They are able to access the video demo and tutorial instantly. Instead of sitting through an hour-long training course to get the information they require, they can just pick-and-choose which elements will improve their performance and skill sets.

2) Offers 24/7 access to training resources. Blended learning training removes time and location limitations. If the student is at home and would like to spend a moment brushing up on product specs, they can do so. If you create an online forum, they can also benefit from the experience of their peers and get answers to questions when the Teacherr is not available.

3) Track employee performance and skill development. Blended learning also makes data tracking more quick and convenient. Instead of grading exams, use an online assessment with a build-in grading rubric, which also offers the added bonus of immediate feedback. Virtually every training exercise and activity can be tracked to gauge employee progress and skill set development, from the choices they make in a branching scenario to their level of participation in an online discussion. Organizations also gain the opportunity to figure out which activities are effective and which need to be modified in order to meet performance goals and objectives.

4) Reduction in costs. The benefit that brings many organizations to a blended learning strategy is the cost savings. student who are doing their that blended learning can make the training process more effective, but does not require as much time or money as traditional training. No instructors need to be present, in some cases, and there is no training space to rent. In addition, the training courses can be updated and expanded in a fraction of the time, as there are no printed materials to worry about.

11. Disadvantages of Blended Learning

1) Ineffective use of learning technology tools can waste resources. If teachers and Student are unaware of how to use the learning technology provided, you probably won't get the results you're looking for. Also, if you utilize learning technology tools that are less reliable or do not offer the necessary features, then it may end up wasting resources instead of improving It. This is why it's crucial to find the right tools before you implement your blended learning program in the classroom. Determine which devices and software are going to meet your needs, as well as which fit into your overall training budget.

2) Learners must have basic technology knowledge or a willingness to learn. In virtually all blended learning environments you will encounter at least one learner who is hesitant about change. There are also those who may not be familiar with technology and have a steep learning curve ahead of them. To solve issue, you should have support on hand to teach new learners and motivate those who may be more reluctant. It's also important to cultivate a blended learning community that stresses the value of technology in training, as well as the real world benefits it can offer.

3) High technology set up and maintenance costs. Purchasing the learning technology for blended learning program, such as devices and infrastructure setup can be costly. This is especially true if you

have a larger student or several departments. However, bear in mind that these are just short term expenses, and that you are most likely saving money in the long run.

12. Role of Teachers in Blended Learning. The important role of teachers in blended learning is in facilitating of the teaching/learning process, combining the explanation of theoretical contents with activities, and encouraging interaction.

Summary &Conclusion: As we move from 21st century, different contempory trends will soon see large scale changes in the way education is planned & delivered. A blended learning model should describe a planned and deliberate educational activity that integrates student-centred learning, classroom-based teaching and learning with mobile and web-based online approaches based on individual learners and their specific needs. Education provision initiative is all based on the need for online learning infrastructure, policy and practices to facilitate 21st century learning. There is a growing world-wide trend in initiatives that are explicit about the availability of learning anywhere, anytime. The underpinning notion is that teachers will need to be up-skilled quickly to cope with the virtual learning opportunities in the classroom.With cyber security & Intellectual property it will help students.

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TECHNO-SAVVYTEACHERS: NEED OF TIME

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Abstract
The role of Information and Communication Technologies (ICT) in the school classroom is becoming increasingly prominent these days. Classrooms are constantly evolving to meet the changing needs of students. ICT more specifically inside the classroom has developed immensely. Technology has become a part of education therefore it is very important that teachers are educated in how to use it, not only for the classroom but also for the workplace. To use ICT in day to day teaching and work, the teacher should be efficient. Teachers should have various skills and qualities to be a techno-savvy. It is the need of today's education world. The present paper focuses on the need of Techno-savvy teacher and essential skills and qualities of ICT teacher.
Keywords: *ICT, Skills, Qualities*

How today's schools are changing?

The most striking innovation in the field of education is the integration of Information and Communication Technology in education. The educational institutions should cope with the suddenly increasing demand for information and skills. One cannot depend on only the same big blackboards, an overhead projector and video-graphed concepts as either because the transaction of curriculum is poor or the tools used in its transaction lack application and skill. For re- engineering the emerging trends in education, it is indispensable to provide digital education through the computer. The role of Information and Communication Technologies in the school classroom is becoming increasingly prominent these days. Classrooms are constantly evolving to meet the changing needs of students. Education has enhanced in schools. Learning as well as teaching has improved and became easier. In every class room there is a computer but not only that, there is a smart board. This helps teachers write on the board more efficiently and gives a big screen to learn better from computer. Technology has also helped children with learning by providing computers. Computers allow access to multiple programs as well as the internet. In many ways, technology has profoundly changed education. For one, technology has greatly expanded access to education. In medieval times, books were rare and only an elite few had access to educational opportunities. Individuals had to travel to centers of learning to get an education. Today, massive amounts of information are available at one's fingertips through the internet, and opportunities for formal learning are available online worldwide. The benefits of ICT for learning depend on the learning approach used, emphasizing the role and the skills of the teacher, and the need for support for both learners and teachers. Technology has become a part of our culture therefore it is very important that we are educated in how to use it, not only for the classroom but also for the workplace.

What is the difference between ICT teacher and ICT skilled teacher?

Information Communication Technology has got so much importance in the field of education that it has been taught as a subject in the school and colleges. The teacher who is teaching ICT as a subject is called ICT teacher whereas the teachers who are able to use ICT skills in teaching learning process is called ICT skilled teacher. Each teacher should be having ICT skills. However, in many ways, technology has profoundly changed education. To meet the needs of students, the teacher should have ICT skills and qualities. A skill is something that we learn to do over a period of time. It is an ability to do an activity or job well, especially because we have practiced it. A skill is the ability to carry out a task with pre-determined results often within a given amount of time, energy,or both. During education or work we will learn new skills that we can use for different things. A quality is something that we would have been born with. It is something that will improve. Qualities are

personality traits whereas skills are learned. Qualities like honesty or punctuality are something we are either born with or learn in our formative years or, in rare cases, imbibe it in later years. Skills like carpentry or computer skills can be picked up any time. Hence the teacher can acquire ICT skills and he can imbibe the qualities of ICT teacher in his career.

What are the different essential skills of ICT skilled teacher?

1) **Word processing skills**- It is the phrase used to describe using a computer to create, edit and print documents. Teachers will create and edit a variety of documents; i.e. reports, letters, memos, emails, labels and envelops from unarranged, edited and script copy using word processing software.
2) **Spreadsheet skills-** A spreadsheet is an electronic ledger commonly used by people in the workplace to store information and manipulate it to make informed decisions. The worksheet is divided into alphabetic columns and numeric rows. Itprepares students for the future by teaching them spreadsheet skills
3) **Database skills**- A database is a collection of information that is organized so that it can be easily accessed, managed and updated. Data is organized into rows, columns and tables, and it is indexed to make it easier to find relevant information.
4) **Downloading Software From Web**- Teachers need to download various data from the internet while teaching his subject. Various type of knowledge is available on net and teacher has to use it to keep his students update. He should know how to download information and software from internet.
5) **Videoconferencing Skills**- A video conference is a live, visual connection between two or more people residing in separate locations for the purpose of communication. At its most sophisticated, it provides transmission of full-motion video images and high-quality audio between multiple locations. This is very helpful in education field as it reduces costs, efficient use of time, effective collaboration between students and teachers, and learning from anywhere at any time. The teachers has to participate in video conferencing so he should have its knowledge.
6) **Scanner Knowledge**- A scanner is a device that captures images from photographic prints, posters, magazine pages, and similar sources for computer editing and display. Scanners are useful to school teachers to scan student drawings and use on a school web site; Scan and email PDF files, such as grading reports.
7) **Computer Security Knowledge**- A teacher should be aware of the internet and its advantages and disadvantages. Creating cyber security awareness is very much required for a teacher to impart the knowledge about pros and cons of internet usage and safety tips for online presence. Teacher should be aware of cyber threats and how to safe guard himself and disseminate the knowledge to all students and parents.
8) **Handling of Hardware**—The teachers need to handle hardware of computer as he is using computer in his day to day teaching. Hence he need to know how to operate it. Starting from switch on up to switching off,there are many small little details which are usually taken for granted. What will you do if your computer does not respond to any command? Can you shift your computer to another place and fix all the cables without any problem? These appear minor questions but inability to tackle them might become a hindrance in the successful use of computer. Hence teacher should have this knowledge.
9) **Connectivity of machines**- Teachers have to use computer in their day to day teaching. Hence he should be able to connect machines properly. He must handle the situation properly if any problem occurs regarding machine.

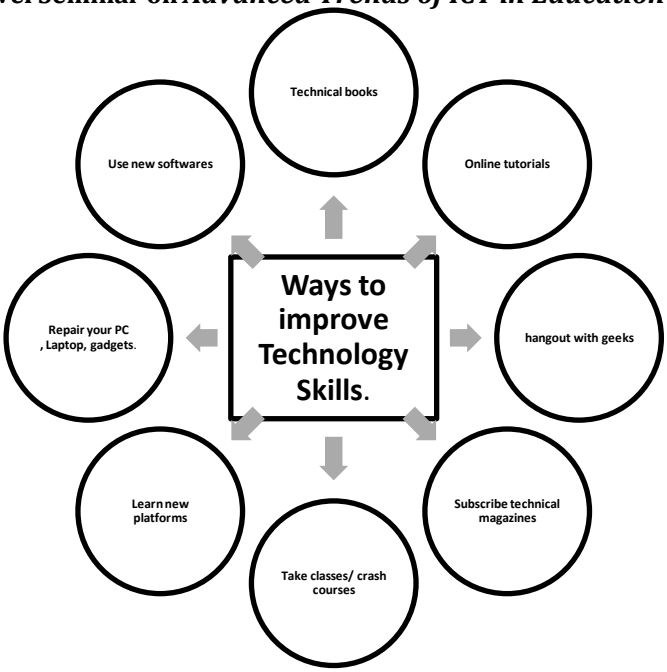
10) **Observant of netiquettes**- Netiquette is the observance of certain rules and conventions that have evolved in order to keep the internet from becoming a free-for-all in which tons of unwanted messages and junk mail would clog your in-box and make the information Superhighway an unfriendly place to be. Teacher should observe the netiquettes.
11) **Use of secondary storage devices**- Secondary storage devices do not interact directly with an application. The purpose of secondary storage is to provide a high-capacity tier, although the data stored is not immediately accessible. It is used to protect inactive data written from a primary storage array to a nonvolatile tier of disk, flash or tape.
12) Demonstration- A teacher needs to go online and make use of various resources. He needs to show videos, on line forms etc. for which teacher needs to learn demonstration skill.
13) **Fault finding and Problem solving -** While using different tools and equipments, ateacher may face difficulty. The tools may not work smoothly. They may not give you desired output. Computers, Printers, Scanner, Digital cameras etc, may not work properly .In such circumstances, teacher must know troubleshooting. He should be able to resolve the problems.

What are the different essential qualities of ICT skilled teacher?

- **Techno-savvyness**– Teachers should be techno savvy. There are tons of applications, tools, and sites out there that teachers are beginning to use in class. There are signs of tech-savvy teacher. It includes having students read your blog, preparing for twitter chats, attending conferences and keeping up to date with the newest tech. He always look for new opportunities should have in depth knowledge of how these new tools and be combined with others and how it can fit into his lessons and his students' learning process.
- **Update knowledge**- ICT skilled teacher always update his knowledge. He attends various conferences and always keep himself up to date with new knowledge. He always uses this new knowledge in his teaching and day to day work.
- **Lifelong learning-** Since the technology gives updates regularly, new gadgets, devices, software are available every day. One must be having ability to learn new things every day.
- **Awareness about legal and ethical issues-** While using ICT, teacher must know what is copyright. Different on line and off line resources are the ownership of some people. When we use online videos, images, text, and other resources, we must seek permission of the owners. One must not use pirated software and other resources that are not licensed. Teacher must have knowledge about legal and ethical issues.
- **Patience-** A teacher must have patience while using different tools. We may need time to understand the concepts related to technology and skills.
- **Experimental-** A teacher must be able to try out different ways of doing things. He should be able to experiment on the devices that are available and find out the best possible ways of using them.
- **Adaptive and adjustment-** A teacher should be able to cope up with different situation and adapt to new situations. Every moment is a moment of change with respect to technology. Teacher should be able to adjust himself to new situations.
- **Commitment-** A teacher must be committed to students and schools. We must be using ICT for betterment of our students. Therefore teacher must strive to make our education modern.

How do I update my technology skills?

Given below is a small mind map which tells you different ways of updating your skills:



CONCLUSION: In many ways, technology has profoundly changed education. Technology has greatly expanded access to education. In medieval times, books were rare and only few had access to educational opportunities. Individuals had to travel to centre of learning to get education. Opportunities for communication and collaboration have also been expanded by technology. The teacher plays a vital role in education system. Technology has become an integral part of education. The teacher has to use new methods and approaches in his teaching and he has to use technology. The teacher should develop the skills like web browsing, presentation and word processing. He should be updating his knowledge and skills. He should have commitment towards students. If every teacher develops these skills then and then only he will be techno-savvy teacher. Techno-savvy teacher is the need of today's education system.

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ROLE OF TEACHER EDUCATOR FOR THE USE OF ICT

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The process of teaching learning has been going on since age it has been affected from time to time by number of innovations carried out of in the area of teachers education as well as outsides the area of the teachers education teaching and learning process has under goes change from face to face to distance visual mode with the advancement of the technology it is high time that our teachers are trained not only in basic skill required for class room teaching but also to handle the most sophisticated advance technology .Today's teachers can survive or function effectively in the technologically advanced classrooms only if they are cancellers with the use of different innovative technological tools. These innovations in technology have broadened the role of a teachers not just a transmitter of knowledge but also as a guide facilitator for exploring, organizing disc emanating the required information from the ever increasing flow of information.

Meaning of ICT:

"ICT is that technology uses the information to meet human need or purposes including processing and exchanging" D Manchaca

"ICT implies the technology which concise of electronic devises and associated human interactive materials that enable the use to employ them for a wide range of teaching – learning process in addition to personal us"

Need changing the role of the teacher's educator in the use of ICT: If we see traditional teaching if was carters and dominated by a knowable teacher who handed over the knowledge to his/her role as a fascinator for the fund of knowledge available for being professed in technology and vacated skills today's teaches needs to be trained in flowing dimensions along with these commitment is also required on the part of a teacher for exploiting the same. However, ICT s can be important tools to meet such increased needs, by helping to provide access to more and better educational content, aid in ninepin diced administrative tasks , provide models and simulations of effectively teaching practices and enable learner sport networks, both in face to face and distance. It is no longer sufficient for teachers to impart content knowledge .they must increased higher levels of commutative skill, promote information literacy and nurture collaborative working practices. The new responsibilities are greatly facilitated by the use of ICT's in teaching. However, a genuine and sophisticated integration is necessary. So teachers training in these regard becomes Crile.

Present condition of ICT in teacher's education: The classrooms are now changing its look from the traditional one that is from one way to two way communications now teachers as well as student participated in classroom discussion now education is based on child centered education. So the teacher should proper to cop up with difficult technology for using them in the classroom for making teaching –learning interested. For effective implementation of certain student. Certain methodology such as project based teaching which puts the students in the role of active researches.

ICT (Information and communication technology or technologies) is a term that includes any communication devices or application as well as the various services and application associated with them. ICT can also be understood as a study or business of developing and using technology to process information and communication.

Implication of ICT:

- With ICT learning can be carried out at a time and place of the learner choice.
- ICT has the potential to bring the content of the best teacher to classroom anywhere in the world.
- ICT with the use of internet and other technologies has the potential to connect classroom to research center and student to actual scientists for discussions.

ROLE OF TEACHER EDUCATOR: ICT and teaching- learning strategies

- ICT help teachers in both pre-service and in services teacher training.
- ICT helps educator to communicate, collaborate, search and explore.
- ICT helps educator to collect process and to store data.
- ICT helps for the skill of assigning team work, project work, independent learning and to provide resource and assess to students.
- ICT helps to interact with students.
- It helps them in preparation of their teaching and provides feedback.
- ICT helps in effective use of ICT software and hardware for teaching-learning process.
- ICT helps in improving teaching skills and innovative teaching.
- ICT helps in effectiveness of class room.
- Develop the ability for self-analysis, self-evaluation, adaptability, flexibility, creativity and innovation developing one-self as professional
- For contact enrichment, to generate understanding and knowledge, examine disciplinary knowledge and social realities, related subject matter with the social milier and develop critical thinking.
- Operate computer and use basic software for word processing, spreadsheet, e-mail etc.
- Evaluate and use computer and related ICT tool for instruction.
- Create effective computer based presentation.
- Search the internet for resource.
- Create multimedia contain to support instructions.
- Develop professional skill in pathology observation, documentation, analysis, reflective inquiry.
- Should be able to choose the kind of media to integrate in the teaching of specific subject.
- ICT based models or simulation helps them to find out things and solve problems generate and plan to control device and achieve specific outcome.
- ICT helps to present, share and exchange their ideas with others.
- ICT Help teachers create more 'Learner – Centric' learning.
- ICT's can be used to reinforce existing pedagogical practices as well as to change the way teacher and students internet.
- ICT helps teachers in preparation for teaching.
- In order to introduce ICT in pre-service teacher are applied different methods and strategies and different tools are used such as, word processing, database, spread sheet etc.
- ICT prepares the educators for the use of their skills in the real classroom situation and also make students for their future occupation and social life.
- ICT helps teacher educator to communicate properly with their students. So ICT bridge the gap between teachers and students.
- ICT helps teacher educator to identify creative child in educational institute.
- It is also helps teacher educator for their personal support (knowledge, attitude, skill)

- ICT helps teacher educators should have the skill to identify different tools and their potential to integrate them in the curriculumtransaction.
- To acquire computer skill such as, "tools to collaborate exchange files, charts , news, graphs, white board technology.
- ICT helps teacher educator should be to use search origin logical operators in a process of identifying information.
- ICT helps teacher educator should be able to use explored educational software or to use tools as spared sheet in an exploratory way.
- ICT helps teacher educator should be aware of technological innovation and its consequences in education.
- ICT helps teacher educator for the skill of assigning teamwork, project work, independent learning and to provide resources access to the student.
- MEDIATOR teacher educator should keep in mind their role as mediator of the learning process.
- Multiple approach- teacher educator must be able to have multiple approach to a question (the perspective of second observer) showing flexibility in the modeling of the knowledge.
- CRITICAL VIEW - Teacher educator must have a critical view of the use of technology in education instead of remaining a mere passive consumer of technology and must promote these critical views in their teaching.
- POTENTIAL ROLE- ICT helps teacher educator should learn about the potential role change towards advanced students and how to cope with a situation where the teacher is not the most advanced person in the class any more.
- ACTIVE PART - ICT helps teacher educator has to take active part in developing his own checklist for evaluation of learning material and use, in the context of, (A) the learner profile ,<B> the learning environment <C> the technical strength of computer lab of the school.
- TEACHERS AS A FACILITATOR & GUIDE – ICT can prove useful in bringing an essential shift in the role of teachers from a mere knowledge transmitter to that of learning.
- USEFUL FOR TEACHERS – ICT helps the teachers in the realization of teaching learning objectives. ICT assists the teachers in their task of teaching.
- Teacher should know about basic computer security issue related to education, how to a scanner, what the deep web is and how to use it as resource tool.

In education ICTis an assisting tool .ICT is used as a tool for example while writing assignments collecting Data documentation and conducting research ICT can be used for acquiring new skill as well as for practicing and improving on the knowledge gained

1]Transform teaching and learning

2]Engage and motivate the learner

3]Provide opportunities to learner to learn in alternative ways. This is possible becauseICT uses a wide range of information and techniques to support critical thinking

4]Allow the learner to identify and select the most useful sources of information.

5]Enable the learner to review, refine,redraft,and modify work in progress.

6]Help the learner to refine their performance and present it more effectively.

Role of teacher educator in languages –Teachermotivate to the learners can use different software packages and CD/VCD learn languages at their own speed. Word processors and language translators, dictionaries and grammar checkers help learners improve their language skills. Role of teacher educator in social studies – Teacher motivate the learners can compose documents and presentations

and prepare reports and give a information on a given project or topic can be researched using the internet,togive context to a topic discussed in the curriculum and to bring classroom learning closer to what occurs in real life. Role of teacher educator in Economics – Some economic concepts that are difficult to teach through lectures and discussion can be easily taught by visualization and animation

Conclusion: Teachers of tomorrow will have to make an effort to be resourceful,making teaching interesting, giving innovative work for the students, linking knowledge with their day today experiences and generating plunge in the school activities.With the help of ICT both the teachers and students get stimulated because teaching becomes more dynamic which expands their vision as well as access to high quality materials,educational software.

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IMPACT OF ICT ON EDUCATION IN 21st CENTURY

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INTRODUCTION: 21st century is the era Of computer. ICT is plays very important role in education. Information, communication and technologies in education deal with the use of information and communication technologies within educational technology.(Wikipedia). ICT is diverse set of technological tools and resources used to communicate, and to create disseminate, store and manage information(Blutron ,2002). In ICT technology computer, internet, broadcasting technologies (radio) and television and telephony is used. According to Alvin Toffler "The illiterate of 21st century will not be those who cannot read and write, but those who cannot learn, unlearn and relearn."

SCOPE OF ICT IN EDUCATION

1)In city and village ICT is suitable to use in learning process.
2)In medical education, difficult surgery videos can be shown to the students.
3)LCD projector can be used .
4)Human mistakes can be avoided.

OBJECTIVES OF ICT INEDUCATION

1)Update the knowledge of teachers, students.
2)To provide accurate knowledge to learners.
3)To help in the research.
4)To provide richness of learning experience.

USES OF ICT IN EDUCATION

1)To Convey the knowledge simultaneously to large number of people.
2)Blended learning :Blended learning plays very important role in education .It is nothing but combination of classroom and e learning .
3)Invillage or we can say rural areas there are very less sources to get latest information. So ICT plays very important role to provide latest information
4)If it is impossible to visit particular place then you can show the videos to the student. e.g. fort, historic places

BENEFITS OF ICT IN EDUCATION

1)Student centred teaching learning is possible.
2)Teacher can use power point presentation.
3)Online teaching possible so the distance isn't the barrier for learning.
4)Digital data can be recorded
5)It saves the time, so teaching learning process becomes fast.

LIMITATIONS AND DRAWBACKS OF USE OF ICT IN EDUCATION

1)If there is lack of equipment then there is problemto use ICT.
2)To use ICT in education,there should be skill person.
3)Cost is high.
4)Power is necesory for the computer.so there is dependancy that is if there is not power then wecan not use ICT.

Thus there are lots of advantageous of the use of ICT in India.so in 21 st century teacher should use ICT in education system.Thevilage students get latest information , it takes less time to give more information to the students and definately teaching becomes more effective. So teache can

use ICT in different ways. Teacher can use it by using different techniques such as ppt, by showing videos, by showing picture, by using radio televisineductinal programmes, so definately it is boon to use ICT in education.

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BLENDED LEARNING –STUDENTS CENTERED TECHNIQUE

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Abstract

The study is to investigate efficient blended learning and face-to-face learning on students' academic achievements and transfer of learning. Combining online learning and a traditional classroom model has become a hot topic in education and a current trend in educational technology. Their use in and outside the classroom can provide more supportive and successful learning opportunities, teacher and peer support, as well as innovation in course design. In this literature review, we provide a discussion of those models, some of theoretical foundations and pedagogy, support for and criticisms of blended learning, discussion concerning blended learning schools, and the different types of professional development in support of blended learning. In a special education environment, teachers are able to not only provide additional resources, but are able to create learner-centered and highly engaging materials for students who struggle with the regular education classroom instruction and materials. Learning concept is integrated into a curriculum at a traditional university and how it can also be used to promote communities of practice among learners. Ultimately, these factors will lead to better skills, content, and language learning. In conclusion, the results show that the blended learning approach has a positive effect on the transfer of learning.

Keywords: *hybrid learning, e-learning, blended, online learning*

Introduction: Blended learning is an education program (formal or non-formal) that combines online digital media with traditional classroom methods. It requires the physical presence of both teacher and student, with some element of student control over time, place, path, or pace.There are a lot of **different strategies** for learning. The **education sector** has benefited from a great many inventors and the way our students are taught today is very different to how they were taught fifty or even twenty five years ago. Much of this **innovation** has been related to the growth of **technology**. Computers have become extremely valuable **teaching tools** and have opened up a whole new world of **onlinelearning.** Some of the **most effective** educational establishments are using dynamic digital tools such as e-learningsoftware alongside more traditional classroom practices to create **blended learning** models. Blended learning is defined as a formal education programme that's made up of in-person classroom time as well as individual study online using elearning software. It is a type of multichannel method that incorporates tutor-led activities, images, video, digital tasks and face-to-face discussion.

Definitions of Blended Learning:

Blended Learning is a learning programme where more than one delivery modes is used…T. Barker

'Blended Learning is a learning, that is facilitated by the effective combination of different modes of delivery, models of teaching and styles of learning, and is based on transparent communication amongst all parties involved with course.'

Objectives

- To know delivery methods through which students learn from a digital source.
- To know the use of online classrooms and discussions.
- To identifying gaps in knowledge by using automatically corrected assignments.
- To know computer mediated activities.

Effectiveness of Blended Learning

- More and more education establishments are coming to rely on the blended learning model. Their reasoning is simple: a multichannel teaching method offers the best of classroom and online learning all in one place.

- Each student has a range of different strengths and requirements and a blended learning approach allows tutors to acknowledge this. When they are given the ability to use tools from both traditional and digital spheres, tutors are able to present necessary information in a range of different ways designed to suit the varying learning styles of their students.
- **Different forms of Blended Learning in Classroom**

Fig: Forms of Blended Learning

Traditional classroom teaching methods are no longer effective to achieve current learning standards. Technological approaches alone can't provide students with deep and meaningful learning experience. But the combination of both can help an educational proses.

Blended learning can be grouped into six distinct models, including:

- Face-to-Face driver.
- Rotation.
- Flex.
- Online lab.
- Self-blend.
- Online driver.

Face-to-face Driver: Face-to-face driver is a blended learning model in which teachers deliver most of the curriculum. Teachers lead the class in a lecture following an established protocol taking precedence and technology being a secondary thought. However, they also produce online resources to supplement or revise course material which students can study at home, in the classroom or in a technology lab.

Rotation: In the Rotation model of blended learning: within a given course, a student rotates on a fixed schedule between learning online in a one-to-one, self-paced environment and sitting in a classroom with a traditional face-to-face teacher.

Flex: Flex model of blended learning features an online platform that delivers most of the curricula. It's the model where most of the learning is done online and the face-to-face model exists to provide on-site support for a flexible and adaptive, as required basis through in-person tutoring sessions and small group sessions.

Online Lab: Online lab is a model of blended learning that characterizes programs that rely on an online platform to deliver the entire course but in a brick-and-mortar lab environment. The entire course and teaching are done online. Teachers interact with students through pre-recorded videos, audio and video conferences or discussion forums and email.

Fig:2.Online Authoring Tools Guaranteed to Enhance Your E-Learning Content

Self Blend: The Self - Blend model is a fully individualized approach that allows students to choose to take one or more courses online to supplement their traditional school's catalog. Maximum part of the learning is done online, but the student will still attend face-to-face classes.

Online Driver: Online Driver involves online platform as well as teachers to deliver the curricula. Students work from remote locations most of the time and come to school for optional or required face-to-face classes. Have a look at the info graphic below to know what blended learning is, what are its different forms, why it's spreading, and how it works in real and virtual classrooms.

Benefits of blended learning: All the educational institutions and teachers we spoke to when compiling this paper began with blended learning because of a pedagogical desire. Yes, they said, blended learning requires an understanding of technology, but that technology is merely a means to an end. Here are some of the benefits they get from blended learning.

1. More effective use of classroom time: Blended learning enables teachers to make better use of the limited time they have with their students. By moving some traditional classroom activities into the online world, you end up spending less time talking in front of the class and more time working with individual students.

2. Easier differentiation: With more time to work with individual students in class, teachers find they can better differentiate their teaching to suit individual needs, answering student questions and giving individual feedback. Many online resources also differentiate automatically math exercises can be set to get progressively harder the more answers a student gets right, for example

3. More active students: Blended models such as the flipped classroom use online videos and resources to prepare students before they come to class. This way, the students have already learned the theory and can use the classroom time to put that theory into practice. In this model, the classroom teacher takes the role of guide and mentor.

4. More creativity for students: There are thousands of online resources that enable students to create videos, animations, podcasts and new media. This gives your students new ways to engage with the work and express what they have learned. Stronger students can also do extra work online to show their knowledge and understanding of a subject without taking up your valuable class time

5. Better prepared students: When the online work is done to prepare students in advance (in the flipped classroom model, for example), students arrive in class better prepared. This often means they are more engaged in the topic from the start.

6. Teaching 21stcentury skills: Today's students need to learn how to work, study and collaborate online. They also need to develop the critical-thinking and creative skills demanded by modern employers. Blended learning helps you teach these skills by encouraging your students to work, share and collaborate online

7. Less paperwork: Many teachers' desks and briefcases are full of student papers that need to be marked and returned. The grades and feedback also need to be logged in the students gradebook or report card. Online learning platforms digitize many assignments, so your marking can be done online (from school or at home).

8. All your teaching resources in one place: Online resources can be accessedfrom any internet-connected computer. This means you only have to upload a video, website link, newspaper article or other resource once. You and your students - as well as other teachers - will then be able to access it from their computers at home or internet-enabled computers in the PC lab

9. Lower costs: Although setting up the IT required to teach blended learning may require some initial investment, many schools and colleges report reduced long-term costs due to reduced expenditure on textbooks, paper and photo copying When the online work is done to prepare students in advance (in the flipped classroom model, for example), students arrive in class better prepared. This often means they are more engaged in the topic from the start

10. Better informed parents: As most students do online work at home, this increases the opportunities for their parents to take part and help out. As a result, students get increased support from parents, and the parents feel a closer connection to their children's school work.

Advantages of Blended Learning

Larger groups: 'More is more'. With blended learning you are able to engage learning in large groups. First you will give them an instruction and after that, put the students to work. During this time you can relax…., but it's also possible to give some more instruction in for students who are in need of more information. This is one of the main benefits of blended learning.

Own pace: Participants can partly work at their own pace and still have face-to-face education. If you're faster than the other participants, you don't have to wait for them. The other way around, if you're slower, you can take your time. If you are a hard working mother and decide to attend a course, beside your normal job, it may be difficult with your time management. You can, to a great extent, decide when you're studying.

Reduction in costs: Less room, less teachers, and with that said; a less amount of money.

Fun: It's just fun! From elementary school to university students and advanced courses, blended learning has proven to be more engaging for various participants.

Disadvantages of Blended Learning

Lack of motivation: The type of blended learning can worsen the motivation and willingness of your participants. Not every blended learning model is applicable to every age category. Just like you don't give young children a book with long texts and few images. When children start reading, you give them books with many images and few words. After several years you can give them a book with more words and less images. If you expect young children to do all their homework and prepare lessons on their computer at home, you are wrong.

Basic technology knowledge: You expect participants to have a basic knowledge of technology. If children don't know what to do, because of the lack of technology knowledge, they will get annoyed. Because participants have to focus on a new system and new knowledge, it might cause a cognitive overload. That's not what you want to happen!

Plagiarism and credibility problem: 'There is no climate change' (…well, according to Donald Trump). Children could easily write this down, because they don't have the knowledge of the unverified online resources. Besides this, it's hard to withstand the temptation of looking up things on the web. Participants have to think by themselves what the answer could be and search the answer on the internet.

Conclusion: In conclusion, a diverse, technological skill set is a necessity for students who are entering the 21st century workforce. Technology must be integrated into the classroom environment at each grade level to prepare students for life beyond high school. Blending academic learning among more traditional teaching methods with more advanced technology rich learning experiences can support the growing need for a student's overall technological IQ.

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A SURVEY: USE OF MOBILE IN LEARNING

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Abstract
Mobile learning is a trend in higher education in which learning takes place and instruction is delivered. This survey mainly focused on how much percent students use their mobile devices to develop a personalized learning experience & improved self learning. This survey is carried out in S.M.S.&E.T. B.Ed. college on first and second year B.Ed. students. The purpose of this study to begin to investigate whether mobile devices are currently used to enhance or support learning in a graduate level. Toobtain information regarding frequency and use of mobile device among students a questionnaire was prepared and on this basis percentage and pie chart were drawn. The findings indicate that students are using their mobile devices more frequently to enhance learning.

Introduction: Over the last few decades information and communication technologies have improved greatly and the use of computers has become more widespread.Today, many technological devices are produced in portable form and people have become accustomed to them. The use of portable electronic devices or smart phones to share information, is a trendin higher education, and is redefining the manner in which learning takes place and howinstruction is delivered .Learning can occur anywhereat any time through the use of these devices is known as mobile learning. Devices commonly used are smartphones with theWindows, Android, or Apple operating systems; or tablet computers. According to El-Hussein & Cronje (2010), the definition for m-learning contains three key components– mobility of technology, mobility Finally, mobility of learning is the result of mobility of both the technology and learners.

Literature Review:

1)Neerja Vyas &Virendra Singh Nirban(2014)studied Students' Perception on the Effectiveness of Mobile Learning in an Institutional Context**.** They attempted to determine how this technology can be optimally used to improve the students perception.

2)DivyaVishwanathan and Jan Blom (2010) in the paper *New Metaphors from Old Practices—Mobile Learning to Revitalize Education in Developing Regions of the World*, present initial work, which has been primarily done in the domain of mobile learning solutions for economically challenged Indian school children.

Objectives:

1) To know about usages of mobile /smart phone by students in learning.
2) To know about features of mobile often used by students in learning
3) To know about places where mobiles are frequently used for learning purpose.

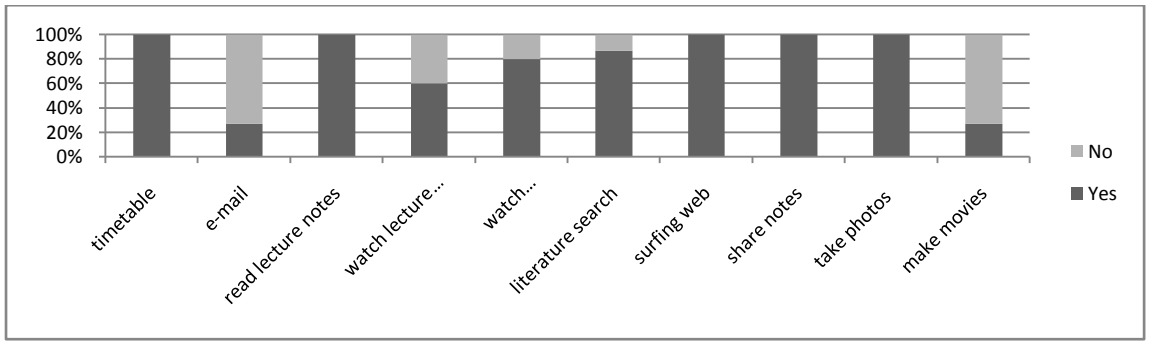
Methodology: In order to Investigating the use of smart phones for learning a questionnaire was developed with certain items. The Study was conducted in a reputed private educational institute. A random sample of 30 UG B.Ed. students was taken.The questionnaire consisted of "yes-no" questions, &preference based questions. The graphs were made to reflect trends and change points.

Results and Discussion:

Objective 1:Usages of mobile for learning

	Yes	No
1. timetable	30	0
2. e-mail	8	22
3. read lecture notes	30	0
4. watch lecture capture	18	12

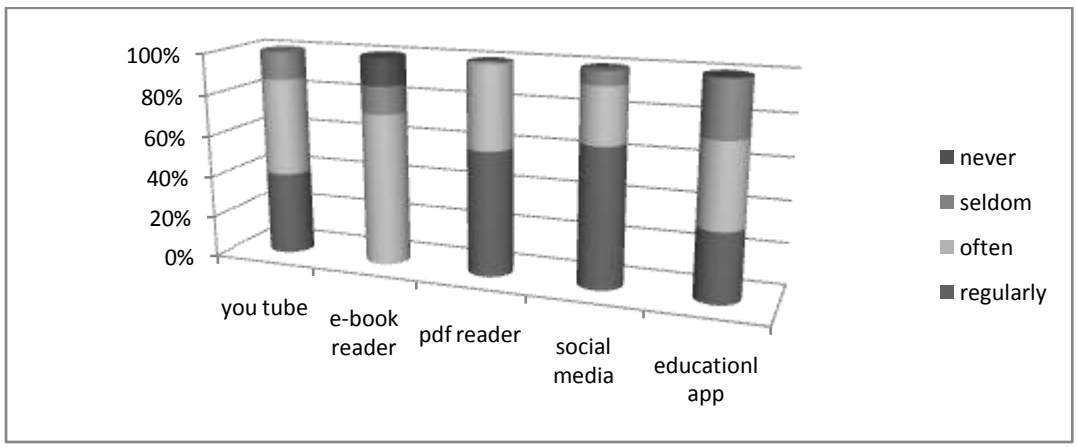
5. watch instructional video	24	6
6. literature search	26	4
7. surfing web	30	0
8. share notes	30	0
9. take photos	30	0
10. make movies	8	22



From the obtained data , it is cleared that smart phones are used by students for various purposes .Graph is plot from obtained data , and from graph it is interpreted that for surfing web, sharing notes, reading lecture notes,and taking photos smart phones are widely used but for making movies and sending email to staff mobile phones are used less than 30% students.

Objective 2: Features of mobile used for learning purpose

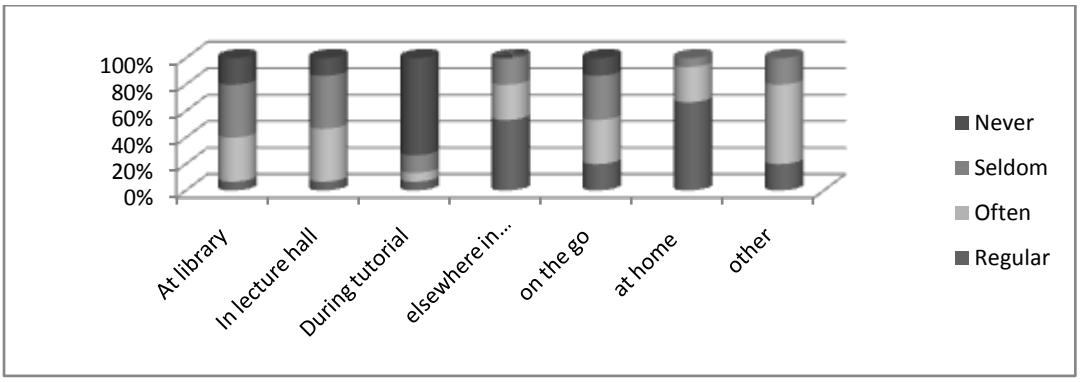
	regularly	often	seldom	never
1. you tube	12	14	4	0
2. e-book reader	0	22	4	4
3. pdf reader	18	12	0	0
4. social media	20	8	2	0
5. educationl app	10	12	8	0



From the obtained data it is interpreted that you tube, pdf reader social media and educational app are regularly used by more than 30% students. e books are oftenly read by 60% students.

Objective3:Different areas where mobile is used for learning purpose

	Regular	Often	Seldom	Never
1. At library	2	10	12	6
2. In lecture hall	2	12	12	4
3. During tutorial	2	2	4	22
4. elsewhere in campose	16	8	6	0
5. on the go	6	10	10	4
6. at home	20	8	2	0
7. other	6	18	6	0



From the obtained data it is interpreted that Smart phones are regularly used by 60%students at homes and 50%students at elsewhere in campose for learning purpose.During tutorial time more than 60% students are not using mobiles.and in lecture hall 40%students use mobilesseldom and 30%students used oftenly .

Conclusions: Electronics and information technology is the fastest growing sector in India. Mobile phone penetration is increasing rapidly in India as well as other developing countries. In education field smart phones are used by students to obtained more information, sharing notes,watching video etc. Students uses smart phones at homes, in travelling ,in college campus for learning purpose which enhances M-learning. With increased popular access to information and knowledge anywhere, anytime, the role of education, especially formal education, is challenged and the relationships between education, society, and technology are now more dynamic than ever.

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ROLE OF TEACHER EDUCATOR FOR THE USE OF ICT & INTEGRATION ICT: A CHALLENGE BEFORE SCHOOLS

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1) ICT in Education: In modern age, different, profession and Business requires information and knowledge. So that information is collected through the different channels. Also, it is used and sent to other person through the channels. Take-give process of information is going among trade and commerce continuously. That is why we said today's world is the world of information. The process of giving and taking information is called communication. Some years ago different information had provided through Printed materials, literature, telephone, television, radios, movies etc. It means that these different technology and methods has used for telecasting information. So, it was very necessary to develop new technology for increasing population. And also necessary to change educational system for increasing knowledge. So today computer is the heart of ICT for ICT computer creates information, collects data. Processes, Storages and it presents, after processing on data, computer gives us meaningful information for communication. If a person wants to answer any question, he can get quick answer from Modern communication technology and methods. ICT includes collecting information to process and creating new information from it. So it is necessary to understand communication technology. And computer technology for understanding ICT.

Meaning of ICT

UNESCO : "It is the scientific technology and engineering discipline for management of Information"

- ICT is a mixture of computer technology and communication technology.
- New digital technology applied for communication is called information communication technology.
- ICT is a diverse mixture of technology tools and resources to create differentiate store bring value addition and manage information for communication.

Means :

The exchange of information through computer is information communication technology.

2) Challenges and Barrier to integration of ICT in Indian Schools Classrooms

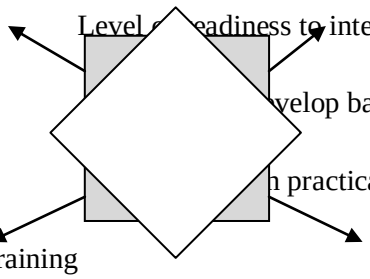
Knowledge and skills to use ICT

Classroom environment

Technology into curriculum

Psychological prepare

Finance



Level of readiness to integrate

velop basic facilities

practical work

Teacher training

1) The teacher educators must have sufficient knowledge and skills to use ICT in delivering a lesson.
2) The challenge confronting our system of education is how to transform the curriculum and teaching process so that students can perform effectively in a dynamic changing environment.
3) To develop basic facilities e.g. teacher books.

4) If no electricity arrange for generator.

5) Arrange workshops or training for teacher training.

6) Focus on practically work than the theoretical work.

7) Accept the new culture and try to imitate it.

8) Information and communication technology is on important instrument which can transfer the present isolated, teacher centered, book-centered learning environment into a rich student centered environment.

9) Electronic communication-for electronic communication different facilities is developed.

10) Develop skills in student for using internet.

3) ICT Skilled Teacher – ICT Skills and Qualities of ICT teacher :

ICT for Education (ICT4E) is a subset of the ICT4D thrust. Globalization and technological change are one of the main goals of ICT. One of its main sectors that should be changed and modified is education. ICTs greatly facilitate the acquisition and absorption of knowledge; offering developing countries unprecedented opportunities to enhance educational system, improve policy formulation and execution and widen the range of opportunities for business and the poor. One of the greatest hardships endured by the poor, and by many others who live in the poorest countries, is their sense of isolation. The new communications technologies promise to reduce that sense of isolation, and open access to knowledge, in ways unimaginable not long ago.Education is seen as a vital input to addressing issues of poverty, gender equality and health in the MDGs. This has led to an expansion of demand for education at all levels. Given limited education budgets, the opposing demand for increased investment in education against widespread scarcity of resources puts intolerable pressure on many countries' educational systems. Meeting these opposing demands through the traditional expansion of education systems, such as building schools, hiring teachers and equipping schools with adequate educational resources will be impossible in a conventional system of education. ICTs offer alternate solutions for providing access and equity, and for collaborative practices to optimize costs and effectively use resources. The basic suite of ICT applications used by more than 95% of teachers is comprised of word processing. Internet, email and file navigation. Sixty five percent of teachers have used both spreadsheets and presentation.

Software: Aspects of SIS Curriculum Manager are used by 55% of teachers. Only 30% of teachers have ever used a database. Detailed results are provided in Appendix D, with a summary of the findings below. Word occessing. The application that most teachers are familiar with is word processing. Most word processing skills can be carried out by the majority of teachers (71% and above can do all tasks except two). Setting up styles and using mail merge are the two word processing tasks undertaken by the fewest teachers (at 59% and 28% respectively)

Internet : Most teachers can navigate to know websites and do basic searches. Between 48% and 79% can create favourites, or bookmarks, save images and text, organize favourites or bookmarks, use advanced search tools and use different browsers. Altering browser preferences (34%), downloading and installing software and plugins (39%) and conducting complex searches (39%) are the Internet tasks carried out by the least number of teachers. Computer File Navigation Over 84% of teachers can save files, create and name files, navigate between existing folders and copy, delete and rename files. Between 60% and 67% of teachers are able to select and navigate between drives and directories, navigate into a network, use help files, install software and recognize different file types. Zipping and unzipping files (28%) and doing complex searches for files (34%) are the computer file navigation tasks carried out by the least number of teachers.

Email : Nearly all teachers can access emails (95%) and create and send emails (94%) with between 82% and 64% able to locate sent and deleted messages, access and use address book entries, add to

address book entries, add attachments to emails and store messages in folders. Creating a mailing list (38%), adding a signature emails (30%) and setting up a discussion list (10%) are the tasks undertaken by the least number of teachers.

Presentation Software : Thirty five percent of teachers have never tried any of the presentation software tasks. Half or more of teachers who have used the software can create new slide shows, edit slide shows, insert images, change fonts and layout and navigate a presentation (ranging from 50% to 62%). Adding navigation buttons (19%), creating an original master and using master slide functions (both 24%) are the tasks the least number of teachers have undertaken.

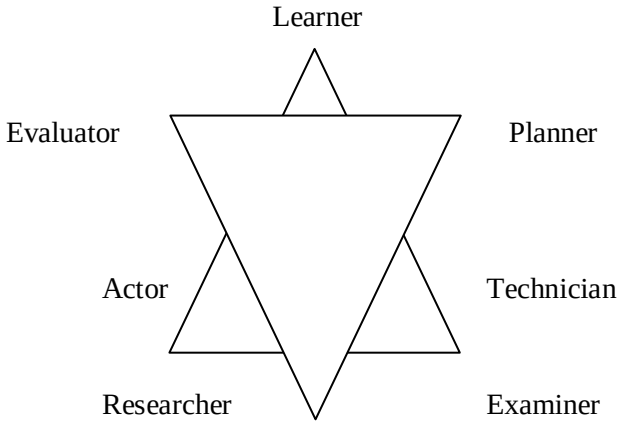
Spreadsheets : Thirty five percent of teachers have never tried any of the spreadsheet tasks. Sixty two percent of teachers have entered data into an existing spreadsheet, 60% have created a spreadsheet and 56% have inserted and deleted rows and columns (56%). Other spreadsheet tasks are used by less than half of teachers.

SIS Curriculum Manager : Fifty five percent of teachers have tried SIS Curriculum Manager. Logging on is the task most widely used by teachers at 54%. A quarter of teachers, or less, has undertaken the reminder of the listed tasks.

Databases : Seventy percent of teachers have never tried any of the tasks associated with databases.

4) Role of Teacher

In today's education system teacher perform different roles at a time, due to ICT.



1) **Learner** : Thegrowth and progress in the field of science and technology is rapid. Today's we can see the teacher always in the role of learner. So teacher earn new knowledge and must keep; his knowledge up-to-date.
2) **Planner** :The maximum use and benefit of computer is possible only when proper planning. So teacher must be a good planner.
3) **Technician** :At the time of presentation of lesson teacher use LCD so today teacher use different type of technology so he is good technician.
4) **Examiner** :Today computer is must part of education so setting of the question papers for tutorials, unit tests, terminal of question bank can be done with the help of computers. Even assessment of answer and preparation of mark lists as well as mark sheets can be done with the help of computer.
5) **Guide** :The teacher also needs to play the role of a guide to show the way forward to the students.
6) **Research** :Today, teacher also play role of actor, beaus different type of and methods are used for teaching methods.
7) **Evaluator** :Today, due to formative type of evaluation teacher compulsory do continuous evaluation of student.

USES OF LIBRARY AND THE INTERNET AS A SOURCE OF INFORMATION FOR LEARNING: A SURVEY

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Abstract
Now everyone use internet as a educational as well as entertaining tool in day to day life. This survey mainly focused on how much percent students use internet to complete their study work instead of library. This survey carried out in S.M.S. & E.T's B.Ed. College on first and second year students. Literature on library and internet reviewed. The researcher use sampling techniques to select the sample for the study. Data was collected through questionnaires. Then data was interpreted statistically. Finding of study point out that students were not using library regularly, hence internet is the most preferable source for completing their study work. It was recommended that the library should provide digitize reference or should upgraded.
Keywords: *Internet, Library, Information source.*

Need and Purpose for study: This study was taken to determine the awareness and uses of e-resources among B. Ed. College students.

Introduction: The Library concept is as old as civilization. Library exists to provide relevant information to its users. Library also known as 'heart' of learning community which provides the exact place to students and faculty to conduct research and upgrade their knowledge. The college library is the main centre of education. Over the last few decades faculty, researchers & students have used library and its resources as a main source. A library also serves as repositories of information and knowledge. Now a day's most of users of library use the internet for searching information instead of library. We can say internet as an information super highway. Through internet anyone can find the relevant, latest, updated information. The emergence of ICT in recent decades has great impact on libraries. Internet is the global system which interconnects the computers network. Instant and interactively user can access the information through internet.

Objective:

This study conducted to accomplish the following objectives:

1. To find out the library resources used for learning by B. Ed students.
2. For analyze the collected data through questionnaire method.
3. To give the suggestion for digitize the library reference material for more utilization of library reference.

Scope and Limitation: This study as conducted in private educational institute. A random sample of 30 U. G. B. Ed. students was taken.

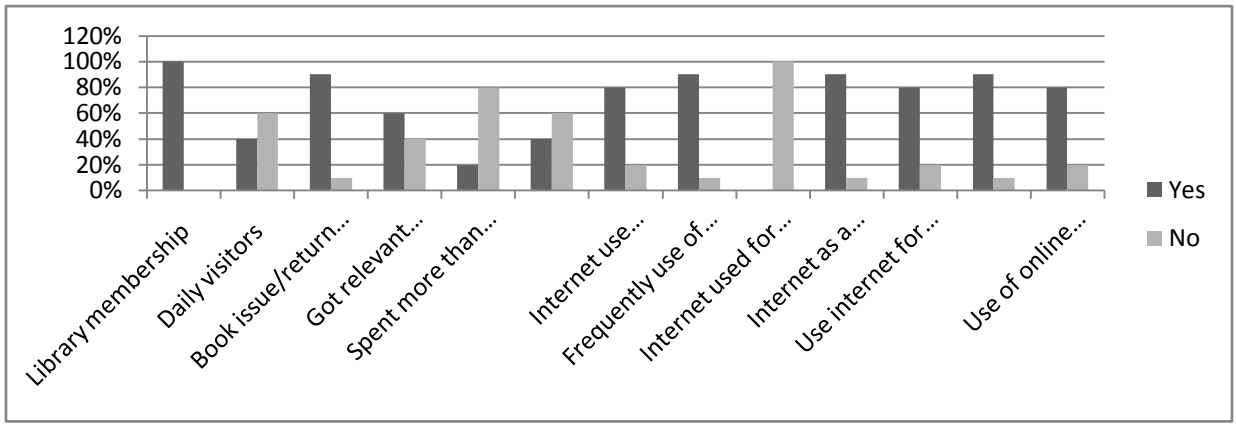
Methodology: For this study researcher used survey method.After studying authentic references researcher select this study for resarch. In order to investigating the use of internet for learning a questionnnaire was developed. The questionnare consisted 13 Yes-No type questions.After receiving these quetionnaire researcher analysis it and made a questinnarie table and present its result in graph.

Questionnaire Table

Q. No	Questions	Yes	No
1.	Library membership	30	00
2.	Daily visitors	12	18
3.	Visiting only book issue/return purpose	27	03
4.	Got relevant material	18	12
5.	Spent more than 1 hour in library	06	24
6.	Satisfaction with library	12	18

7.	Internet use instead of library	24	06
8.	Frequently use of inernet	27	03
9.	Internet used for only education	00	30
10.	Internet as a educational tool	27	03
11.	Use internet for teaching aid preparation	24	06
12.	Referred college website	27	03
13.	Use of online material for study	24	06

Results present in following graph



Conclusion:

1. 100% B.Ed. students were taken membership from college library.
2. 40% B.Ed.students daily visits the library and 60% B.Ed. students does not come to the library.
3. 90% B.Ed.students come to the library only for book issue and return purpose and 10% B.Ed.students were ignore to come to the library.
4. 60% B.Ed.students said that they receive relevent material (books) but 40% B.Ed.students like to use internet as a information source.
5. only 20% B.Ed. students like to spent more than 1 hour in library but 80% B.Ed.students went within few minutes.
6. 40% B.Ed.students were satisfied with printed material and 60% B.Ed.stundents not satisfied witero used inth library.
7. 80% B.Ed.students like to use internet isnstead of library and 20% B.Ed. students used library.
8. 90% B.Ed.studentsfrequently used internet as compare to the library and 10% B.Ed.students were used internet oftenly.
9. 100% B.Ed. student used liked to use internet as per requirement.
10. 90% B.Ed.students mentioned internet as a informtion tool 10% B.Ed.students said no.
11. 80% B.Ed.students used internet for making teaching aids and 20% B.Ed.students not using internet for making teaching aids.
12. 90% B.Ed. students referred college website notes 10% B.Ed. students were not like to used.
13. 80% B.Ed. students like online study material and other information and 20% studends like printed material.

Suggestion:

1. According to researcher library material should be digitize and it will be make available on college website.

2. Through digitization all collections are in digital form and it helps the users to use or access with any device.
3. Through digitization of references students saves theirtime, use-time is reduced because students receive relevant reference.
4. Students can access the pdf format of books anywhere and anytime.
5. Students can receive a reference which was referred by teachers which is available limited in printed form.

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5. *Website: http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=3473&context=libphilprac*

BLOG IN EDUCATION

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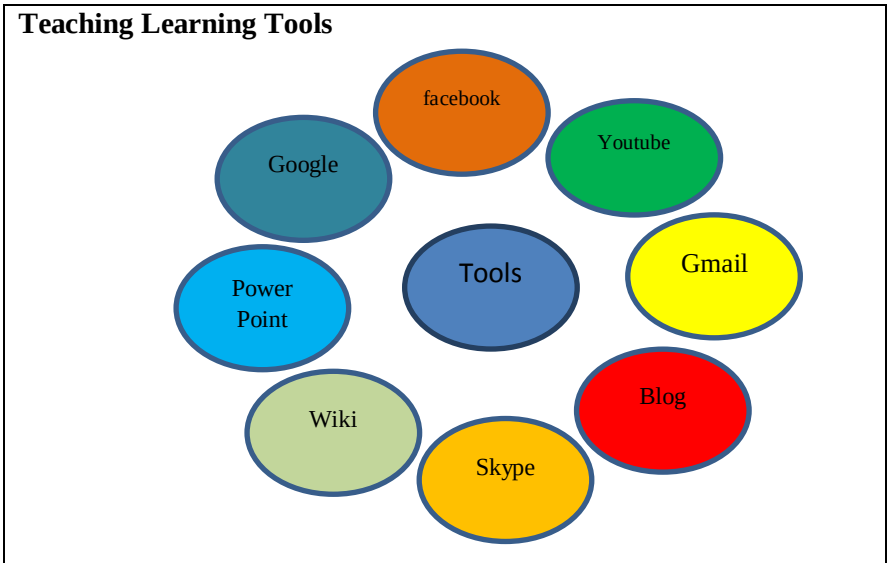
Abstract
Blogs have an important presence on the Internet and they are known by users. Teachers know about this tool, but they barely appreciate it as an educational tool. A minority of teachers have used the web design, which can enable the use of Web quest, however, the process of designing a website is complicated, because we should upload files to servers, there are problems with links, frames, buttons and we a need to know how to use html code in some cases. Moreover, Blogs take full advantage of a website and it is really easy to design it, once we have an account, we can easily add image and text without any problem. We recognize various pedagogical possibilities concerning use of Blogs through file management, use of video, images and all kind of benefits relating interaction and communication. We therefore developed an analysis of their use by teachers, taking into account teacher's attitudes about technologies, and ICT tools, comparing all these with the implementation of Blogs.

Introduction: One of the major tasks of a teacher is, nowadays, believed to be trying to improve digital competence of students so that they are able to use ICT in the modern community.The increasing use of Web 2.0 applications in teaching and learning seems to suggest that teaching the millennial generation may be fundamentally different from traditional approaches. These technologies challenge the conventional conception of pedagogical practices, social space, social practices, and schedules. Web 2.0 as a term refers to the second generation of web technologies that is characterized by user communities and a wide range of services, including social networks, blogs, wikis, groove, RSS, and podcasts. Such applications encourage collaboration and efficient exchange of information among users.The most commonly used Web 2.0 technologies in teaching and learning environments in education are blogs, wikis and social networking tools. Now a day multi-mode technology toolsuses in teaching learning process as shown below.



Blogs: The term "weblog" was coined by Jorn Barger on 17 December 1997. The short form, "blog", was coined by Peter Merholz, who jokingly broke the word weblog into the phrase we blog in the sidebar of his blog Peterme.com in April or May 1999. Shortly thereafter, Evan Williams at Pyra Labs used "blog" as both a noun and verb ("to blog", meaning "to edit one's weblog or to post to one's weblog") and devised the term "blogger" in connection with Pyra Labs' Blogger product, leading to the popularization of the terms

Blogs are one of the most popular Web 2.0 tools;A Word "Blog" is formed from"web log". A blog is a type of website, usually maintained by an individual with regular entries of commentary, descriptions of events, ideas, news, facts, opinion, articles, or other material such as graphics or video.Webster Online Dictionary "a blog is a short term of "web log"—an online chronological collection of personal commentary and links."According to Wikipedia define the term blog, "A Blog is a discussion or informational website published on the World Wide Web consisting of discrete, often informal dairy style text entries or posts". Blog similar to e-mail accounts, user can create "Blog" at specific location on internet.It is user's own space where user can keep post for the other visitors. Blogs are usually structured, organized by category and can be updated as and when required. In some cases blogs are used as daily diaries about people's personal lives, political views, or even as social commentaries. The truth of the matter is that blogs can be shaped into whatever you, the author, want them to be.Blogs give you an opportunity to write content that is unique to you and your practice. Write some people are uncomfortable with self-promotion; your blog gives you an occasion to interact with your visitors write promoting who you are and what you do.

Types of Blog

1. **Personal blogs**
2. **Collaborative blogs or group blogs.**
3. **Corporate and organizational blogs.**
4. **Aggregated blogs**

Blog Use in Administration: That's why it's great to tap into the opinions, knowledge and research of education administrator blogs. Most of these blogs are written for and by administrators, and can open up a conversation and help you connect with others who, like you, work to provide the best educational opportunities for your students. Others blogs are written from people who aren't in the trenches, and can provide a different, but necessary perspective. This variety of blogs from experts representing all aspects of education gives school administrators a wealth of information to build upon.

1. Administrators can create blogs and assign people as authors so they can post to it.
2. Administrators can create a personal blog using the Admin Console. A person who has been assigned permission to do so can also create their blog in the community. Only the blog's owner can post to it.
3. A person with permission to administer a space can create a blog there. The blog's author list is determined by space permissions. For more information, see Managing Space Permissions.
4. Settings are inherited from the space that contains the project.
5. A person with permission to administer a social group can create a blog there. Every member of the social group has full access to the blog's features except blog management.

Use of Blogs in Education for Teaching Learning Process: The numbers of blogs areavailable on internet which is related to education. Searching on any subject can provide many result and user can collect relevant information as required. In Educational institutions, use of blogs is becoming very popular. Blogs are proving to be quite important tools for sharing useful educational information and tips among teaching faculties. With the increased interest in introducing digital literacy skills in the classroom as a means of preparing students for the 21st century marketplace, our teaching and learning centre has had more questions form faculty about using blogs as teaching learning tools. Blogs can be use in classroom environment for diary entry; it also can be a useful tool to link communication between study groups within a class or other classes or even schools. If use effectively, blogs can create a learning environment that extend beyond the schoolyard. Teachers are finding it useful to provide information to students as required as them. Teachers can play important role in creating,

editing and even monitoring blogs; thus by ensuring the data uploaded is appropriate. Blogs can boost the development of a learning community. Bloggers can share information and opinions on specific topics and support each other with comments and answers to questions. In a way, blogs often acts as a system for teachers as well as students where they can look for certain ideas, techniques and tools. This helps in upgrading overall knowledge base. Blogging gives students the opportunity to learn valuable skills, including the ability to write in a variety of different scenarios. Furthermore, typing skills are required for most of today's modern jobs. This is something students will gain with the use of computers to create their blog posts.

Blogs can serve at least four basic functions

1. Classroom Management

Class blogs can serve as a portal to foster a community of learners. As they are easy to create and update efficiently, they can be used to inform students of class requirements, post handouts, notices, and homework assignments, or act as a question and answer board.

2. Collaboration: Blogs provide a space where teachers and students can work to further develop writing or other skills with the advantage of an instant audience. Teachers can offer instructional tips, and students can practice and benefit from peer review. They also make online mentoring possible. For example, a class of older students can help a class of younger students develop more confidence in their writing skills. Students can also participate in cooperative learning activities that require them to relay research findings, ideas, or suggestions.

3. Discussions: A class blog opens the opportunity for students to discuss topics outside of the classroom. With a blog, every person has an equal opportunity to share their thoughts and opinions. Students have time to be reactive to one another and reflective. Teachers can also bring together a group of knowledgeable individuals for a given unit of study for students to network and conference with on a blog.

4. Student Portfolios: Blogs present, organize, and protect student work as digital portfolios. As older entries are archived, developing skills and progress may be analyzed more conveniently. Additionally, as students realize their efforts will be published, they are typically more motivated to produce better writing. Teachers and peers may conference with a student individually on a developing work, and expert or peer mentoring advice can be easily kept for future reference.

Advantages of Blogs

1. Quick posting and viewing information is possible.
2. Offer an easy publishing tool for posting information as well as getting feedback.
3. Enable educators and learners to expand the learning circle with parents, communities, or even the people around the world who has access to the internet.
4. No limit to create number of blogs. User can create any number of blogs.
5. Many providers offer free blog services. Even with advanced features, they charge a quite affordable.
6. Blog is easy to use, effective and familiar.
7. It is the enjoyable, encouraging, and engaging.
8. Blogging helps people improve to communication skills.
9. Blogging encourages students to experiment with different media.

Disadvantageof Blogs

1. Most of the people are unable to write down their ideas in a compelling and clear manner.
2. Hard to grade and assess. It can be overwhelming for educators to grade either too many or too few entries are posted by students.

3. It's time consuming and involves a lot of efforts to maintain the quality of the site quality and keep it on task.
4. Users can be distracted easily.
5. Lack of listening and speaking skill training.
6. Many blogs are not updated.
7. Plagiarism and copyright issues.

Conclusion: Web 2.0 as a term refers to the second generation of web technologies that is blog, wiki, etc. The next evolution of the Web 3.0 involves the five main technologies. The semantic web improves web technologies in order to **generate, share and connect content through search and analysis based on the ability to understand the meaning of words**, rather than on keywords or numbers. This capability with natural language processing, in Web 3.0. T**he three dimensional design is being used extensively in websites and services** in Web 3.0. With Web 3.0**, information is more connected thanks to semantic metadata. Content is accessible by multiple applications**, every device is connected to the web, the services can be used everywhere.

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SOCIAL MEDIA AND LEARNING *IS ACTIVE LEARNING*

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Social media is becoming an integral part of life online as ***social*** websites and applications proliferate. Most traditional online ***media*** include ***social*** components, such as comment fields for users. In business, ***social media*** is used to market products, promote brands, connect to current customers and foster new business.

Social media concept : Kubey (1998) opined that media education has yet to obtain popular support. He postulated that far more parents, for example, will say that they want their children to be computer literate than will say they want their children to be media literate. Parents believe that computer expertise can equal a leg up in the job market. Joint (2011) has wondered aloud if the new technology is making us stupid. Writing in the journal "ANTAEUS" he asked the question as the title of his research: If Google makes you stupid, what should librarians do about it? Social media as a concept is so new that it has not taken root in the lexicon of the code of ethics of Social Work organizations. Yet, the point cannot be overstated that cutting edge Social Work practice of the future will of necessity involve and include extensive use of social media and web based activities.

What is social media?

Social media is becoming an integral part of life online as ***social*** websites and applications proliferate. Most traditional online ***media*** include ***social*** components, suchas comment fields for users. In business, ***social media*** is used to market products, promote brands, connect to current customers and foster new business. ***Social media*** is a phrase that we throw around a lot these days, often to describe what we post on sites and apps like Facebook, Twitter, Instagram, Snapchat and others. But if we use the term to describe a site like Facebook, and also a site like Digg, plus a site like Wikipedia. A **social networking** service (also **social networking site**', SNS or **social** media) is an online platform which people use to build **social networks** or **social** relations with other people who share similar personal or career interests, activities, backgrounds or real-life connections.

Basic forms of social media: At this time, there are basically six kinds of social media. Note, though, that innovation and change are rife.

Social networks: these sites allow people to build personal web pages and then connect with friends to share content and communication. The biggest social networks are MySpace, Facebook and Bebo.

Blogs: perhaps the best known form of social media, blogs are online journals, with entries appearing with the most recent first.

Wikis: these websites allow people to add content to or edit the information on them, acting as a communal document or database. The best-known wiki is Wikipedia4 , the online encyclopaedia which has over 2 million English language articles.

Podcasts: audio and video files that are available by subscription, through services like Apple iTunes. Forums areas for online discussion, often around specific topics and interests.

Forums: came about before the term "social media" and are a powerful and popular element of online communities.

Content communities: communities which organise and share particular kinds of content. The most popular content communities tend to form around photos (Flickr), bookmarked links (del.icio.us) and videos (YouTube).

Microblogging: social networking combined with bite-sized blogging, where small amounts of content ('updates') are distributed online and through the mobile phone network. Twitter is the clear leader in this field.

Why social media is necessary : Our world today thrives on the use of social media as the primary tool for communication for people in all walks of life. There is no field where dependence on the social media is not pervasive. It controls technology (it is technology), advertising, marketing, education, religion, music, literature, all aspects of world cultures and people just to list a few. Through social media outlets like Twitter and Facebook, people make contact with the public. The coverage is global and fast! Through social media, several non-profit organizations have succeeded in achieving their goals of service to humanity. Also, many educational accomplishments have been made public; not to mention the proliferation of knowledge. Again, these illustrations of the benefits of social media seem to scratch only the surface. We can spend all day adding to these. They are huge and seemingly indispensable. However, there are downsides to the social media. For one, many people find it difficult to achieve the right balance and so get carried away with feeding the public information that is irrelevant or that decorum (decency) dictates as personal. We know of instances where the police have cautioned people about information they make public that compromises their safety. Also, some people put up pictures that may be wise to show to only friends and family. How would you feel if someone said, "I didn't know you have folds around your waistline or your arms are saggy until I saw the photos you put up." It would be an inconsiderate, unkind remark since everyone has flaws and everyone is beautiful. But why show the world these photos? My understanding is that celebrities get some uncomplimentary pictures of them taken when they'd rather not have such photos made public. That's a price they pay for being celebrities. No offence meant but what's the purpose of showing these to the general public except you have a public following and just want to keep your fans updated? If you need to share pictures with the public, how about showing meaningful photos about nature, the world, animals and the like.

The social media is working in Learning and Teaching process:

Social media such as Facebook, Twitter, Google Plus, and Flickr, as well as open**social** practices such as blogging, are being **used in learning** for the purpose of convenient communication with other students and potentially with others outside the class such as students of the same topic and subject experts. Social media is an ingrained part of today's society. Our students are constantly on Instagram, Facebook, Twitter, and likely many sites we're not hip enough to know about, and by reading this blog, you're interacting with social media at this very moment. If you want to bring the "real world" into the classroom, consider integrating social media into your lessons.

Create a Class Facebook Group: Facebook is known as a place to post status updates, announcements, photos, and video — all things that we likely use in our classes anyway. Create a Facebook group for each class, on which you can post assignments, make announcements, and remind students about important deadlines. Parents can also access the site to monitor what is going on in your class. A Facebook group also creates a space for students to ask and answer questions. When students get home and begin working on their homework, they can post a question to the group's wall that either you or a classmate can answer. Since students often learn from others, having students share their questions, insights, or experiences with a topic can expand learning for other students. In short, it extends the classroom discussion beyond the classroom. A Facebook group is also ideal for teachers using the flipped classroom. Post videos, photos, documents, and other resources on the group's wall so that students can access them before class or while working on their assignments. Of course, content management systems can offer the same opportunities for announcements and resources. However, because many older students and parents already have Facebook on their phones

and tablets, they have constant access to course information without having to log in to a completely different system.

Start a Topical Twitter Feed: Like Facebook, Twitter offers a quick way to post class announcements and reminders as well as real-time information on class field trips (perfect for parents who can't tag along). Twitter also helps classes track information on a topic. For instance, for a class discussing a current event or topic such as career ideas, Twitter can provide up-to-date information, eliminating the need for extensive research. By following the Twitter feeds of experts in the field or even hashtags focused on a current world issue, students can learn more about what is happening in the world around them.You can use this information in a variety of class discussions, research, and writing projects. Twitter is made not only for reading, but also for responding. Encourage students to interact with others via Twitter by posting their favorite quotes or facts from a particular lesson. Have them interact with experts by tweeting questions or comments. Many organizations offer Twitter chat sessions with which students can interact.

Require Students to Blog: Student writing improves the more they do it. Instead of traditional writing projects, blogs create great opportunities for students to write and display their writing on a larger scale. The topic ideas are endless. Have students reflect on lessons or field trips, document research for a larger project; or review movies, books, or audio recordings. Ask students to illustrate their thoughts with photos or videos. By having students read each other's blog posts, they will create a stronger community with one another, discovering shared experiences and reactions. Because their work becomes part of the greater World Wide Web, students have increased motivation to carefully consider their language, spelling, and grammar usage as well as how they draw in outside information. In this vein, blogging can be an excellent segue into a discussion on plagiarism, voice, and writing style.

Post Student Videos to YouTube: Like Facebook, YouTube is an excellent option for flipped classrooms in that students can watch lectures and resources before entering the classroom. We have all probably shown a YouTube clip or two to illustrate a point in the classroom. Instead of watching material created by others, why not have students create their own material? Similar to blogging, the opportunities for student-created video are plenty. Students will enjoy watching each other explain a concept, review a book or movie, stage their own interpretation of a scene from a play, create public service announcements, or report on news stories. Again, like blogging, since the material will be seen by a wider audience,students will be more apt to do their very best in creating a video, and they will enjoy being able to express their creativity as they connect more deeply with course material.

Showcase Student Work on Instagram: If a picture is worth a thousand words, imagine what a carefully crafted class Instagram feed can say. Instagram can showcase student work by offering a place to feature student artwork or even interesting details about a student (i.e., a "meet a student" photo journal). Start a scavenger hunt in which students post pictures of items focused on a certain letter or theme. Have students post photos of items related to their favorite book or historical figure.

A Final World on Social Media: Privacy concerns are always an issue whether using social media for personal or educational use. Please read all social media platforms' privacy pages, and ensure that your class feeds are set to private to protect students' work. Review your school's social media policy and if necessary, have parents sign consent forms for posting their child's work online. Furthermore, make sure that students are well versed in etiquette and other proper use of technology.

In Short: Since students are already using social media away from the classroom, integrating it into the classroom helps students learn best practices for social media and offers an interesting new twist on lessons.

The Role of Social Media as a Learning Tool: The rise of social media in the classroom isn't about how many people "like" your posts. The collaborative environment and open forum that social media encourages, along with the rapid-pace of information sharing that it facilitates, means that students can accelerate the development of their creative, critical thinking, and communication processes in certain ways when they use it. Social media promotes self-directed learning, which prepares students to search for answers and make decisions independently. When reinforced in a classroom setting, these social media skills can be guided and refined to produce better learning outcomes and critical awareness. Social media also allows students more freedom to connect and collaborate beyond the physical classroom, which means students anywhere can start to experience the globally connected world long before they enter the workforce.

It's All About Engagement: Social learning is active learning, which means that students participate directly in their own learning rather than passively absorbing information they will most likely forget once the exam is over. Social media shapes and presents information in a way that makes sense to and excites students more than traditional tools do, whether it's through a shared article with comment functionality, a livestream of an important event, a survey related to course materials, or a question posed to the broader community. Furthermore, sharing posts and information with other students, rather than simply submitting assignments to the teacher, promotes deeper engagement and better performance from all students. If students know from the start that they and their peers will interact with course materials and each other on various social media platforms, they may put in more effort to both their work and online presence.

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BLENDED LEARNING –ITS CONCEPT, CHALLENGES AND FUTURE

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Abstract
Blended Learning is a combination of autonomous, media-assisted learning (e-learning) and classical presence based classroom teaching. The goal of blended learning techniques is to combine the advantages of face-to-face teaching with entirely digital e-learning units and to avoid the disadvantages of both methods. Blended learning supplements phases of students learning independently using their Smartphone, computer or tablet with face-to-face teaching. In class, after having examined the individual progress of each student, the instructor can discuss contents which have proven difficult, answer questions and teach topics which are better conveyed in person. With the use of blended learning concepts, the efficacy and economic efficiency of training and continued education can be improved. However, in order to actually raise efficiency and avoid abuse, the coupling of e-learning elements with classroom teaching units under the direction of a training centre is indispensable.Organizations today are looking beyond the automation of traditional training models to new approaches to knowledge transfer and performance support that are better aligned with business goals and deliver measurable results. By focusing on the specific business objective, rather than the learning technology, we are given the opportunity to fundamentally re-think how we design and deliver learning programs by using Blended Learning.

Introduction: The rapid rise of Internet technologies in the past few years led to the opening of alternative and non-traditionallearning opportunities across various levels of education and training. The change involved a wide range of innovations in teaching learning approach, one of which is blended learning whereby a variety of models was employed. Owing to the flexibility as well as the richness in the possibility of remodelling of the approach, interest in blended learning has grown rapidly. Blended learning is attractive and realistic because it combines the traditional classroom approach with the online learning model. The mode of delivery modality of blended learning provides an efficient and effective educational experience for learners, hence it is also possible to apply the blended model in innovative ways to increase both student learning outcomes and reduce instructional delivery costs. A stern reminder to educationists is that blended learning technology should not be used to replace the teacher or instructor.

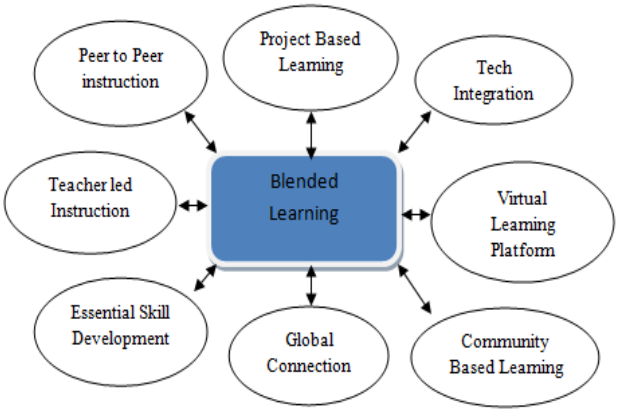

Fig-A: Concepts related to the quality of Blended learning

Characteristics of Blended Learning

Most common characteristics cited by Egbert & Hanson-Smith (1999)

- Learners have opportunities to interact socially and negotiate meaning.
- Learners have enough time to learn & giving feedback.
- Learners are guided to attend mindfully to the learning process.
- Learners work in an atmosphere with an ideal stress or anxiety level.

Conceptual dimensions of the Blended learning: The original use of the phrase "Blended Learning" was often associated with simply linking traditional classroom training to e -learning activities. However, the term has evolved to encompass a much richer set of learning strategy "dimensions." Today a blended learning program may combine one or more of the following dimensions, although many of these haveover-lapping attributes.

Components of the Blended Learning Model: Blended learning model can be used as a guide in evaluating and integrating separate components that would result in instructionally-sound learning situation. The components are as shown in Figure

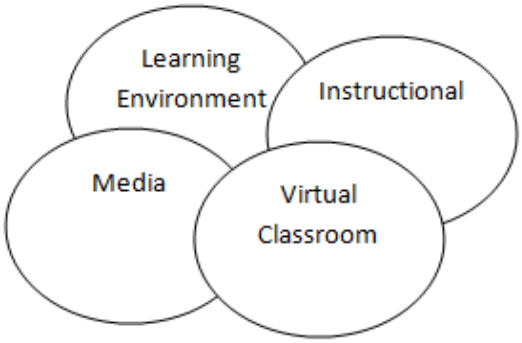

Fig-B Components of Blended Learning

a) **Learning environment component:** A learning environment can either be synchronous or asynchronous. Each learning environment has a distinct set of advantages and disadvantages. The goal of blended learning is to leverage the specific positive attributes of each environment to ensure the optimum use of resources to attain the instructional goal and learning objectives

b) **Media component:** Some instructional media, however, may be more appropriate than others in supporting either a synchronous or asynchronous learning environment, but no single medium is inherently better or worse than any other. Whereas a given delivery medium might not alter the desired content, the selection of a particular medium may affect how you design the content to take advantage of unique attributes of that specific medium.

The medium is not limited to technology and can include:

a. Stand-alone, asynchronous, or synchronous online learning / training
b. Performance support tools (knowledge management tools)
c. Traditional classroom, labs, or other "hands-on" experiences
d. Reading assignments, CD-ROMs or other self-paced learning.

c) **Instructional component:** This component is used to select the most appropriate instructional strategies that support the learning objectives. Such strategies are the products of learning objectives and serve to ensure the learning objectives and facilitate the transfer of learning.

d) **Virtual classroom:** A virtual classroom allows instructors and learners to be in different places at the same time, and allows the instructor to archive the event for later viewing. These events are usually conducted through the use of virtual meeting tools. The topics covered can be similar to those dealt with in a live classroom.

Table1: Media used in Blended Learning

Live face-to-face (formal)	**Live face-to-face (informal)**
Instructor-led classroom	Collegial connections
Workshops	Work teams
Coaching/mentoring	Role modelling
On-the-job (OTJ) training	

Virtual collaboration (synchronous) Live e-learning classes E-mentoring	**Virtual collaboration (asynchronous)** E-mail Online bulletin boards Online communities
Self-paced learning Web learning modules Online resource links Simulations ,Scenarios Video and audio CDs/DVDs Online self-assessment workbooks	**Performance support** Help systems Print job aids Knowledge databases Documentation Performance/decision support tools

Offline and Online Blending Learning: At the simplest level, a blended leaning experience combines offline and online forms of learning where the online learning usually means "over the Internet or intranet," and offline learning happens in a more traditional classroom setting. We assume that even the offline learning offerings are managed through an online learning system. An example of this type of blending may include a learning program that provides study materials and research resources over theWeb while providing instructor-leading, classroom training sessions as the main medium of instruction.

Role of teachers and students in Blended Learning Classroom: Teacher should have depth knowledge about content so that they can teach various subjects. They should also be able to differentiate between various instructions based upon students need concepts. Teachers must not only understand the content that is to be taught within the classroom but they must now have a depth of understanding that allows the content to be morphed into the delivery system allowing the student to take ownership in their learning process .Blended learning supports all the benefits of e-learning including cost reductions, time efficiency and location convenience for the learner as well as the essential one-on-one personal understanding and motivation that face to face instructions presents.. Blended learning can help foster critical and reflective thinking stated that blended learning is flexible, social atmosphere and reusable learning object. In blended learning the learners have enough freedom for learning and time to time feedback is given by the teachers. It is the best way of interface between teacher and students, emphasized on the student ability to integrate online information with their classroom content. Students should also be able to demonstrate through various aids as and when require. The teacher continues to encourage and motivate, guide and monitor progress, give feedback, boost confidence, and maintain motivation. Students need to be made aware that participation is important and necessary. Students must make use of good time management skills as blended courses require them to balance both online and offline course activities. The teacher's role is to encourage each student group to come up with their own answers to the essential question or problem, teacher's responsibility is also to help students set up the end of the lesson where they will do a quality presentation to real-world experts, defend their ideas, and then re-analyze what they have learned about the subject.Teacher and student role are much interconnected. With the use of technology in teaching and learning process the student's participation has increased. Students in blended learning work as partner of teachers. Thus teacher motivates students to increase their confidence so that they can develop critical thinking. Most important role played by the teacher is in keeping the students digitally safe.

Advantages of blended learning over simple e-learning

It represents a switch from passive learning to active learning. The focus of the classroom shifts from a presentational format to one of active learning.

a) It adds a human touch to the teaching. The interactive content enables the instructor to create a high level of interest, accountability, and real assessment.
b) It enhances individualization, personalization and relevance.
c) A blended learning approach is an effective and low-risk strategy aimed at meeting the challenge of the transformational changes that technological developments bring to higher education
d) The connection and motivation of students is higher when they learn as part of a social group under the supervision of an instructor, instead of studying alone at home.
e) The coupling of autonomous learning units and mandatory class sessions gradually teaches the participants important competences like discipline, time management, self-motivation and the capacity to study on their own.

Challenges of Blended Learning: The use of blended learning can pose challenges for students and universities. Unrealistic expectations and feelings of isolation are challenges for students, while universities or schools are challenged by time and supportissues. Both students and institutions encounter challenges presented by technology issues which are,

1 Technical Challenge -

The technical challenges are not about getting technology to work on networks. Rather, they consist of ensuringthe success of the programme by utilizing and supporting appropriate technologies.

2. Organizational challenges -

Management often agrees that blended learning is the correct direction for training initiatives, but it fails tounderstand that this is a complex process that needs thought beyond an individual programme. Organizationalchallenges include –

a) Overcoming the idea that blended learning is not as effective as traditional classroom training
b) Redefining the role of the facilitator
c) Managing and monitoring participant progress

3. Instructional design challenges - When learning technologies are introduced, attention is often paid to the technology implementation, while the design of the actual appropriate content is left with too little time and budget to create a successful programme.

Instructional design challenges include-

a) Looking at how to teach, not just what to teach
b) Matching the best delivery medium to the performance objectives
c) Keeping online offerings interactive rather than just "talking at" participants.
d) Ensuring participant commitment and follow-through with "non-live" elements.

Ensuring all the elements of the blend is coordinated.

Table 2. Summary of the benefits and challenges of blended learning

Benefits	Challenges
• Enhanced student learning outcomes • Greater flexibility for students and teachers • Improved autonomy, reflection, and research skills • Reduced student withdrawal rate • Ability to foster a professional	• Unrealistic student expectations • Student-perceived isolation • Technological problems for students • Invasiveness into other areas of life • Time commitment • Technological problems for institutions

learning environment • Potential cost and resource savings	• Lack of support for course redesign • Difficulty in acquiring new teaching and technology skills

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USE OF INTERNET FOR DESIGNING BLENDED CLASSROOMS

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Abstract
Learning is a process of acquiring knowledge, values, and skills. Acquisition can take place mainly by experiences. These experiences can be indirect, direct or similar to direct (simulated). Use of indirect experiences for learning has been used from last various decades. Indirect experiences are not able to transmit hundred percent knowledge, values or skills. Now in the age of 21st century it is important that we should give direct experiences or simulated experiences for proper acquisition of the knowledge through technology. But again there are individual differences for the perception of knowledge. To minimize the perceptional mistakes traditional learning classroom is best option where teacher is controlling learning of the learners. The traditional learning in classroom is based on indirect experiences or has very much limitation to provide direct experiences so if we use internet with modern learning methods like open learning or distance learning with traditional learning it will be more beneficial for learners. This is known as blended learning. Internet facility which is easily available now with each learner with smart phone can be effectively used for preparing blended learning. This paper focuses on the development of blended class room by using internet.
Keywords*- Learner, Internet, Traditional classroom, blended learning classroom.*

Use of Internet for designing blended classroom

Introduction-Blended learning is totally learner centered. Teacher's role is not only teaching the concepts by also to provide facility for learning in the blended classroom. The important factor in the blended learning is the availability of the facilities to the learner. The available facility is not only important component of the blended learning but with that teachers effort, learner's interest, inert motivation, outcomes are also important. Blended learning started around last decade. Traditional classroom learning is common before the starting of the blended learning system. Classroom learning system has advantages that there is control of teacher which is important to control the learners understandings and perceptions as well as it also time saving but despite of this it has various limitations as; it does not provide flexibility in selecting stream or subjects of interest, time and place. Because of this either learner leave the education or the achievement of learner in education in below standard due to lack of time or place. Various research studies proved that blended learning classroom can be more effective than the traditional classroom teaching if it has been implemented properly. The material for learning is available in Internet of various streams and also with variety of resources from books to apps in mobile with flexibility in time and place. Internet is effective tool for providing or acquiring blended learning facilities. Internet is available at any time of the day and now-a-days it does not require so much physical infrastructure to access internet. It is easily available anywhere and anytime. It fulfills the need of various categories of person who are unable to take use traditional classroom education. By using internet we can prepare virtual learning environment which may be part of blended learning or may not be part of blended learning. It means blended learning classrooms are mixture of traditional and virtual classroom with flexibility that they are totally dependent on the need of the student to interact with other learners or with the teacher. Internet is not only useful to provide virtual classrooms but it also useful to facilitate support systems for learning in asynchronous or synchronous way.

Learner: Learner is one who wants to acquire knowledge or values or skill. Learner can decide the way for learning. There are different ways of learning traditional or modern/ formal classrooms or virtual classrooms

Learning: It is a process of acquiring knowledge, values and skills.

Traditional classrooms: Formal regular four walled rooms with the limitations of the facilities for giving experiences to the learners about content.

Open learning

"Open learning systems aim to redress social and educational inequality and to offer opportunities not provided by conventional colleges or universities."

–Mackensie N., Postgate R. and Seupham (1975)

"Open Learning refers to policies and practice of openness in entry requirements (with minimal or no restriction on qualifications), choice of courses, place of study and time, etc. It is an educational philosophy where learning can happen anywhere, anytime from any resource, and therefore, this can be seen as a practice in face-to-face institutions."

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Online learning: Learning by using asynchronous or synchronous internet recourses form.

Blended Learning: Blended learning is a mixture of traditional and open learning system.

It is integration of online with traditional face-to face class activities in a planned, pedagogically valuable manner.- www.teacherthought.com

There are different models of the blended learning as follows:

Rotation model: A course or subject in which students rotate on a fixed schedule or at teacher's discretion between learning modalities, least one of which is online learning.

Flex Model: Online learning is the backbone of student learning, even if it directs students to offline activities at times. Students move individually customized, fluid schedule among learning modalities.

Enriched Virtual model: A course or subject in which students have required face to face learning sessions with their teacher of record and then are free to complete their remaining course work remote from the face to face teacher.

Internet

It is a global computer network providing a variety of information and communication facilities, consisting of interconnected networks using standardized communication protocols.

"The internet is the global system of interconnected computer networks that use the internet protocol suite (TCP/IP) to link devices worldwide."

The internet is an informal term for the world-wide communication networks of computers. This network makes effective transfer of information within less time and reliable. This quality of internet is useful in the open learning process.

There are two ways to access education by using internet; Asynchronous and synchronous.

"Asynchronous Learning is learning online at different time and/or place using an online learning platform. Example of asynchronous learning is use of discussion forums and email for learning."

"Synchronous Learning is opposite of asynchronous learning, where learner interacts with teachers and/or learners online at the same time from different place."

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Blended learning classroom: Synchronous and Asynchronous communication facility for discussing challenges and opportunities with experts within the classroom and with the internet is nothing but Blended learning classroom. This can be similar to the Flipped classrooms. Internet is most effective source as it is available anytime and anywhere for designing Blended learning classroom.

Designing blended learning classroom: From last two decades our country is struggling for obtaining hundred percent literacy rates. Blended learning facility will help to improve rate of literacy by providing opportunities of learning with the help of Internet. Different researchers have proved that use of internet for learning is effective. Internet is used for collecting information in blended learning or as a resource for some courses.

Blended learning systems should also need to provide interactions with teacher for more effectiveness of the learning. The richness of internet technologies allow for unlimited creativity when it comes to electronic resource development. Such richness offers teachers new opportunities to develop very interesting resources while it also poses a substantial challenge in that.

Use of internet for designing blended learning classroom: Teacher should focus on challenges which learner faces in Blended learning system. Teacher should find solutions to solve these

challenges in the course. Teacher need to confirm availability of source of internet with each student. If we are able to find number of sources of internet which are available easily to learner at any place and any time it will more beneficial for blended learning classroom. Teacher should explain properly the use of internet as this can divert learners from main objective of the learning. Give information to the learner about availability of the websites and other material like blogs, etc. with details about time limit to use and complete work with help of internet. As per the availability of the internet source there should be proper scheduling of the blended learning classroom open learning and discussion sessions. Schedule should be announced to the learner with proper media. This classroom is similar to flipped classroom.

Benefits of use of internet in designing blended learning classroom

It will be beneficial for improving learning in blended classroom. Learner will get motivated as he gets proper guidance for challenges in traditional classroom sessions of blended learning.

Teachers with the interactions with learners can give suggestions for improvement in use of internet.

It will be also useful to keep uniformity in understanding of concepts in learners. It can be happen that some material is not able to give clear idea about the concept, so teachers opinion in traditional classroom sessions will help about this.

It will create new platform for collecting of information or sharing experiences.

It will provide opportunity for students for innovations and designing thing with the proper guidance of the teacher.This provides continuous development of the material with the discussions with teachers and changes in the available knowledge.

Further studies: This study can be extended further to quantitative analysis of the effectiveness of the use of internet in blended learning.

Conclusions: Use of internet should be effective for enhancing the quality of the blended learning courses. It involves guidance or help to the learners with problems and co-ordinations of all the elements of the concepts in the course. This can be possible only with the use of blended learning classrooms.

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ROLE OF ICT IN EDUCATION

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Abstract

Information and communication technologies are the power that has changed many aspects of the lives. The impact of the ICT on each sector of the life across the past two-three decades has been enormous. The way these fields act today is different as compare to their pasts. Across the past twenty years the use of ICT has basically changed all forms of i.e. education, business, governance and communication.ICT has begun to have a presence but unfortunately we are lacking to achieve desired impact. The education is a socially oriented activity. It plays vital role in building the society. The quality education traditionally is associated with strong teachers having high degrees. Using ICTs in education it moved to more student – centered learning. As world is moving rapidly towards digital information, the role of ICTs in education becoming more and more important and this importance will continue to grow and develop in 21st century. This paper highlights various impacts of ICT on contemporary higher education and also discusses potential future developments. The paper argues the role of ICT in transforming teacher-centered learning to competency based learning. It also explores some challenges in higher education like cognitive tutors, need for developing a model, collaborative authoring etc.

Introduction: Education has very important role in building the society change .ICT making dynamic change in society. Education determines standard of society. The quality education helps to empowering the nation in all aspects by providing new thoughts, the ways of implementation of various technologies and so many such things. The quality education is basic need of the society. There are number of effective teaching & learning methodologies in practice. Technology is the most effective way to increase the student's knowledge. Here comes the role of ICT in the education sector! Being an academician I cannot imagine education without ICT. Nowadays ICT (specially an internet) plays imminent role in the process of integrating technology into the educational activities.

Objectives of ICT in Management Education:

1. Improvement in learning achievement;
2. Reduction of adult illiteracy rate, with sufficient emphasis on female literacy
3. Expansion of provisions of basic education and training in other essential skills required by youth and adults;4. Increased acquisition by individuals and families of the knowledge, skills and values required for better living and sound and sustainable development.

Role of ICT in Higher Education:

1. To increase variety of educational services & medium.
2. To promote equal opportunities to obtain education & information.
3. To develop a system of collecting & disseminating educational information.
4. To promote technology literacy

ICT as a Change Agent In Learning Process:

Conventional Learning Process: In the process of conventional learning emphasis was given on contents. It follows the particular course structure / syllabus for many years. Accordingly the subject wise textbooks & reference books have been written. By using relevant material to the subject teachers supposed to teach through lectures and presentation. Teachers used their lesson plans, tutorials, different way of assessment to evaluate student performance etc.

Competent Course Structure: It is the need of the day to improve quality & structure of the syllabi by enforcing competency & performance based approach towards it. To include advance technology and practical approach is also on of the imp. One such curricula requires, 1) Access to information types & different forms. 2)Student-centered learning though information access. 3) Learning environment concentrated on information access & inquiry. 4) Real life examples. 5) Teachers as mentors rather that content experts. The role of ICT in the education at higher level recurring and unavoidable. It is challenge to integrate ICTs with universities, into their strategies and educational

process. It should be implemented at national & international level. It will be helpful to improve qualify and flexibility, the widening access to the field of tuition. Many universities are providing distance education by creating N/w through mutual partnership.

Change In The Way of Learning: We discussed ICTs are cause to make a move from a teacher centered learning to competency based learning. Universities are also responsible to make supporting changes in the way students are learning. Traditional way of learning is based on Tran missive modes. Use of ICT in education also affects the way students learning. The following points are particular forms of learning. a. Students Centered Learning: With the help of technologies it is possible to promote transformation of education from teacher centered inst. To students centered inst. e.g. 1) Increased use of web as a source. 2) Internet users can select the experts from whom they will learn. 3) Process will become problem – based learning. 4) The proliferation of capability, competency and outcomes oriented curricula. ICTs in education acts as a change agent. It supports independent learning. Students become immersed in the learning process by using ICT.

b. Supporting Knowledge Construction: The emergence of ICTs as a learning technology unknowingly insists to think on alternative theories for learning. The conventional teaching process has focused on teachers planning and leading students through a series of in structural sequences to achieve desired outcome. This way of teaching follows the planned transmission of knowledge though some interaction with the content as a means to consolidate the knowledge acquision. It depends on the process of personal understanding. In this domain learning is viewed as the construction of meaning rather than memorization of facts. Use of ICTs provide many opportunities through their provision and support for resource based, student centered learning. It acts to support various aspects of knowledge construction and as more and more stud. Employ ICT in their learning process, the more pronounced impact of this will become.

Development and Application of basic education: We take the same broad definition of ICT to include radio, television, satellite, fixed and mobile telephone, fax, computers and CD-ROMs and the internet. The ICT can be divided into two groups: traditional or old ICT and the new ICT. Learning through new ICT is also called e-learning. Recent studies show the enormous potential of e-learning, especially in industrialized countries. In April 2001, MIT announced that learning materials and syllabi for all courses were being put on the Internet for anyone to use – recognizing the power of the Internet and that knowledge is for sharing. As in the case of higher education mentioned in the previous section, there are four ways ICT can support basic education – (i) supporting education in schools, (ii) providing non formal education for out-of-school children and adults, (iii) supporting pre-service distance education of teachers and their in-service professional development, and (iv) enhancing the management of schools. These are detailed below. Supporting education in schools: ICT can provide access to information sources, enable communications, create interacting learning environment and promote change in methods of teaching.

Supporting non-formal education: The evidence demonstrates that radio and television, the traditional ICT are cost Effective means to reach out-of-school children and adults where the costs are spread over a large number of learners, in the regions of conflict and for refugees. If the purpose of ICT is to reach children and adults who cannot go to school for opportunity costs, radio and television are more likely to widen access than the new ICT which may not be available to them. However, basic education is more successful when delivered in the mother tongue and traditional ICT may be less economic because of the small number of learners. The possibility of two-way communications with new ICT makes them more attractive where the target group has easy access to them, for example, in urban areas. Supporting pre- and in- service teacher education. The high demand for teachers calls for the rapid supply of trained teachers. Distance education of teachers is an essential

medium to achieve education for all. Radio and television (radio more than television) still remain popular means because of low costs.

Society requires new skill: ICT increasingly pervades every aspects life (work, learning, leisure & health).Because ICT are excellent tool for information processing the new generation needs to become in their use, should acquire the necessary skill, and therefore must have access to computers and networks while at school .Schools are information and knowledge holding institutions. Therefore ICT should be fundamental information management tool at all levels of education system,from classroom to ministries.

Enhancing educational Management: In this area new ICT are more relevant. Computer software programs are being used in time tabling and school management to improve the use of staff time, student time and space, thus reducing costs significantly. Only a few computers are necessary for this type of application. It is noted that ICT in schools can improve quality with less cost. Old ICT are still cost-effective for provision of education to out-of-school children and youthin developing countries. New ICTs have a very large potential for teacher education in larger quantity and better quality. A combination of old ICT to widen coverage and access and new ICT to provide interactivity are supposed to be costeffective for teacher education. If a nationwide network of community learning centers equipped with computer laboratories with broadband access and trained staff to access online distance learning and to provide tutoring support could be set up in developing countries until a computer is available at home, there are possibilities for these countries to take advantage of the benefits of e-learning mentioned above. Some of the E-9 developing countries are already taking a step in this direction as will be noted in the following Section.

CONCLUSION: The role of ICT in the education is recurring and unavoidable. Rapid changes in the technologies are indicating that the role of ICT in future will grow tremendously in the education. ICT also focuses modification of the role of teachers. In addition to classroom teaching, they will have other skills and responsibilities. Teachers will act as virtual guides for students who use electronic media. Ultimately, the use of ICT will enhance the learning experiences of students. Also it helps them to think independently and communicate creatively. It also helps students for building successful careers and lives, in an increasingly technological world. Basic education services accessible to all, including the poorest, illiterate adults, children outside the school system.

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SOCIAL MEDIA FOR TEACHER EDUCATION: GENERATING NEW AVENUES OF PROFESSIONAL DEVELOPMENT

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Abstract
Social media has become indispensible aspect of our lives today. It has its rich dividends for human life. Even education sector is apprehending its significance.Efforts are taken for utilizing social mediafor quality augmentation of educational process. Teacher being at the nub of the process hence needs to recognize the clout of social media and thrive to utilize of it as a dynamic professional tool. Social media can play a crucial role in capacity building and continuous professional development of teacher also. It can be decisive in promoting reflection, collaboration, media, self-expression and creativity of the teacher. It can become instrumental in developing learning communities across the globe. Social media supportsfor creating better learning environments and rapport between teacher and students. Hence, teacher education shouldpromote solicitous inclusion and assimilation of social media in its course of preparing the teachers for neo-millennium. . It can be vital in preparing teachers as facilitators of 21st century. Hence, deep thought and relevantapplication of social media in teacher education is indispensable in today's era.How the professional development of teachers can be promoted through social media? What are the prospects of social media in Teacher Education Programme? The present paper has tried to address these issues.

Keywords*: Social Media, Professional Development, Reflection*

Prologue: Information and Communication Technologies (ICT) have revolutionized the entire human life in modern era. Mobile technology and social media in particular have turned out to be indispensable elements of human life. The emergence of internet, and Web 2.0 Tools have created new spaces for virtual communication exchanges. In this scenario and with sustenance of the Web 2.0 resources, social media has expanded its horizons beyond limits. Such resources have permitted novelapproaches of relationships, regardless of time and space, by means of so called Internet Social Networks (ISN). Social media such as Facebook, Twitter, etc. provide several promises for socialization, individual's capacity to communicate with people across the globe, ability to be a member of virtual group beyond geographical and physical constraints, self-expression and ability to receive information and share it. Social media sites such as WhatsApp, Facebook, LinkedIn, Twitter, BlackBoard, SlideShare, YouTube, blogs, WIZIQ, Skype, Instagram etc. have shaped a new keenness and connections in our lives through their diversified applications. The Pew Report's (2005, January) findings have come true which claimed that by 2014, the Internet use will increase the size of people's social networks far beyond what has conventionally been the case. This is the magnetism of social media that has completely transformed our lifestyle. The word 'Social media' is one of the most if not the most beloved murmur in today's youth. 'Generation Y'(the age group of 14-30) is the major user of such platforms. With the increase in the accessibility of internet, social media is one of the fastest dispersing cultures. The fact is that it has become a new language of communication. Social media can be defined as the media used for online social interactions. It is any form of online publication or existence that permits interactive communication, including blogs, Internet websites, Internet forums, and wikis. Examples of social media include Facebook, Twitter, WhatsApp, YouTube, LinkedIn, Slideshare, Wiziq, BlackBoard and Flickr etc. Gunawardena et al (2009) define social network as the practice of knowledge expansion through developing connections with individuals of similar interests. It is helping the users to build their own personal learning networks. These can be web-based or mobile-based applications that allow individuals to develop, share and connect new self-engendered

content in digital environment. These are expansively used by the entire world for socio-economic as well as professional purposes. Social media can be animperative tool in educationas well. Today many educational institutes throughout the world use these platforms for academics, admissions and administrative intentions. Social Media sites permitthe learners and educators to exchange thoughts and ideas with each other quickly and easily. Students can locate experts in a field of interest and follow them. Video sharing platforms like YouTube can be intentionally utilized for distance learning, supplementary lectures, etc. Students' communication, faculty-students communicationcan be enhanced to greater heights. Faculty can engage with students, provide them support. They can build and strengthen campus community and aidthe students connect with the alumni. Online courses can be initiated through social media. Social media nowadays is not only exploitedfor staying connected with friends and family but also for other purpose like professional learning, media and researching. The engagement of social media in education has set a new dimension to this sector. Considerable changes are occurring in the teaching profession due to manifestation of social media in educational process,.Social media's significanceis increasing not just for students but also for the teachers. It is an extremely vital tool in the hands of teachers if they understand and help students to make effective use of this social media to build their knowledge base. Social Media has proved itself as an emerging essentialmeans in education. Teacher Education is heading towards a complete paradigm shift in 21st Century. Information & Communication Technologies (ICT) are at the crux of this transformation. Social media can be extremely decisive in capacity building and continuous professional development of both pre-service as well as in-service teacher population. Social Media through its varied tools and modes can incorporate technology and constructivist theories to boostdialogue, reflection, collaboration and learning communities. It can be quite meaningful in preparing teachers as facilitators demanded in neo-millennium. Hence yawning thought and apposite adoption and assimilation of social media in teacher education is indispensable in today's era.

Social Media for Education: Social media can be a huge advantage for a teacher who works for innovation and experimentation. It offers immense prospects for teacher's creativity and innovation during curriculum transaction. DT competency standards for teachers (UNESCO, 2009) have pointed out thatmodifications in pedagogical practices must comprise the use of different technologies, tools and electronic content. It is also important for teachers to understand when, where and how to use technologies. Recent studies have proven that social media an interesting pedagogical strategy. Monteiro (2010) have pointed out that the creation of virtual environments to complement traditional learning is essential to promote and strengthen teacher-student and student-student interactions in sharing knowledge and cooperative work. Such networks viz. social media can also be important in continuing teacher education (Barcelos, Passerino& Behar, 2010). Goldfarb et al. (2011) have listed out the benefits of the pedagogical relevance of social media found in the literature: i) superior identification of students' needs and academic assessment; ii) organization of communities to exchange ideas, approaches, and resources; iii) student participation due to their familiarity with ISN; iv) stepping up of student performance resulting from greater involvement in classroom discussions; v) information management, held by the power of ISN to integrate several tools; vi) prospectsof contacting the students who do not adapt to traditional teaching methods; vii) increase of accomplishment and self-confidence feelings. Social media can be used to facilitate the teaching-learning process which involves collaborative, communicative, documentive, generative and interactive tools. Over the last two decades teaching practices have evolved with more and more emphasis on student-centered pedagogy. There is an increased anticipation placed onto the position that technology can hold to exploit effective learning (Roblyeret al, 2010). Social media may proffer a new construct to enhance the learning experience. Greenhow and Gleason (2012) have suggested

that the application of twitter in higher education may lead to increased engagement and better interaction between students and teachers. Fusch (2011) have claimed that the tools of the trade are as important as the learning objectives, and that tools are needed which foster social presence, build a more interactive learning environment and cultivate collaborative study. Every day is characterized by more connectedness, fierce engagement and disseminated activities in our lives. This era has a noteworthy impact on the role of the teacher; it is changing fast and we need to support teachers to take charge. There are pricelessprospects offered by social media, but likewise there are many challenges working to spoil the enthusiasm of a teacher. Therefore the onus lies on teacher education to launch and integrate innovative technologies of social media in its process to cultivate time relevant professional development of teacher.

Social Media for Teacher Education: Social media needs to become an integral part of the curricular transaction of teacher education. Both the modes in-service and pre-service need to adopt and assimilate social media for developing professional outlook and competencies of the teacher. Social media needs to become integral part of teaching-learning process in Teacher Education Programmes (TEP). This will create a positive view as well as proficiency among student teachers regarding the use of social media for educational purpose. F-2-F interactions are not sufficient to address the personal and professional issues in the development of a teacher. Hence social media can be a blessing for teacher educators. Social media can be integrated not only in pedagogic aspect but also in evaluative aspect as well. It can be used as a platform for the formative evaluation of the professional development of a teacher. Theoretical dimension of TEPs need to utilize social media to promote reflection, analyzing ability as well as creativity. Social networking can also prove instrumental for practicum aspect also. It can support the process as a part of the process as well as a tool of observation and evaluation. Above all there are various avenues of application of social media in teacher education. Such thought must be executed into practice. This will surely pave way for positive impact for the use of social networking in school education.

Epilogue: Indian Teacher Education needs time relevant transformation through innovation and experimentation. It requires to foster new age professional development among the pre-service as well as in-service teachers. Aspirations and trends in contemporary world need be addressed by teacher education and it needs to imbibe the positives. Social media is one such trend in current times which shall be incorporated in teacher education programmes to prepare competent facilitative teachers of 21st century. Such teachers will not only promote better learning environments but also will perform as creative curriculum actors rather than merely its relays. Serious thought has to be made through researches and real time endeavors in this direction about utilizing social media in teacher education so as to foster reflection, collaboration and innovation amongst teacher communities.

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ICT ENABLED TEACHER EDUCATION

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Abstract
The development in the use of the electronic media has influenced all fields of life. Education is no exception to this. Quality in teacher education is continuous process. The quality of the teacher education institution and its programmes is judged by the performance of the teachers and the success of their graduates in terms of professional skill they have achieved. Quality assurance is often determined through an accreditation process. ICT enabled learning environment at the institute has become increasingly important in making accreditation, certification, and programme review decisions. Thus, in order to get respectful accreditation from respective organization, an institution must well in advance take care of inculcation of ICT in teaching and learningprocess. Hence, in this article, an attempt is made to enlist how ICTs may beincorporated into the teacher education and need for incorporating it into the system.

Introduction: ICT Stands for "Information and Communication Technologies." ICT refers to technologies that provide access to information through telecommunications. This includes the Internet, wireless networks, cell phones, and other communication mediums. In the past few decades, information and communication technologies have provided vast array of new communication capabilities. For example, people can communicate in real-time with others in different countries using technologies such as instant messaging, voice over IP (VoIP), and video-conferencing. Social networking websites like Facebook, blogs and tweeter allow users from all over the world to remain in contact and communicate on a regular basis. Modern information and communication technologies have created a "global village" in which people can communicate with others across the world as if they were living next door. For this reason, ICT is often studied in the context of how modern communication technologies affect society. UGC has taken initiative to create network, which could connect all universities and most of colleges in India by creating network and by offering resources for developing IT infrastructure in universities and colleges. UGC has also undertaken a program of e-content creation and development of guidelines and program, which will enable students to take courses or degree/diploma from more than one university. Universities, jointly in partnership, can offer courses and certification [1] A report made by the National Institute of Multimedia Education in Japan, proved that an increase in student exposure to educational ICT through curriculum integration has a significant and positive impact on student achievement, especially in terms of "**Knowledge, Comprehension**, **Practical skill** and **Presentation skill** in subject areas such as mathematics, science, and social study [2]. The changes caused by the introduction of information technology into learning environments introduced some potential problems which must be considered by administrators. Some fundamental rethinking of the education process may be necessary because of the use of ICT. This will also put pressure on the educational institute system to restructure the way education is organized.[3] Development and progress of IT and its wider applications in all walks of life and work will be creating a society, in which every individual, group, community will be linked through Internet with others[1]. ICT is used worldwide to facilitate the teaching learning process but it can no way replace the traditional system of teaching learning. The teaching-learning activities which are varied and complex have to be harmonized. So it is very important for an ideal and updated professional teacher to integrate effectively all the various elements of the teaching learning situation and more importantly these should be brought into an intelligible whole [4]. ICTs improve the quality of education. Improving the quality of education and training is a critical issue, particularly at a time of educational expansion. ICTs can enhance the quality of education in several ways; by increasing learner motivation and engagement, by facilitating

the acquisition of basic skills, and by enhancing teacher training [5]. Professional development of teachers is must. Professional development to incorporate ICTs into teaching and learning is an ongoing process and should not be thought of as one 'injection' of training. Teachers need to update their knowledge and skills as the curriculum and technologies change. Individuals develop in stages and mature over time.[6]

Requirement of ICT resources at Institute: Desktop/laptop computer for teachers use, SIS curriculum manager, Personal email account, School intranet, Internet, Printer, Digital cameras, Specialist software, applications (CAD, CAM, HTML, Editors etc.), Technical support, Digital projectors/interactive whiteboards Desktop computers for student use in classroom and Lab, Laptop computers for student use.

Teachers ICT Knowledge: Teachers must be aware of the following commonly used ICT applications: Word processing (MS-Word), Spreadsheets (Excel), Presentation packages (Power Point) Databases (Access), File navigation. Internet, Email, Social media (Blog, Face book, tweeter), SIS Curriculum Manager (SIS).

Why the role of the teacher must change?

The roles of teachers have changed and continue to change from that of instructors to that of **con**structors, facilitators, coaches, and creators of learning environments.Many studies and articles have identified reasons why the role of the teacher must change, such as:

- ICT will cause certain existing resources to become obsolete. Resources such as overhead projectors and chalkboards may no longer be necessary if all learners have access to the same networked resource on which the teacher is presenting information, especially if students are not physically in the same location.
- ICT may make some assessment methods more efficient and knowledgeable. Online tests, for example, can provide the teacher with considerably more information than traditional multiple choice tests.

It is no longer sufficient for teachers to impart content knowledge. They must encourage higher levels of cognitive skills, promote information literacy, and nurture collaborative working practices. These new responsibilities are greatly facilitated by the use of ICTs in teaching. However, a genuine and sophisticated integration is necessary, so teacher training in this regard becomes crucial[7].

New ICT SkillsEssential for Teacher

A technically competent teacher is able to:

- Operate computers and use basic software for word processing, spreadsheets, email, access etc.
- Evaluate and use computers and related ICT tools for instruction
- Apply current instructional principles, research, and appropriate assessment practices to the use of ICTs
- Evaluate educational software
- Create effective computer-based presentations
- Search the Internet for resources
- Integrate ICT tools into student activities across the curriculum
- Create multimedia content to support instruction
- Create hypertext documents to support instruction
- Demonstrate knowledge of ethics and equity issues related to technology
- Keep up-to-date as far as educational technology is concerned

Training Requirements

In assuming their new roles, teachers are expected to upgrade their knowledge and acquire new skills in these areas:

1. **Pedagogy** - Teachers need new pedagogical skills so they can take full advantage of the potential of technology to enhance the learning process. The use of questioning strategies is an essential component of developing an inquiry-based classroom where a structured discussion raises basic issues, probes beneath the surface of things, and pursues problematic areas of thought.
2. **Curriculum development** - Teachers must be able to develop appropriate, effective curricula that enable students to construct meaning, integrate new knowledge into their world views, and communicate understanding.
3. **Full integration into curriculum** – Strategies are necessary to meaningfully integrate technology into the curriculum. Technology must be considered as a learning tool, not merely treated as a subject area in itself. In particular, teachers need the skills to develop long-term strategies for using technology to support their curricula, student outcomes, and learning goals.
4. **Staff development** - Activities that simply provide skills in using particular software applications, for instance, have shown little impact on students' classroom learning. Ultimately, students' success depends on teachers using technology to support sophisticated, hands-on/minds-on, multidisciplinary learning projects. These projects must be tightly linked to overall strategic goals and to content standards.
5. **Support system** - Teachers must have systems of support at various levels - regional, district, and school - for integrating technology and overcoming isolation as they grapple with new and unfamiliar approaches to teaching and tools for learning. They also need real-time technical support in resolving problems related to hardware, software, and networks; problems that can often interfere with or completely derail the learning of both teachers and students.

New Requirements: Today's teachers are required to be:

- Felicities, helping learners to make judgments about quality and validity of new sources and knowledge.
- Open minded analytical and independent professionals.
- Active co-operators and collaborators.
- Mediator between learners, what the need to know and where that knowledge can be found.
- Providers to reinforce understanding.

New Competencies: For teachers to be able to integrate the use of ICT into their lessons, a variety of skills need to be developed:

- Creativity
- Flexibility
- Logistic skills, assigning work, grouping and devising new locations forlearning to takes place
- Skills and project work
- Administrative and organizational skills
- Collaborative skills

Conclusion: The use of computers and the internet for enhancing the quality of education make learning more relevant to life. Worldwide research has shown that ICT can lead to better teaching methods and improve student learning. A survey on ICT enabled education through curriculum integration has reported significant and positive impact on student achievement, especially in terms of "Knowledge, Comprehension, Practical skill and Presentation skill in subject areas such as

mathematics, science, and social study. Multimedia courseware can promote effective education that is more engaging; learner centred, interdisciplinary and more closely related to real life events and processes and adaptive to individual learning styles and needs. Giving Student technology based Education, giving them exposure to the use of computers and internet and integrating the ICT into curriculum, we definitely make bright future of the students.

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USE OF MOBILE APPS IN TEACHING

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Abstract
This study was conducted to investigate the teacher's readiness to use of mobile apps in teaching. The focus of the study is to examine some aspects namely,
-The use of mobile app
-The acceptance of mobile phones in teaching and learning
The purposive sampling technique was used to gather data of 50 teachers. Data was collected via questionnaire. The data was analyzed and interpreted.
Research findings revealed that teachers are expected to learning activities and they are ready to use mobile application in teaching.
Keywords:-*Serosoft, Extramarks*

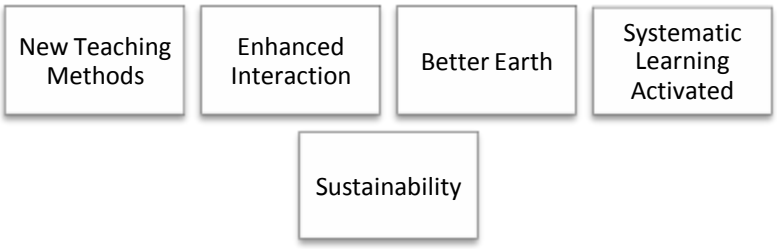
Introduction:

Teaching in the Internet age means we must teach tomorrow's skills today.'- Jennifer Fleming

Over the past few decades, influence of technology upon children and education has been immense. Technology refers to the use of tools, machines and techniques and sources of power to make work easier and more productive. Technology deals with making things happen. The radical change and advancement in the economy, as we observe today is the result of the modern technology. The challenging process of educating is in demanding need for solutions on how technology will change education. Society seems to be fascinated by the eruption of technological advancements in the educational field. Technology has changed and will change many ideas of education, the potential of educational systems captivates the lives of many students and teachers. With technology involved students are more active in learning. Education was once equated with money, but things have changed. Books are often found to be tiring and boring for children while replacing them with colourful pages and moving animations can make teaching fun to the core. In these changing times, students are more driven towards using a mobile phone for every purpose. A smartphone they call it. The world is at the fingertips and a student can get access to any information from anywhere. This reduces the chance of visiting a library and searching for the data. A mobile phone hence can be used for a number of such purposes. What makes the information easily available is mobile applications. Every mobile app has a unique feature which offers its own set of services.

"A mobile app is a software application developed specifically for use on small, wireless computing devices such as smartphones and tablets rather than desktop or laptop computers."

Benefits of Mobile Apps: Due to the mobile phones and the various feature-oriented applications, students can learn at their pace and take their time at understanding things, as everything is just a click away. The education research scholars are coming up with new techniques to impart knowledge every day. This includes exposing students to the kind of activities that engage them in learning through innovative ways. The need of the hour is to make students focus on their subject-oriented studies.



New Teaching Methods: The introduction of applications in the education sector has led to the introduction of new teaching methods. There are fun games available on mobile applications that indulge the students into a healthy thought process and help them understand things from a different perspective.

Enhanced Interaction: Experts say that apps in education can make children more interactive and activate better engagement between parents and children. The most effective way is to engage with the children while they are using applications. Interaction tendency in children is enhanced by mobile applications.

Better Earth: While millions of trees are cut down for making papers for the traditional method of learning, mobile apps in education requires just a download. It means a greener earth for future generations. Mobile learning process has sustainability. Completing a lesson with an app is much more effective as it is learning from experience rather than from compulsion.

Systematic Learning Activated: Smart learning is one thing and systematic learning is next. App based learning enables both. Mobile apps help in systematic learning. Apps are arranged in such a way that, it promotes not only a craving for learning but systematic learning.

The apps are arranged in a systematic way that it becomes possible for students to go with the flow without even realizing.

Sustainability: Using mobile apps for learning is more sustainable compared to the traditional learning methods which include papers, pencils, and pens. Getting reference notes is very simple in mobile learning- just download it. This results in a lesser number of trees being cut down every year.

Teachers can make use of apps in classrooms. There are apps that help teachers to plan teaching materials. App based learning allows teachers and parents more time to discuss lesson plan for better interactive classes. While selecting apps for children, parents and teachers can contribute a lot.

Objectives: To study the impact of teaching style using the mobile apps in education.

Limitations:- The study is limited to the teaching process.

Research Methodology:-

Purposive sampling technique will be used for which 50 teachers will solve the questionnaire.

Findings: The questionnaire was distributed to the teachers and analyzed and the following things were recorded which shows that teachers are ready to use the mobile apps as teaching tools which will help them a lot in the teaching-learning process.

Level of acceptance of using mobile apps as teaching tools:-

Sr. No.	Criteria	Yes	No
1.	I prefer to develop my classroom teaching.	100%	-
2.	I want to make mobile phone as a tool for teaching.	98.6%	1.4%
3.	I know how to make use of different mobile apps in teaching.	97%	3%
4.	Using mobile apps helps me in my professional development.	98%	2%
5.	It will save my teaching time.	98.2%	1.8%
6.	I want to do enrichment activities in leisure time.	98%	2%

Different Mobile Apps in Teaching:

a. **Extramarks:** Extramarks includes various tools like animations, videos and virtual labs to make teaching easy and engaging. It follows a comprehensive method of learning, practice and test for deep immersive learning. It includes virtual lab too. It is also beneficial for audio, visual and kinesthetic students. It also gives up a summative check up.

b. **Serosoft / Edunet:** Serosoft is the app which is very useful. The teachers can upload job sheets, send videos, even daily attendance is recorded. Even homework assignment job sheets can be uploaded on serosoft. This app is very beneficial to the teachers as well as the students.

c. **Whatsup:** In teaching whatsup plays a very vital role. Teachers can create groups, send each other images, videos and audio media messages related to the teaching of various subjects. Teacher can record a lesson and send it to students who were absent.

d. **Youtube:** It has contributed to much greater flexibility in instruction. Not only can teachers display accurate charts and graphs, but they can use video to show the students in various subjects. Even it has privacy control through a feature called safety mode. Teachers can create their own channel and students can subscribe it. This app can even be used globally.

e. **English Vocabulary app:** Mobile devices and apps are changing the way people learn English. Learning a new vocabulary word means more than just understanding what the word means. There are many different activities to help you really learn each word- to understand the meaning, to recognize it when you hear it or read it, and to be able to pronounce it and write it. You can listen as many times as you want.

f. **Phonetics:** Speech is the most important means or medium of human communication. The significance of speech is self- evident in that it is hard to imagine life without speech. Phonetics is the science where all aspects of speech are considered and investigated: how speech is produced using our speech organs, what are the properties of speech sounds in the air as they travel from the speaker's mouth to the ear of the listener, and, finally, how we perceive speech and reognise its structural elements as certain linguistic symbols or signs.

g. **Byju's:** This type of app is useful for the concept clearance of Science and Mathematics.
The app gives the students with all their science related problems starting right from the basic definition up to their applications and problems. It is a application based method. This app majorly focus on make learning contextual and visual, rather than just concentrating on theoretical. This concept of the app will provide a student a greater level of understanding a subject and will be more confident over his studies.

h. **Appy Pie:** Appy pie is a online based mobile app builder that allows the users to build apps with simple drag and drop steps. The users don't require any coding skills to build apps on this platform. Also, a user who doesn't have any experience in app building as s the platform provides all the tools, resources and guidelines that are easy to follow. it has a virtual keyboard and mouse for basic learners. The content in the text books are transformed into graphics in this app so it is beneficial for the students to access very easily as textbook is quite boring for the students.

Conclusion:- It can be said that the different mobile apps can be used in the teaching process which will enhance in proper development and understanding of the students.

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IMPACT OF ICT ON HIGHER EDUCATION OF INDIA

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Abstract
"The destiny of India is now being shaped in her classrooms. This, we believe, is no more rhetoric. In a world based on science and technology, it is education that determines the level of prosperity, welfare and security of the people." Education is the backbone of a nation where higher education occupies the apex of educational pyramid in the formal process of Indian education. The most important task in present scenario is to impart better and quality education. Children are the nation builder of future and to carve them as good citizen we need to provide them with proper education so that they can become pillar of the nation's growth. The government of India introduced new economic policies namely globalisation, privatisation and liberalisation to increase employment, output and income opportunities and achieve economic development at international level. ICT in education has increased the opportunities by increasing the scope of admissions in all levels of education. Due to ownership, level of quality increased in few set-ups to great extent. Lot of facilities have been provided nowadays to public system but no proper strategies to utilize and maintain it. Due to this, it is turning to be great failure. Thus, ICT has positive and negative impact on education and society. Hence, the present study is an attempt to analyse the impact of ICT on the growth and demand and supply of higher education and on society at micro level.

***Keywords**: Education, Information and Communication Technology (ICT), Higher education.*

Introduction: India needs more efficient and educated people to drive our economy forward. There are many Indian around the corner who known for their capabilities and skills. To develop India as an education hub or to become a prosperous partner in global economy, India has to qualitatively strengthen education in general and higher education with research and development in particular. This paper is mainly focused on the overall performance of higher education system in India. We try to find out the initiatives taken by the government to raise level of education system. The government of India introduced new economic policies namely globalisation, privatization &liberalisation to increase employment, output and income opportunities and achieve economic development at international level.Privatisation has brought about rapid change in the educational scenario of India. It is seen that privatisation encourages the individuals and religious organisations to establish colleges and deemed universities to meet the growing demand for higher education. Consequently, higher educational institutions are found throughout the country. It not only increases the number of higher educational institutions but also increases the number of seats for highly demand courses such as engineering and medicine. Moreover, it decreases the distance between the educational institutions. It causes competition among them to fill the seats allotted by the affiliated universities and maximize socio- economic benefits. However, it creates the gap between the demand and supply of higher education. It not only increases the cost but also decreases the quality of education.

Education in India: Education in India is provided by the public sector as well as the private sector, with control and funding coming from three levels: central, state and local. Under various articles of the Indian Constitution, free and compulsory education is provided as a fundamental right to children between the ages of 6 and 14. The ratio of public schools to private schools in India is 7:5

Higher education in India: After passing the Higher Secondary Examination (the Standard 12 examination), students may enroll in general degree programs such as bachelor's degree in arts, commerce or science, or professional degree programme such as engineering, law or medicine. With over 720 Universities, 45 000 colleges and 31 million students (2013), the Indian Higher Education boasts of having the largest Higher Education system in the world in terms of the number of institutions and of being second-largest in terms of enrollment.(12th FICCI Higher Education Summit 2016) The main governing body at the tertiary level is the University Grants Commission (India),

which enforces its standards, advises the government, and helps coordinate between the center and the state. Accreditation for higher learning is overseen by 12 autonomous institutions established by the University Grants Commission. The emphasis in the tertiary level of education lies on science and technology. Indian educational institutions by 2004 consisted of a large number of technology institutes. Distance learning is also a feature of the Indian higher education system. The Government has launched RashtriyaUchchattarShikshaAbhiyan to provide strategic funding to State higher and technical institutions.

Structure of Higher Education In India: Higher Education in India was started in 1857 with the inception of universities in the three Presidency towns. India now possesses a highly developed higher education system that offers facility of education and training in almost all aspects of human creation and intellectual endeavors such as arts and humanities, natural, mathematical and social sciences, engineering, medicine, dentistry, agriculture, education, law, commerce and management, music and performing arts, national and foreign languages, culture, communications etc. Higher education in India runs smoothly with following interdependent three structures.

A) Academic Framework:

- Diploma- Diploma courses are available at the UG and PG level.
- Undergraduate course - After schooling education bachelor's degree is offered in two streams

*General course : Three years of degree course in arts, science and commerce Etc.

*Professional course : Agriculture, Engineering, Medicine, Pharmacy, Law etc.

- Postgraduate course- Master's Degree is normally of two years duration in both the general and professional course.
- Research programme - A research programme i.e. M.Phil and Ph.D is taken after completion of master degree.

B) Institutional Framework: In India the institutional framework consists of Universities established by an Act of Parliament (Central Universities) or of a State Legislature (State Universities), Deemed Universities (institutions which have been accorded the status of a university with authority to award their own degrees through central government notification),Institutes of National Importance (prestigious institutions awarded the said statusby Parliament), and Institutions established by State Legislative Act and colleges affiliated with the University (both government-aided and unaided).

C) Regulatory Framework: Different regulatory bodies such as Medical Council of India (MCI), All India Council for Technical Education (AICTE) and the Bar Council India (BCI), India Council for Agriculture Research (ICAR), National Council for Teacher Education (NCTE), Bar Council of India (BCI), Distance Education Council (DEC), manage different professional courses. There are two accrediting institutions – namely National Board of Accreditation (NBA) established by AICTE and National Assessment and Accreditation Council (NAAC) established by UGC. UGC Regulations, 2012 mandate that all higher educational institutions be accredited by an accreditation agency.

Overview of Indian Higher Education Institutions:

Years	Universities	Colleges	Total HEIs	Enrollment (in million)
1950-51	28	578	606	0.2
1960-61	45	1819	1864	0.6
1970-71	93	3277	3370	1.2
1980-81	123	4738	4861	2.8
1990-91	184	5748	5932	4.4
2005-06	348	17625	17973	10.5

2013-14 720 45000 45000 31

- With over 720 Universities, 45 000 colleges and 31 million students (2013), the Indian Higher Education boasts of having the largest Higher Education system in the world in terms of the number of institutions and of being second-largest in terms of enrollment.
- Public expenditure on Higher Education is only 1.25% of GDP as compared to 3.1% of USA and 2.6% of Canada. Expenditure on higher education is likely to go up from USD 10.3 bn to USD 30 bn
- India is expected to be the fastest growing economy by touching a GDP of USD 10 trillion by 2030 and one of the youngest nations in the world with a median age of 27.6 years. Projections show that our country would require a gross incremental workforce of 250 million by 2030
- The greying developed world is expected to face a skilled talent shortage of approximately 56 million by 2030 and India alone would provide 47 million skilled talent
- Given its large workforce and projected labour surplus, India is well-positioned to cater to the changes in labour market requirements. India is a potential market for global players with 144 million young population in age bracket of 18-23 years
- By 2020, 90% of India's GDP and 75% of employment is expected to be contributed by the services and manufacturing sectors.
- Government of India has set itself an aggressive target of achieving 30% gross enrolment ratio ('GER') in higher education by 2020, from the current GER at 22.5% (2013-14E).
- The private sector plays a huge role in the addressing the growing need for quality education. The share of private sector institutions and enrolments has increased to 63.9% and 58.9% in 2012 as compared to 42.6% and 32.9% in 2001 (http://www.ficci-hes.com/)

ICT enabled Education: an Overview

The Information and Communication Technology (ICT) is an umbrella term that includes any communication device or application, encompassing: radio, television, cellular phones, computer, and network hardware and software, satellite systems and so on, as well as the various services and applications associated with them, such as videoconferencing and distance learning. When such technologies are used for educational purposes, namely to support and improve the learning of students and to develop learning environments, ICT can be considered as a subfield of Educational Technology. ICTs in higher education are being used for developing course material; delivering content and sharing content; communication between learners, teachers and the outside world; creation and delivery of presentation and lectures; academic research; administrative support, student enrolment etc.

In the current information society, people have to access knowledge via ICT to keep pace with the latest developments. In such a scenario, education, which always plays a critical role in any economic and social growth of a country, becomes even more important. Education not only increases the productive skills of the individual but also his/her earning power. It gives them a sense of well being as well as capacity to absorb new ideas, increases their social interaction, gives access to improved health and provides several more intangible benefits. The various kinds of ICT products available and having relevance to education, such as teleconferencing, email, audio conferencing, television lessons, radio broadcasts, interactive radio counselling, interactive voice response system, audiocassettes and CD ROMs have been used in education for different purposes (Bhattacharya and Sharma, 2007).

Table 3: The Four Rationales for Introducing ICT in Education

Rationale	**Basis**
Social	Perceived role that technology now plays in society and the need for familiarizing students with technology.

Vocational	Preparing students for jobs that require skills in technology.
Catalytic	Utility of technology to improve performance and effectiveness in teaching, management and many other social activities.
Pedagogical	To utilize technology in enhancing learning, flexibility and efficiency in curriculum delivery.

Source**:** Cross and Adam (2007)

Today ICTs – including laptops wirelessly connected to the Internet, personal digital assistants, low cost video cameras, and cell phones have become affordable, accessible and integrated in large sections of the society throughout the world. It can restructure organizations, promote collaboration, increase democratic participation of citizens, improve the transparency and responsiveness of governmental agencies, make education and health care more widely available, foster cultural creativity, and enhance the development in social integration. It is only through education and the integration of ICT in education that one teaches students to be participants in the growth process in this era of rapid change. ICT also allows for the creation of digital resources like digital libraries where students, teachers and professionals can access research material and course material from any place at any time (Bhattacharya and Sharma, 2007). Such facilities allow the networking of academics and researchers and hence sharing of scholarly material. This avoids duplication of work.

In view of ICT, education can be classified in three main categories:

- E-learning
- Blended Learning, and
- Distance Learning

E-Learning or Electronic learning is a general term used to refer to computer-enhanced learning. It is commonly associated with the field of advanced learning technology (ALT), which deals with both the technologies and associated methodologies in learning using networked and/or multimedia technologies. It is also known as online learning. Distance education provided the base for e-learning's development. E-learning can be 'on demand'. It overcomes timing, attendance and travel difficulties. E-learning allows delivery, dialogue and feedback over the internet. It allows mass customization in terms of content and exams. E-education can provide access to the best gurus and the best practices or knowledge available (UNESCO, 2002). It is possible to leverage the online environment to facilitate teaching techniques like role-play across time and distance. It can also facilitate the development of scenarios, which can be rarely witnessed in practice. ICT can play a valuable role to monitor and log the progress of the students across time, place and varied activities.

E-learning has the following advantages:

- Eliminating time and geographical barriers in education for learners as well as teachers.
- Enhanced group collaboration made possible via ICT.
- New educational approaches can be used.
- It can provide speedy dissemination of education to target disadvantaged groups.
- It offers the combination of education while balancing family and work life.
- It enhances the international dimension of educational services.

Blended Learning is the combination of multiple approaches to learning. It is usually used to define a situation where different delivery methods are combined together to deliver a particular course. These methods may include a mixture of face-to-face learning, self-paced learning and online classrooms.

Face to face Learning refers to learning that occurs in a traditional classroom setting where a faculty member delivers instruction to a group of learners. This could include lectures, workshops, presentation, tutoring, conference and much more.

Self paced Learning provides the flexibility to learn according to the availability of learners' own time and pace, it occurs in a variety of ways such as : reading specific chapters from text book, studying course material presented through web-based or CD based course, attending pre-recorded classes or sessions, reading articles referred by faculty member, working on assignments & projects, and searching & browsing the internet.

Online Collaborative Learning involves interaction between learners and faculty members through the web; this interaction can occur in one of the following modes:

- Synchronous interaction.
- Asynchronous interaction.

Synchronous, means 'at the same time', it involves interacting with a faculty member and other learners via the web in real time using technologies such as virtual classrooms and / or chat rooms. On the other hand, Asynchronous means 'not at the same time'; it enables learners to interact with their colleagues and faculty member at their own convenience, such as interacting through email.

Distance Learning: It is a type of education, where students work on their own at home or at the office and communicate with faculty and other students via e-mail, electronic forums, videoconferencing, chat rooms, instant messaging and other forms of computer-based communication. It is also known as open learning. Most distance learning programs include a computer based training (CBT) system and communications tools to produce a vital classroom. Because the Internet and World Wide Web are accessible from virtually all computer platforms, they serve as the foundation for many distance learning systems.

ICTs also allow for the creation of digital resources like digital libraries where the students, teachers and professionals can access research material and course material from any place at any time. Such facilities allow the networking of academics and researchers and hence sharing of scholarly material and leads to quality enhancement in teaching and learning.

Impact of ICTs on Learning & Achievement

1. **It is generally believed that ICTs can empower teachers and learners, promote change and foster the development of '21st century skills, but data to support these beliefs are still limited**

   There is widespread belief that ICTs can and will empower teachers and learners, transforming teaching and learning processes from being highly teacher-dominated to student-centered, and that this transformation will result in increased learning gains for students, creating and allowing for opportunities for learners to develop their creativity, problem-solving abilities, informational reasoning skills, communication skills, and other higher-order thinking skills. However, there are currently very limited, unequivocally compelling data to support this belief.
2. **ICTs are very rarely seen as central to the overall learning process:** Even in the most advanced schools in OECD countries, ICTs are generally not considered central to the teaching and learning process. Many ICT in education initiatives in LDCs seek (at least in their rhetoric) to place ICTs as central to teaching and learning.
3. **An enduring problem: putting technology before education:** One of the enduring difficulties of technology use in education is that educational planners and technology advocates think of the technology first and then investigate the educational applications of this technology only later.

Impact on student achievement

1. **The positive impact of ICT use in education has not been proven** In general, and despite thousands of impact studies, the impact of ICT use on student achievement remains difficult to measure and open to much reasonable debate.
2. **Positive impact more likely when linked to pedagogy** It is believed that specific uses of ICT can have positive effects on student achievement when ICTs are used appropriately to complement a teacher's existing pedagogical philosophies.
3. **'Computer Aided Instruction' has been seen to slightly improve student performance on multiple choice, standardized testing in some areas:** Computer Aided (or Assisted) Instruction (CAI), which refers generally to student self-study or tutorials on PCs, has been shown to slightly improve student test scores on some reading and math skills, although whether such improvement correlates to real improvement in student learning is debatable.
4. **Need for clear goals:** ICTs are seen to be less effective (or ineffective) when the goals for their use are not clear. While such a statement would appear to be self-evident, the specific goals for ICT use in education are, in practice, are often only very broadly or rather loosely defined.
5. **There is an important tension between traditional versus 'new' pedagogies and standardized testing:** Traditional, transmission-type pedagogies are seen as more effective in preparation for standardized testing, which tends to measure the results of such teaching practices, than are more 'constructivist' pedagogical styles.
6. **Mismatch between methods used to measure effects and type of learning promoted**: In many studies, there may be a mismatch between the methods used to measure effects and the nature of the learning promoted by the specific uses of ICT. For example, some studies have looked only for improvements in traditional teaching and learning processes and knowledge mastery instead of looking for new processes and knowledge related to the use of ICTs. It may be that more useful analysis of the impact of ICT can only emerge when the methods used to measure achievement and outcomes are more closely related to the learning activities and processes promoted by the use of ICTs.
7. **ICTs are used differently in different school subjects:** Uses of ICTs for simulations and modeling in science and math have been shown to be effective, as have word processing and communication software (e-mail) in the development of student language and communication skills.
8. **Access outside of school affects impact:** The relationships between in-class student computer use, out of class student computer use and student achievement are unclear. However, students in OECD countries reporting the greatest amount of computer use outside school are seen in some studies to have lower than average achievement (the presumption is that high computer use outside of school is disproportionately devoted to computer gaming).
9. **Users believe that ICTs make a positive difference:** In studies that rely largely on self-reporting, most users feel that using ICTs make them more effective learners.

Impact on student motivation

1. **ICTs motivate teachers and students:** There appears to be a general consensus that both teachers and students feel ICT use greatly contributes to student motivation for learning.
2. **Access outside of school affects user confidence:** (Not surprisingly) Students who use a computer at home also use them in school more frequently and with more confidence than pupils who have no home access.
3. **Where to place computers has an impact:** Placing computers in classrooms enables much greater use of ICTs for 'higher order' skills than placing computers in separate computer laboratories (indeed, fewer computers in classrooms may enable even more use than greater

numbers of computers located in separate computer labs). Related to this is an **i**ncreasing attention given to the use of laptops by both teachers and students (and in some places, 'computers-on-wheels'), as well as, to a much lesser extent, to the use of personal digital assistants and other mobile devices.

4. **Models for successfully integrating ICT use in school and after school hours are still emerging:** There are few successful models for the integration of student computer use at home or in other 'informal settings' outside of school facilities with use in school.
5. **The appropriate ages for introducing computers to students are hotly debated:** On a general level, appropriate ages for student ICT use, in general, are unclear. However, it is clear that certain uses are more or less appropriate, given student ages and abilities. Emerging research cautions against widespread use at younger ages.
6. **ICTs can promote learner autonomy:** Evidence exists that use of ICTs can increase learner autonomy for certain learners.
7. **Gender affects impact:** Uses of ICTs in education in many cases to be affected by the gender of the learner.
8. **The 'pilot effect' can be an important driver for positive impact:** Dedicated ICT-related interventions in education that introduce a new tool for teaching and learning may show improvements merely because the efforts surrounding such interventions lead teachers and students to do 'more' (potentially diverting energies and resources from other activities).

Potential Drawbacks-cum-Challenges to Use ICT in Education

- It may create a digital divide within class as students who are more familiar with ICT will reap more benefits and learn faster than those who are not as technology savvy.
- It may shift the attention from the primary goal of the learning process to developing ICT skills, which is the secondary goal.
- It can affect the bonding process between the teacher and the student as ICT becomes a communication tool rather than face to face conversation and thus the transactional distance is increased.
- Also since not all teachers are experts with ICT they may be lax in updating the course content online which can slow down the learning among students.
- The potential of plagiarism is high as student can copy information rather than learning and developing their own skills.
- There is a need for training all stakeholders in ICT.
- The cost of hardware and software can be very high.

Conclusion: The increasing use of information and communication technologies (ICTs) has brought changes to teaching and learning at all levels of higher education systems (HES) leading to quality enhancements. Traditional forms of teaching and learning are increasingly being converted to online and virtual environments. There are endless possibilities with the integration of ICT in the education system. The use of ICT in education not only improves classroom teaching learning process, but also provides the facility of e-learning. ICT has enhanced distance learning. The teaching community is able to reach remote areas and learners are able to access qualitative learning environment from anywhere and at anytime. It is important that teachers or trainers should be made to adopt technology in their teaching styles to provide pedagogical and educational gains to the learners. Successful implementation of ICT to lead change is more about influencing and empowering teachers and supporting them in their engagement with students in learning rather than acquiring computer skills and obtaining software and equipment. ICT enabled education will ultimately lead to the democratization of education.

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ROLE OF TEACHER EDUCATOR FOR THE USE OF ICT

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Introduction: Information and communication technologies have been an integral element in the growth of diverse forms of online education, which over the last 40 years, have brought new opportunities for lifelong learning in many countries. Delivery of resources, however, does not guarantee learning, even when the initial barriers of access have been overcome. Where the media in use are unfamiliar, even stronger incentives are required for learners to engage effectively. Lifelong learning has been an inspirational concept for decades, receiving attention now for a variety of economic and social development reasons. In practice, it is dominated by provision of learning opportunities for adults and research into the effects and significance of learning beyond formal schooling. The impact of ICT on learning is currently discussed almost entirely in relation to use of digital media, primarily the World Wide Web. However, ICT impacted on higher education before the widespread use of the Internet. Through the application of print, audio-visual and broadcast media to School education, it has enabled those with student roles and responsibilities to continue formal study leading to higher education qualifications on a mass scale. The practice of lifelong learning itself has been facilitated by the demonstrable fact of thousands (now millions worldwide) of student studying beyond school age using a range of media. Lifelong learning has been an inspirational concept for decades, receiving attention now for a variety of economic and social development reasons. In practice, it is dominated by provision of learning opportunities for students.

The impact of ICT on learning: The impact of ICT on learning is currently discussed almost entirely in relation to use of digital media, primarily the World Wide Web. However, ICT impacted on higher education before the widespread use of the Internet. Through the application of print, audio-visual and broadcast media to Professional training. The practice of lifelong learning itself has been facilitated by the demonstrable fact of thousands (now millions worldwide) of students studying beyond Use of the Internet has enabled institutions to register learners wherever they are based. However, technical accessibility may reveal more subtle cultural barriers against participation.Course materials may also include content that is too culturally specific, or even offensive in some contexts. Yet here technology may help with the challenge. Digitally stored course materials can be edited, inappropriate sections cut and new material added to suit the new context. This process is facilitated by the use of content management systems and course designs based on reusable learning objects. While definitions of a learning object vary the core idea is to construct material which is organised into defined chunks which make sense in their own right. Chunks can be selected and used again in new combinations with new material and connecting strategies. This requires course teams to rethink how best to provide an integrated experience for learners, and detailed negotiations may also be necessary to ensure that diverse cultural expectations can be accommodated .

Use of the Internet: Use of the Internet has enabled institutions to register learners wherever they are based. However, technical accessibility may reveal more subtle cultural barriers against participation

Yet here technology may help with the challenge. Digitally stored course materials can be edited, inappropriate sections cut and new material added to suit the new context. This process is facilitated by the use of content management systems and course designs based on reusable learning objects.

The introduction of new media requires in effect, a complete rethink and redesign of teaching systems and staff skills. However, deep institutional change rarely occurs overnight, and as a result, the success of early attempts to use new media has been patchy, in terms of student usage and feedback.

Students may be unenthusiastic however because of poor implementation rather than intrinsic qualities of the media. Furthermore, each course has different opportunities arising from the nature of the discipline and the learning goals set for students. Some courses positively require to be taught using the Web, and it becomes feasible for a strong case to be made to students that participation online is essential. Activities create graded exercises in searching, evaluating and using web resources, carrying out measurements and analyses, and uploading assignments to Web pages. Students are explicitly warned that extensive study at the computer is required, and from the beginning, they have to interact online with their tutor group in order to carry out some aspects of their assignments. Student and tutor feedback shows an enthusiastic response to this approach, and the course has very high retention rates.

Discussion of ICT usage for courses of Professional training: This discussion of ICT usage for courses studied by Professional training, has touched on a number of policy issues. These are drawn together here and elaborated. • The impact of ICT goes wider than just the structure and presentation of courses – teacher roles, course design, support systems and the curriculum require development as a result. The use of the Web for both delivery and communication with students is impacting on the roles and workload of both course teams and tutors. Courses are being produced more quickly, within a two-year period and under, but updating is required every year and academic input is spread more evenly across the course life. This discussion of ICT usage for courses studied by learners, has touched on a number of policy issues. These are drawn together here and elaborated. • The impact of ICT goes wider than just the structure and presentation of courses – teacher roles, course design, support systems and the curriculum require development as a result. The use of the Web for both delivery and communication with students is impacting on the roles and workload of both course teams and tutors. Courses are being produced more quickly, within a two-year period and under, but updating is required every year and academic input is spread more evenly across the course life. Course teams also use conferences to maintain regular contact with tutors, and can respond to their views of the course more readily. The boundary between course teaching and learner support is breaking down, and electronic communication is enabling new forms of online teaching to emerge . Introductory courses in ICT skills are being developed, and all degree programmes need to build in ICT skills to student learning outcomes. • Institutions require a framework within which strategic decisions about use of ICT can be made: institutional strategies for learning and teaching are one way of achieving this. Use of new technologies has wide ranging impacts on institutions, and individual teachers are unlikely to be able to reap their benefits unless the institution as a whole invests in new infrastructure and develops staff, both technical and administrative. Enthusiasts and participated well beyond the requirement set down by the course team. Summarising the promise of the "new media" – taking these to include CD-ROM and now DVD-ROM as well as the Web and applications such as streaming audio1, video and mobile devices – commentators have typically identified the following advantages: • A sense of presence, possibly even community, in online interaction • Improved learner support • Unlimited practice of difficult concepts, skills etc. • Unlimited access to resources via the Internet • Improved delivery of learner preferences – notably those required by students with disabilities • Global access to resources and teaching • Learning anywhere, any time What we now have is accumulated experience over more than a decade of large-scale use at the training colleges and elsewhere that demonstrates three major themes. The first is that the impact of the new media is uneven, whether resulting from differences between learners, the context in which learners are studying, or the nature of the subject being learned. The second is that the promise of the new media is just that – a promise or potential that can only be realised through skilled and creative design and teaching, on the part of both the local tutor and the course team. The third is that lack of success in use

of ICT may result as much from cultural differences in how people expect to learn, as from any feature of the new media themselves.

The impact of ICT on education and training: The impact of ICT on education and training has not yet been as great as had been expected despite wide political and social endorsement. In particular, the transformation of business and public services through ICT has not yet reached teaching and learning processes;

• embedding ICT in education and training systems require further changes across the technological, organizational, teaching and learning environments of classrooms, workplaces, and informal learning settings;

• although ICT has the potential to develop a "learning continuum" that would support lifelong learning and embrace formal, informal and workplace learning, this has not yet been realised.

There is broad agreement that ICT is helping learning in schools and that e-mature schools produce better results. Higher education is also reaping major benefits from ICT but has yet to come to grips with its potential for professional learning, virtual mobility and continuing professional development.

Todays Role of teacher Educator in ICT.

In an environment of general but uneven progress, 3 findings are particularly striking:

• the impact of ICT on education and training has not yet been as great as had been expected despite wide political and social endorsement. In particular, the transformation of business and public services through ICT has not yet reached teaching and learning processes;

• embedding ICT in education and training systems require further changes across the technological, organisational, teaching and learning environments of classrooms, workplaces, and informal learning settings;

• although ICT has the potential to develop a "learning continuum" that would support lifelong learning and embrace formal, informal and workplace learning, this has not yet been realised.

ICT as a basic education and training tool: A first priority is to exploit infrastructure investments fully. The mainstreaming of e-learning is far from completed. ICT is not yet fully embedded in pedagogical practice or educational systems. A particular effort is called for on pedagogy, to develop the innovative teaching and learning tools made possible by ICT.

Open Networking.

- Flexibility and autonomy, for students and for institutions
- New approaches to teaching, more individualised
- Strengthened international cooperation,
- Availability of free and open knowledge
- Still a strong hierarchy among HE institutions,
- ICT networking allows institutions not focused on research to benefit from advances in knowledge

In new knowledge domains

- Edge disciplines are increasingly important in
- It is important to attract young people to them

Serving new users' needs

- New Millennium learners
- Experienced learners, lifelong learners
- Pedagogical and technological research

CONCLUSION: One of the themes of Role of teacher Educator in ICT in the last two decades has been the idea that campus-based education provision was converging. ICT has been a driver for that debate. Where courses are delivered wholly online, new forms of interaction and collaboration are

developing. One impact of the ease of communication enabled by e-mail and conferencing is that tutors and students are in more frequent contact and teaching is more continuous than in second generation distance teaching, with tutors logging on every few days, if not daily in some cases. They may indeed be more frequently in touch than are campus-based students with their tutor. What we are seeing in other words, is not the replication in a virtual context, of a model of campus-based teaching that dominated higher education for centuries, but the emergence of new forms, opening new opportunities. Although our focus here is on distance education and lifelong learning, these opportunities are there for campus-based higher education too. It is always difficult to claim that practices are being revolutionised in education.

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ALTERED STUDENT'S LEARNING BEHAVIOR AND ROLE OF TEACHER IN ICT ERA

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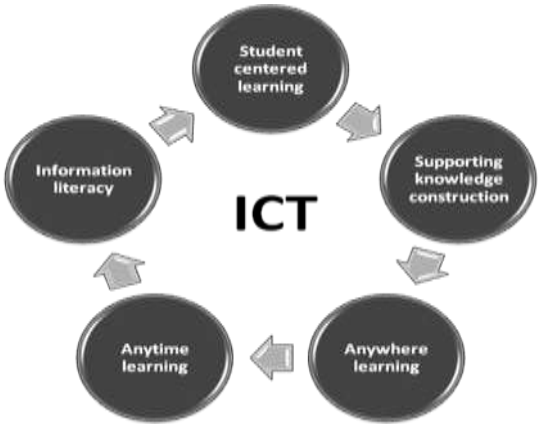
Abstract
Education system of ancient India was of Gurukul based where student used to go to Guru's (teacher's) residence and get the education in the ambience of nature. Teaching learning process gradually changed with time and use of ICT has tremendously changed the teaching learning process. It has made the student self explorer and curious about the things happening around them. But some adverse impacts are also observed on learning behavior of the students. Student don't bother to learn and remember things on their own, each and every thing for them is now available on internet. Although their curiosity is increased but their ability to reproduce and to relate cause and effect analysis is lacking day by day. All such conditions led them towards plagiarism and they find it easy to copy and paste during their work. This paper focuses on the effects of ICT on students learning, capacities of students and role of teacher in such scenario.
Keywords*-ICT, Teaching learning Process, Capacities of students, Role of teacher*

Introduction: Gurukul education system prevailed ancient India where student used to go to Guru's (teacher's) residence and get the education in the ambience of nature. Education in those times was practical based and student learns on their own by observing the nature. With the changing scenario education system changed enormously. Further introduction of ICT also modified the teaching learning process. ICT refers to use of Information, Communication and Technology in teaching learning process. Earlier teachers were limited to provide the notes but now increasing implication of ICT has made the student self learner and explorer. Due to ICT it is now possible that student can observe and see what is happening around them at micro level. Introduction of ICT as an aid to support teaching has initiated since the late 1990s in India. Also for the last few years increasing number of international development agencies have also increased the potential of ICT to support the education sector. ICTs need to be seen as "an essential aspect of teaching's cultural toolkit in the twenty-first century, affording new and transformative models of development that extend the nature and reach of teacher learning wherever it takes place" (Sarkar , 2012). Use of different technologies for teaching learning IT was further strengthened by Action Plan Part III- Long Term National IT Policy (GOI, 1999) constituted by the Government of India. It has given a boost to use and exploit the rapidly emerging new technologies. The ICT Policy in higher education aims at preparing youth to participate creatively in the establishment, sustenance and growth of a knowledge society leading to all round socio- economic development of the nation and global competitiveness. The introduction of ICT in the higher education has profound implications for the whole education process ranging from investment to the use of technologies in dealing with key issues of access, equity, management, efficiency, pedagogy and quality. Draft of National Policy on ICT in School Education is available in the MHRD's website. 11th Five Year Plan has proposed for launching of a National Mission in Education through ICT to increase ICT coverage in all the 378 universities and 18064 colleges. The Mission aims to focus on digitization and networking of all educational institutions, developing low cost and low power consuming access devices, and making available bandwidth for educational purposes. Collaborative efforts of agencies such as MHRD-Department of Information Technology (DIT)-Department of Tele communications (DoT) would be utilized to ensure fully electronic universities and digital campuses. Although advanced computational facilities will be provided in selected institutions.

Role of ICT in teaching learning: ICT provides student support services such as course outlines, digitally recorded classroom material, discussion groups, laboratory manuals and lab assignments, lecture notes, live lectures for later viewing and re-viewing, links to course specific websites, online

tutorials, supplementary readings, and virtual office hours for teacher-student consultations. Virtual libraries are a particular boon to students as they cut down on costs of acquiring expensive textbooks, journals and reference material. Tools are available on the Internet to assist both teachers and students to manage writing assignments to detect and avoid the pitfalls of plagiarism and copyright violations. ICT improve the quality and the quantity of educational provision. Introducing ICT systems for teaching in developing countries has to consider about high opportunity cost of installation, investments in hardware and software's and in human skills and training. Technology-facilitated learning has proven to be quite expensive in all areas of consideration, infrastructure, course development and course delivery (Sarkar 2012)



Modified from Toro and Joshi 2012

How ICT is affecting learning behavior of students: Although ICT is playing a pivotal role in present teaching learning but it has been proved to have some substantial effects on the learning behavior of the students. With the increasing use of technology anyone can get education not knowledge at any time and at any place by a single click. There is no doubt that Information, Communication and Technology has increased the curiosity in students, eased the availability of information but it also lead to never lasting damages to the young ones like each and everything is just a click away and student don't bother to remember, answer to each and everything is available on google. Majority of students are now superficial and scattered thinkers. Students are also devoid of the real time experience that they can have in the fields. The cause and effect analysis power of students is decreasing day by day. In order to gather information in large amount they are not able to retain the large amount of information. Critical analyzing power of students is also decreasing. Such tendency also leads to the increasing habit of plagiarism in long run. Plagiarism cases are on rise in India for the last few decades. Some examples are like student of CNR Rao was involved in plagiarism (nature.com). Two professors from Pune university were also involved in such copy and paste work. More over, some 3,210 academic papers on the issue of internet-related plagiarism were written between 1999 and 2014, compared with just 30 in existence by 1994. A study performed in 2003 at 23 college campuses by the Center for Academic Integrity, found that 38 percent of undergraduate students had used the Internet for plagiarizing work in one or more instances in the past year (Rimer). Cyber-plagiarism is not just limited to college either. A 2001 Center for Academic Integrity survey of 4,500 high school students found more then half had copy and pasted or downloaded material for use in their own work (Hafner 2003). Reading for pleasure, has declined among young people in recent decades. This habit enhances thinking power and fuels their imagination in a way that visual media such as video games and television cannot do. Further introduction of the Wi-Fi system too has led to the growth of hi-tech education system where 24 x 7 accessibility and accountability of subject matter is made readily available to the students. So students don't bother to read books and magazines.

Why students are heading towards misusing ICT

1. Pressure from parents and family to excel in every field lead the student to take shortcuts.
2. Students are involved in various activities and they don't have sufficient time to complete their work. Lack of time also lead to copy the materials either from different websites or from their friends rather than writing their original thoughts.
3. Students try to achieve each and everything in very short span of time.
4. Feeling of competition and self appraisal also lead them to copy and paste habit.

Role of teacher to overcome ICT misuse

1. Teachers should select such topics that are from different books and not easily available on the net.
2. Teacher should encourage the students to submit multiple drafts and show their progress between them.
3. Teachers can promote the student to submit their work in their handwriting.
4. Teacher can inculcate the habit of coating the references and sources in the students.
5. Teacher can help the students to find out the areas in which they can excel so that they don't need to copy other.
6. Teacher can inspire them to materialize their thoughts so that they will feel motivated instead of discouraged.
7. While evaluating the students or giving them assignments teacher should thought uniquely so that student don't easily use net to give answer.
8. Teacher can inculcate the habit of reading and sharing the information with the class.
9. Teacher can encourage them for their unique and innovative thoughts.
10. Teacher can take the help of some traditional teaching methods like teaching outside of the class, vadic maths etc.

Role of parents: Addiction to different technologies started from home. It has been observed that children of elementary age use nearly 7.5 hours per day for using entertainment technologies (Kaiser Family Foundation Report 2010). Parents should avoid over expectation and allow their wards to choose the carrier of their interest. Parents can inculcate the habit of reading the books and they can also give company to their children while reading the books.

Conclusion: The integration of ICTs in higher education is inevitable. The use of ICT creates an open environment which enables the storage and the reuse of information materials as also it enables the interface among the teachers as well as students. Apart from having enabling telecommunications and ICT policies, governments and higher education institutions will need to develop strategies for effective use of ICT. It is now high time that parents, teachers, health professionals, government, researchers and technology production corporations should come on the same platform and try to manage balance between healthy activity and technology use better known as Balanced Technology Management. Uses of technology in the education or in the modern society is inevitable but we must take care of the fact that technology is a double edged sword and we must wisely use it and guide the young minds about its uses and harmful effects specially while using it for the study. Student life is very delicate and it is age of distraction. So it is becomes important for us to educate the students to learn to focus and to understand that there is no technology shortcut for good education.

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BLENDED LEARNING

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I. Introduction: Blended learning is a mix of **e-learning** with **classroom instruction**. Both environments are partly or fully supervised, depending on the model. It is not a simple matter of using more technology in the classroom or assigning homework that requires using the Internet or other technologies. Blended learning is a more robust teaching model that is adopted by a school or an individual classroom. It is still formal learning, as students are assessed on what they learned both online and face-to-face.

Blended learning is an education program (formal or non-formal) that combines online digital media with traditional classroom methods. It requires the physical presence of both teacher and student, with some element of student control over time, place, path, or pace. While students still attend "brick-and-mortar" schools with a teacher present, face-to-face classroom practices are combined with computer-mediated activities regarding content and delivery. Blended learning is also used in professional development and training settings. The terms "blended learning", "hybrid learning", "technology-mediated instruction", "web-enhanced instruction", and "mixed-mode instruction" are often used interchangeably in research literature.

II. Where did blended learning come from?

Blended learning (sometimes referred to as hybrid learning) has a complex heritage that has evolved from the distance and open education movements and the development of online or e-learning. The earliest references to the term ‘blended learning’ are from the late 1990s and, since that time, definitions of its meaning have varied according to particular combinations of pedagogy and technologies (Friesen 2012). The detail of the ‘blend’ is context specific influenced by institutional culture, learner need and is often bounded by the digital capabilities of teachers. Blended approaches which include ‘flipped learning’ and ‘self-blended learning’ are gaining in popularity as educators grapple with the rising tide of digital technologies, the increasing sophistication of online courses (e.g. MOOCs) and increased student expectation of flexible and differentiated learning provision. Blending synchronous face-to- face learning with synchronous and/or asynchronous online components provides a powerful response to this challenge; and used innovatively, can build a valuable bridge from formalised education to informal learning spaces.The major advantage that blended learning offers is scale, whereas one instructor can only teach so many people.[One example is PLATO (Programmed Logic for Automatic Teaching Operations), a system developed by the University of Illinois and Control Data. PLATO in particular had a long history of innovations and offered coursework from elementary to the college level. Mainframe-based training had a number of interface limitations that gave way to satellite-based live video in the 1970s. The advantage here was serving people who were not as computer literate. The major challenge was the expense required to make this work. In the early 1990s, CD-ROMs emerged as a dominant form of providing technology-based

learning as bandwidth through 56k modems weren't able to support very high quality sound and video. The limitation to CD-ROMs was tracking completion of coursework, so learning management systems emerged as a way to facilitate progress tracking. Modern blended learning is delivered online, although CD-ROMs could feasibly still be used if a learning management system meets an institution's standards. Some examples of channels through which online blending learning can be delivered include webcasting (synchronous and asynchronous) and online video (live and recorded). Solutions such as Khan Academy have been used in classrooms to serve as platforms for blended learning.

III. Working of blended learning: Blended learning combines face-to-face and online activities in a seamless and complementary flow of learning. For example, in the flipped classroom, online activity is introduced before a face-to-face class, in the form of reading materials and other artefacts. These resources provide a springboard for students to conduct further online research through personal learning networks (PLN) and digital curation activities. Subsequent classroom time is spent in small groups with the aim of deepening this learning through problem-based activities. This weaving together of different modes of delivery with a purposeful pedagogical underpinning is one example of a blended approach that combines synchronous and asynchronous elements. Other blends might be purely synchronous and take the form of a face-to-face class in which some learners join remotely via web conferencing tools. In short, there is a huge range of different blended approaches; the balance between online and face-to-face components, and the integration of other methods, depends on the needs of learners and the context within which the learning is implemented. The more innovative of these approaches increase student engagement by enabling learning, thinking and conversation across multiple spaces and over time.

IV. Models of Blended Learning: There are distinct blended learning models suggested by some researchers and educational think-tanks. These models include:

It is important to note that even blended learning models can be blended together and many implementations use some, many, or even all of these as dimensions of larger blended learning strategy. These models, for the most part, are not mutually exclusive.

i. Face-to-Face Driver Model: This is a 'softer' approach to blended learning. The lecture will always be in-person. An individual teacher will add content online to support the curriculum. For example, in-class lectures are supported by supplementary lectures and virtual world activities found online.

ii.Rotation Model: The rotation model is a fixed schedule of in-classroom and online instruction. It alternates between an in-classroom lecture supported by online study and an online lecture with supporting classroom activities. For example, in week 1, students will have face-to-face lectures and activities will be online. In week 2, students will watch online lectures and the classroom will be used for activities.

iii.Flex Model: Students learn primarily online, while the classroom is used for tech support.

iv.Online Lab Model: Courses are taught fully online but supervised by an adult in the physical classroom.

v.Self-Blend Model: Students take extra courses online. This is common for students wanting to take advanced courses for college or at-risk students who need extra coursework to graduate.

vi.Online Driver Model: This is also taught fully online. It is self-paced with teachers checking in on a student and providing support as needed.

V.Desirable Qualities of Blended Learning

The most obvious reason why schools and teachers enjoy a blended learning model is that it increases engagement. More than half of children 8-12 years old have a phone or smartphone, which is like

having a handheld computer. With blended learning students can use their smartphones for classroom activities and learn online at their own pace.

This may sound like a matter of convenience, but engagement is a powerful technique. In a blended learning environment students are continuously connected to the content. Many learning styles are stimulated through various technologies and digital media, helping the students comprehend, retain, and apply information.

VI.Advantages of Blended Learning

i.Blended instruction is reportedly more effective than purely face-to-face or purely online classes.

ii.Blended learning methods can also result in high levels of student achievement more effective than face-to-face learning.

iii.By using a combination of digital instruction and one-on-one face time, students can work on their own with new concepts which frees teachers up to circulate and support individual students who may need individualized attention. "Rather than playing to the lowest common denominator – as they would in a traditional classroom – teachers can now streamline their instruction to help all students reach their full potential."

iv.The use of information and communication technologies have been found to improve student attitudes towards learning.By incorporating information technology into class projects, communication between lecturers and part-time students has improved, and students were able to better evaluate their understanding of course material via the use of "computer-based qualitative and quantitative assessment modules".

v.Blended learning also have the potential to reduce educational expenses, although some dispute that blended learning is inherently less expensive than traditional classroom learning.Blended learning can lower costs by putting classrooms in the online space and it essentially replaces pricey textbooks with electronic devices that students often bring themselves to class. E-textbooks, which can be accessed digitally, may also help to drive down textbook budgets.Proponents of blended learning cite the opportunity for data collection and customization of instruction and assessment as two major benefits of this approach. Blended learning often includes software that automatically collects student data and measures academic progress, providing teachers, students and parents detailed students data. Often, tests are automatically scored, providing instantaneous feedback. Student logins and work times are also measured to ensure accountability.

vi.Schools with blended learning programs may also choose to reallocate resources to boost student achievement outcomes. Students with special talents or interests outside of the available curricula use educational technology to advance their skills or exceed grade restrictions.

vii.Blended learning allows for personalized education, replacing the model where a teacher stands in front of the classroom and everyone is expected to stay at the same pace. "Blended learning allows students to work at their own pace, making sure they fully understand new concepts before moving on."A classroom environment that incorporates blended learning naturally requires learners to demonstrate more autonomy, self-regulation, and independence in order to succeed.[6] If teachers offer a form of initial program orientation before introducing blended learning strategies, it can better prepare students to feel confident navigating the different components and developing a stronger sense of independence.[1]

Some online institutions connect students with instructors via web conference technology to form a digital classroom. These institutions borrow many of the technologies that have popularized online courses at the university level. Some advantages of blended learning, particularly at a Kindergarten to grade 12 level of education, can be found under the general concept of educational technology. It is also one of the most effective ways for personalized learning at scale.

VI. Disadvantages: Unless successfully planned and executed, blended learning could have disadvantages in technical aspects since it has a strong dependence on the technical resources or tools with which the blended learning experience is delivered. These tools need to be reliable, easy to use, and up to date, for them to have a meaningful impact on the learning experience. IT literacy can serve as a significant barrier for students attempting to get access to the course materials, making the availability of high-quality technical support paramount.Other aspects of blended learning that can be challenging is group work because of difficulties with management in an online setting.Reportedly the use of lecture recording technologies can result in students falling behind on the materials. In a study performed across four different universities, it was found that only half of the students watched the lecture videos on a regular basis, and nearly 40% of students watched several weeks' worth of videos in one sitting.This has further implications for the educator and in how much online resources need to be revealed to the student but also ensure it is at the right level for the intended student. From an educator's perspective, most recently, it has been noted that providing effective feedback is more time-consuming (and therefore more expensive) when electronic media are used, in comparison to traditional (e.g. paper-based) assessments.Using e-learning platforms can be more time consuming than traditional methods and can also come with new costs as e-learning platforms and service providers may charge user fees to educators. Another critical issue is access to network infrastructure. Although the digital divide is narrowing as the Internet becomes more pervasive, many students do not have pervasive and ubiquitous access to the Internet – even in their classrooms. Any attempt to incorporate blended learning strategies into an organization's pedagogical strategy needs to account for this. This is why learning centers are built with goodwi-fi connections to make sure this issue is addressed.

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ROLE OF ICT FOR SKILL BASED EDUCATION

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Abstract
In the world of 21st century Creation of knowledge based society is the begets task in front of education system. Lord Macaulay has introduced content based teaching learning methods to our country. We have established different universities for giving education to the society but today we are finding so many problems in education system. Compare to the world education progress we notice so many problems in education system of India. Today ICT plays important role for making knowledge based society. Researcher has observing the use of ICT in education plays important role in various aspects. ICT is effective in administration, teaching – learning, admissions, library, exam work, staff attendance, on line exam, absents reports, SMS to the parents etc. This study has described how ICT plays important role in higher education.
Key words*- Skill, ICT, Higher Education*

Introduction: Information and communication technologies (ICT) have become commonplace entities in all aspects of life. Across the past twenty years the use of ICT has fundamentally changed the practices and procedures of nearly all forms of endeavour within education, ICT has begun to have a presence but the impact has not been as extensive as in other fields. Education is a very socially oriented activity and quality education has traditionally been associated with strong teachers having high degrees of personal contact with learners. The use of ICT in education lends itself to more student-centred learning settings and often this creates some tensions for some teachers and students. But with the world moving rapidly into digital media and information, the role of ICT in education is becoming more and more important and this importance will continue to grow and develop inthe 21st century. This paper highlights the various impacts of ICT on contemporary higher education.

Objectives of the paper

1) To explain the concept of ICT
2) To explain the role of ICT. In Higher Education
3) To determine the problems for using ICT in rural area
4) To suggest some suggestions for effective use of ICT in Higher Education

Concept of Skill: A **skill** is the ability to carry out a task with pre-determined results often within a given amount of time, energy, or both. Skills can often be divided into domain-general and domain-specific skills. For example, in the domain of work, some general skills would include time management, teamwork and leadership, self-motivation and others, whereas domain-specific skills would be useful only for a certain job. Skill usually requires certain environmental stimuli and situations to assess the level of skill being shown and used.

Concept of Information & Communication Technology: Information Technology is any equipment or interconnected system or sub system of equipments that is used in the acquisition, storage manipulation, managementtransmission or reception of data or information-

Definition of InformationCommunication Technology: Information Technology is a scientific, technological and engineering discipline and management technique used in handing the information, it‘s application and association with social, economical and cultural matters.-**UNSECO**

Information technology is a systemic study of artifacts that can be used to give form to facts inorder to provide meaning for decision making, and artifacts that can be used for organization, processing, communication and application of information-**Darnton**

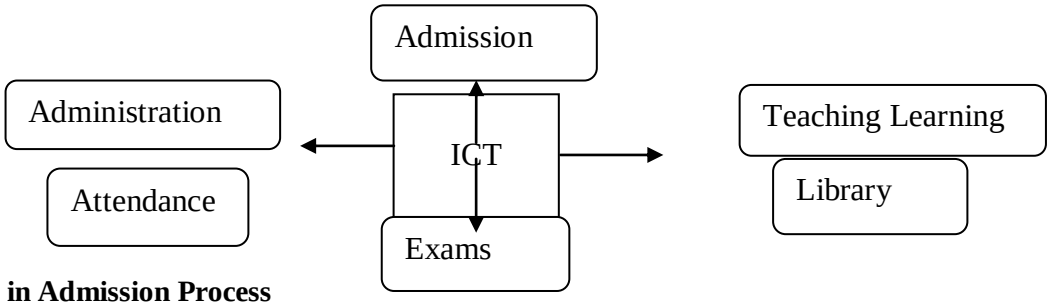
Characteristics of Information&Communication Technology:

Information Technology has the following Characteristics:

* Acquisition, Storage, manipulation, management, transmission or reception of data or information.

* Real time access to information.
* Easy availability of updated data
* Connecting Geographically dispersed regions
* Wider range of communication media

Role of ICT in Higher Education- Globalization and technological changes have created a new global economy powered by technology, fueled by information and driven by knowledge. Higher education is drastically changed after the use of ICT. New methods of learning plas important role for progress of education



Role of ICT in Admission Process

Online Admission Application System has been accepted with widespread praise and as such several institutes have approached us for implementing a similar system for them.

Use of ICT in Current Admission Process:-

A. Acceptance of Forms :

- Institutes are only giving short add for admissions of various courses & then collect online applications forms. It is very essay to collect data of interested students for admissions in various course

B. Handle Queries &problems ofapplicants :

- Problem solving of candidates it is also easy by the use of ICT in higher education. If students will have some problems they will send mail & institutes will solve their query. There is no need to visit any institute &waste our time & money

C. **Sort List Candidates :**

- It is very easy to collect all forms
- Short listing of all admissions form
- Declaration of results & admissions

Use of ICT for Teaching Learning process:- Traditional teacher-centered methods focused on rote learning and memorization must be abandoned in favor of student-centered and task-based approaches to learning. Modern education based on student catered learning. In student centered learning ICT plays very important role. Digital media continually focus on updating students & parents

Use of Power point presentation- Slide presentation software such as PowerPoint has become an ingrained part of many instructional settings, particularly in large classes and in courses more geared toward information exchange than skill development. PowerPoint can be a highly effective tool to aid learning, but if not used carefully, may instead disengage students and actually hinder learning.

Advantages of effective use of ICT in teaching learning

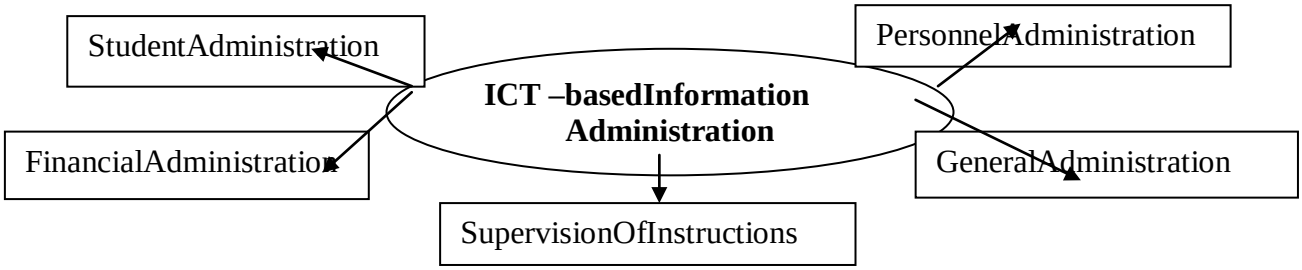
- Engaging multiple learning styles
- Increasing visual impact
- Improving audience focus
- Providing annotations and highlights
- Analyzing and synthesizing complexities
- Enriching curriculum with interdisciplinary

- Increasing spontaneity and interactivity
- Increasing wonder

Use of ICT for Examination: ICT plays important role for development of exam system. Traditional exam methods only focus on testing student's memorization process. But now a days in various courses government focusing on online exam system. It's a technological term for conducting exams on computers instead of the traditional paper and pen based exam, It can be conducted either offline or online. It is a modern method of conducting examination widely accepted and hastily increasing environment of conducting examination through online in all the sectors of education and job. It will considerably replace the traditional paper and pen based exam in future. In present days the availability of the computers and the wide spread nature of the internet has laid a strong foundation paths for conducting most of the prestigious exams on-line. With our usual process of manual examination it takes long time to our results, but in case of online exam student will get an immediate result of their performance with their percentile ranking, that compares how well a student has performed in comparison with other students who have taken exams at the same time. Because of percentile performance and immediate performance reports students can measure their capabilities and save time from long waiting which would have been the case on traditional paper and pen based exam.

Use of ICT in Library: Now a day's Digital library concept is come in higher education. Early networked information systems were developed by technical and professional communities, concentrating on their own needs. The emphasis was on making information available to colleagues and the public, without charge. The digital library of the future will exist within a much larger economic, social and legal framework. For example, musical works represent the livelihood of composers and musicians. Their artistic reputations depend on their work not being changed in storage or transmission. They require payment, as do recording studios and concert halls. Such work will only be part of the digital library, if the library supports their interests. The legal system's task is to codify this rapidly changing economic and social framework. The relevant areas of law include copyright, performance, and other intellectual property, libel and obscenity, communications law, privacy, and international law.

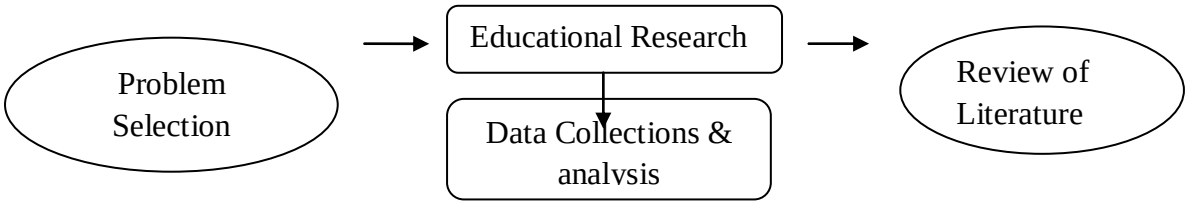
Use of ICT in Educational Administration



Information Communication Technology (ICT) plays an important role in enhancing the quality of education. Administration and management applications of ICT are currently popular in higher education due to its capabilities in facilitating administration activities from data storage to knowledge management and decision making.Raise standards and performance, concentrating in particular on quality improvement and raising the quality of teaching and learning. Enable more effective leadership and management in higher education .Help teachers to concentrate their time on core task of teaching. Enable more effective collaboration between schools and with their local colleges. Provide wider learning opportunities to pupils, their families and the wider community in a home environment

Use of ICT for Students Attendance: Worldwide research has shown that ICT can lead to improved student learning and better teaching methods. A report made by the National Institute of Multimedia Education in Japan, proved that an increase in student exposure to educational ICT through curriculum integration has a significant and positive impact on student achievement, especially in terms of "Knowledge Comprehension"・"Practical skill" and "Presentation skill" in subject areas such as mathematics, science, and social study. However, you can see that there are many education technology solutions provided in the world which may cause confusion among educators about how to choose the right ICT solution.

Use of ICT for Educational Research



The field of education has been affected by ICTs, which have undoubtedly affected teaching, learning, and research. A great deal of research has proven the benefits to the quality of education. ICTs have the potential to innovate, accelerate, enrich, and deepen skills, to motivate and engage students, to help relate school experience to work practices, create economic viability for tomorrow's workers, as well as strengthening teaching and helping schools change. Initially computers were used to teach computer programming but the development of the microprocessor in the early 1970s saw the introduction of affordable microcomputers into schools at a rapid rate

Problems for using ICT at Rural area in Higher Education

Power Challenges: Lack of consistent and affordable electricity is the single greatest challenge in designing a computing infrastructure for rural health informatics.

Environmental Challenges: The physical environment in most rural and remote settings is characterized by some combination of heat, dust and humidity, each of which is a challenge for standard computers. **Connectivity Challenges:** Lack of affordable connectivity and bandwidth is the primary obstacle to several of the most promising health applications for rural areas.

Human Resources and Other Non-technical Challenges: As important as these physical and infrastructural challenges are the many human factor and institutional obstacles to sustainable use in underserved areas. A partial list of these includes:

- Inexperienced computer users
- Lack of trained technical support
- Uncoordinated or absent governance mechanisms
- Widespread poverty and associated security risks

Suggestions for Effective use of ICT in Higher Education

- Government should make budgets provision for ICT developments in various Institutes.
- University also make availability of funding from UGC for ICT development
- Institute also make our own budgets for ICT developments
- IT experts should be available in all computer labs
- Students should get direct experience of ICT use from school life
- Parents also understood the importance of ICT & give such a facility at our home
- Continuous practices of ICT should be given to the students like online exam, Email etc

Conclusion: It is clear that ICT offers opportunities not available previously to educators. Using tools such as e-mail; the Web; audio-, video-, computer–conferencing, both synchronously and

asynchronously, a very rich interactive and individualized learning environment can be created that allows learners to dictate their pace of learning, place of learning,and the company they wish to keep while Learning.

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BLENDED LEARNING

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Abstract

Blended learning is an integration of face- to- face and online learning experiences – not a layering of one top of the other from this perspective; the Internet has been Considered to be a disruptive technology that requires a careful consideration of educational goals, Structures and process. There is evidence that blended learning has the Potential to be more efficient when compared to a traditional Classroom model. The evidence is that students achieve as well or better, on exams and are satisfied with the approach. Blended learning is higher education provides a vision and a roadmap for higher education Students to understand the possibilities or organically blending face-to-face & online learning for engaging, a fruitful, beneficial and meaningful learning experiences. Blended learning is a term increasingly used to describe the way e- learning is being combined with traditional Classroom methods & independent Study to create a new hybrid teaching methodology. The term-blended learning is generally applied to the practice of using both online & in- person learning experiences when teaching. A blended learning approach provides ultimate flexibility in present Content.

Introduction: Technology based training emerged as an alternative to instructor- led training in the 1960's an mainframes & mini Computer. Research has found that blended courses have the potential to increase the student learning out comes while lowering attrition rates in comparison with equivalent fully online courses. Blended learning has the proven potential to enhance both the effectiveness & efficiency of meaningful experiences.

Meaning and Defination of Blended learning: Blended learning is an education program (formal or non formal) that combines online digital media with traditional classroom methods. It requires these physical presence of both teacher and students, with some element of student Control over time, place path or pace. The concept of Blended learning is rooted in the idea that learning is not just - a- one time event – learning is a continuous process. Blended learning provides various benefits over using any single learning delivery medium alone" – Singh (2003)

"Blended learning should be viewed as a pedagogical approach that Combines the effectiveness & socialization opportunities of the Classroom with the technologically enhanced active learning possibilities of the online environment, rather than a ration delivery modalities"

Dziuban, teart – man & moskal (2004)

Blended Learning is a Student Centered approach to creating a Learning experience where by the Learner interacts with other student with the instructor Content- through thoughtful integration of online and face-to-face environment.

Desirable qualities of Blended Learning:

The most obvious reason why schools and teachers enjoy a blended learning model in that it increases engagement. With blended learning Students.

Blended learning is a method that has proven to be not only effective interms of learning outcomes, but ranks high on rating of Satisfaction with Students and instructors.

Blended Learning also referred to as hybrid Learning in a Combination of Learning modalities and web- based Learning delivery and is Carefully designed, using a Customized instructional strategy that leverages the Strengths of each when implemented effectively, a blended Leanings program can make better use of instructional resources & facilities and increase class availability thus speeding up a pathway to graduation for students.

Models of Blended Learning:

Blended learning can be grouped into six distinct models based on difference in teacher roles, physically space, delivery methods and scheduling.

1) Face- to- Face driver: In this model the teacher drives the instruction and argument with the digital tools. The program that fit in the face-to-face driver category all retain face-to-face teachers to deliver most of their curricula. The physical teacher desploys online learning on a case-by-case basis to supplement or remediate often in the back of the classroom or in a technology lab.

2) **Rotation Model:** A course in which students rotate on a fixed time schedule between Self- paced online learning and sitting in a classroom with a Face- to- Face teacher or at the teachers discretion between learning modalities at least one of which is online learning.

The rotation model includes for sub- models:

a) Station Rotation
b) Lab Rotation
c) Flipped Classroom
d) Individual Rotation

a) Station Rotation: A course or subject in which students experience the rotation model within a Contained Classroom, or group of Classroom. In the station rotation model student rotate through all of the stations.

b) Lab Rotation: A Course in which students rotate to a Computer Lab of the online Learning Station.

c) Flipped classroom: A course or subject in which students participate in online learning off-site in place of traditional homework. The primary delivery of content and instruction is online, which differentiates a flipped classroom from students who are merely doing homework practice at night.

d) Individual Rotation: A course or subject in which each student has an individualized play-list and does not necessarily rotate to each available station or modality.

3) Flex model: In this model, online learning is the backbone of student. Students move on an individually customized, fixed time schedule among learning modalities. Programs with a flex model feature an online platform that delivers most of the curricula. Teacher provide onsite support on a flexible and adaptive as needed basis through a person tutoring sessions and small group sessions. Many dropout recovery and credit recovery blended programs fit in this model.

4) Self Blend: Student chooses remote online courses to supplement their curriculum. The nearly ubiquitous version of blended learning among high school students is the self blend model, which encompasses any time students choose to take one or more courses online to supplement their traditional school catalog. All supplemental online schools that offer a via carte courses to individual students facilitate self blending.

5) On-line Lab: An online lab delivers entire course through online but under bricks and mortar location. Often students who learn through online bal also take traditional course and have typical block schedule.

6) Online Driver or Enriched virtual model: In this model students have required face – to face learning sessions with their teacher of record and then are free to complete their remaining course book remote from face-to-face teacher. Many enriched virtual programs began as full time online schools and then developed blended program to provide students with brick and mortar school experiences.

Purpose of Blended Learning:

A critical element to the blended learning concept is reduced seat – time. Reduction of time that students spend in a face-to-face, traditional classroom format serves several purposes that offers several benefits including.

- Institution have the potential to manage instructional and facility resources more efficiently, teaching more students within a semester.

- This approach is beneficial for students providing the convenience and flexibility associated with online learning, freeing up time for work, family obligation or extra curricular activities.
- Blended learning develops skills set for students that otherwise would not be possible in exclusive face-to-face instruction. Skills includes digital citizenship, information management skills, self-directed learning and web-research and collaboration skills.

Advantages of Blended learning:

Blended learning is a natural idea of learning approach. The following are some of the advantages or benefits of blended learning.

1) **Enhanced social interaction, communication and collaboration:** Blended learning connects people, activities and events through technology. It is a key tool for building and sharing cultural understanding on a global basis.

2) Offers flexibility and efficiency: It combines offline and online learning where the online learning where the online learning refers to the use of Internet in the learning activities. The Internet provides flexibility and efficiency in the teaching activities. The Internet provides flexibility and efficiency in teaching and learning activities.

3) Extend the Reach & mobility: The emerging of information and communication technology has changed the learning approach. With increasing use of mobile & wireless technologies, the time & place for learning can take place anywhere at anytime.

4) An opportunity for students to practice technology skills in navigating online course material and creating their own digital content for assessment.

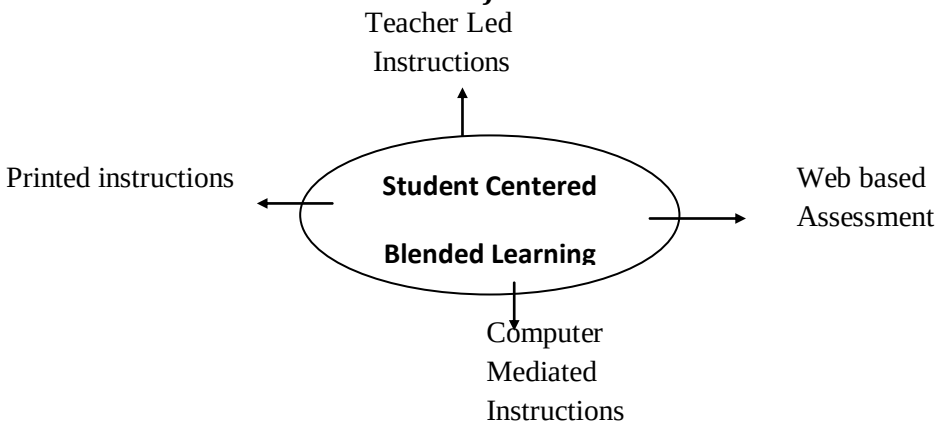
5) Increase interaction in student – teacher: It increase student – teacher and student-student interaction through the use of communication tools like discussion forums, blogs and shared web content on the electronic white board.

6) The ability to reserve face-to-face time for interactive activities, such as higher-level discussion small – group work, debates, demonstrations or lab activities.

7) An increase in learning outcomes measures & lowering of attrition rates compared to fully online courses.

8) For students the appeals of Blended learning includes.

- Flexibility and the freedom to learn anytime, anywhere.
- Some level of control over the pacing of their learning. Difficult concepts can be reviewed as often as necessary.
- More engagement content that they can create and use their own initiative and network to shape.
- A blended program can be the best of both world, and though a significant undertaking, once implemented successfully such a program has significant benefits for the institution and students.
- Students embrace flexibility embrace being a connected world that the web provides. It is no wonder that blended program rank high in learning outcomes and satisfaction Blended learning programs truly are the best of both the words for students instruction and the institution.



Limitations of Blended Learning:

1) Lack of motivation: The type of Blended learning can worsen the motivation and willingness of your participants Not every blended learning model is applicable to every age category.

2) Basic technology knowledge: Expect participants to have a basic knowledge of technology. If children don't know what to do, because of the lack of technology knowledge, they will get annoyed.

3) The technology challenge infrastructure: Essential infrastructure within an educational institution or particular class acquiring software technology and hardware for Blended learning program. So Blended-learning program can be costly.

4) A high level of self –discipline or self – direct is required, learners with low motivation or bad study habits may fall behind.

Teachers role in Blended learning: The role of teacher have changed and continue to change from that of instructions to that of constructors, facilitators coaches and creator of learning environment. They must encourage higher levels of cognitive skills promote information literacy and nuture collaborative working practices. These new responsibilities are greatly facilitated by the use of ICT in teaching. Teachers in Blended learning must:

1) Professional development: A teacher should technically competent to evaluate educational software create effective computer based presentation search Internet resources. Keep up-to-date as far as evaluation technology concerned. In blended learning program, the teacher should because data as an integral part of the planning process for each student and whole class. To help teachers learn new roles and to understand blended learning many blended learning programs requires that the teacher take a training themselves as a part of required professional development.

2) Teacher needs new pedagogical skills so they can take full advantages of the potential of technology to enhance the learning process.

3) To help student in a blended learning environment, teacher should model learning and show students how to find information and answers. Have strategies in place to keep students on – task engaged and motivated. The blended learning instructor helped students move beyond simple. "Regurgitating rote responses to learning to apply content to new situations."

Conclusion: Adopting a Blended Learning offers the appeal to combining different learning elements using the power of ICT while retaining a human touch. A Blended learning model should describe a planned and deliberate educational activity that integrates student – centered learning, classroom based teaching and learning with mobile and web-based online approaches based or individual learners & their specific needs.

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REIMAGINING STUDIES BY USING SMARTPHONE APPLICATIONS

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Abstract

Today's world is digital world and it is getting smarter day by day. In this world our learning should be smartand this is need of time. Nowadays people are constantly using social networking sites, lots of apps and many more. So what if we make a good use of this digital stuff like ICT tools in learning process? It will be very helpful in learning. This will give a result in learning and studies. This process just needs proper understanding and awareness about social networking as well as ICT tools among not only teachers but also among students. We should spread awareness about ICT tools so that it will help strong educational structures. There are so many things in ICT to talk about as ICT is a vast field. In this we are going to focus on use of Whatsapp in learning. How it can be used? What will be effects of using it in learning? In learning will help the students to understand their subject more efficiently and enthusiastically. Let's make study and learning more interesting by blended learning.

Introduction :- Today, educational mobile technology is frequently used in online instruction in universities worldwide .It offers students increased choices and opportunities in the context of online instruction. Online courses that incorporate mobile technologies are becoming a more frequent component in universities, and the number of web-based mobile courses has increased (Inan, Flores, & Grant, 2010). The information and communication technologies shared between online students through social interactions on mobile tools promote opportunities for online cooperation and collaboration .Mobile educational technologies provide online learners with opportunities to communicate and share knowledge. Additionally, non-traditional students need an effective blended online learning strategy to pursue blended courses. For these reasons, the present study is conducted with non-traditional students to explore the effectiveness of the blended scenario in a course using the WhatsApp mobile application compared to 100% in-class learning. The study measures the effectiveness of the blended mode in terms of enhancing students cognitive and attitudinal levels in the context of a course entitled Scientific Research Methods in Information Science.Blended learning is very useful concept in today's world. In today's world most of the students use smart phones.

How we can make it work: -The first essential step to take into account is establishing the guidelines. We went over all our rules with the students, so that they knew exactly what was expected from them. In a similar way to how classroom rules are introduced the first day of class, the way in which you present the Whatsapp project to your students is going to set the pace for the rest of the activities. It is vital that students are aware of both what they are supposed to do, and how they are going to be assessed. As regards this last point, it is also important that you are clear on the rubrics that are going to be taken into account to correct students productions and if and when they are going to be graded. It is also advisable to ask parents for their permission to use Whatsapp in the classroom (in the case of younger learners), or to let them know that some assignments were going to be carried out using this app (in the case of older learners). Needless to say, such rules and criteria have to be designed in such a way that they match your own classroom reality.

Teachers can do following things to apply ICT in tradition learning:-

A) Creating the group: - The next step, as expected, was creating the Whatsapp groups. At the beginning, we created one group for each class, in which all the students from said class were included, and we performed a "trial" activity for students to fully understand how the process would work. Then, we considered it was sometimes necessary to create groups of 4 or 5 students (we were included in all the groups although we didn't participate in all the chats). Creating smaller groups

facilitated our follow-up work, fostered more personal assessment and improved the integration of all the learners since we kept on changing the members of the groups for each of the tasks. This methodology was also useful when some students didn't have their phones with them – or simply didn't have a cell phone at all – since it allowed for them to work in pairs or trios and send their answers to the smaller groups.

B) Implementing the activities: - Taking into account the context and characteristics of each group, we implemented the Whatsapp activities in different ways: as compulsory assignments to practice topics dealt with in class, as homework, as extra activities for fast learners (with the benefit of having them in silence), as entertaining and relaxing activities at the end of the class or as rewards for good behavior. What is important to highlight is that the first message for each specific activity must be clearly organized, since that was the chat initiation point and the instructions needed to be fully understood by all the students.

C) Reading: - Developing reading skills is one of the easiest tasks on Whatsapp since we can provide plenty of activities to improve reading comprehension by simply having a text on our mobile phones. However, we should bear in mind that the texts must be short as students may not have big screens to be able to read comfortably. The idea of practicing reading comprehension through Whatsapp is not to replace the extensive reading done in the classroom. These short texts are meant to reinforce the skills they have already learnt in class, and to provide real life material – such as jokes, short articles on trendy topics, pieces of ad, etc. One major advantage of these tasks is that they can be done anytime, anywhere: at home as homework, or in the classroom for fast finishers – and it helps keep them quiet!

D) Writing: - Writing is another useful skill we can easily make students practice via Whatsapp… and it's more fun! Just remember that the assigned writings should be shorter than the assignments on paper format. We suggest that this type of activity be used to foster purely communicative and informal writing. Students feel really motivated doing these tasks since it's something they usually do: they use Whatsapp to communicate on a variety of topics via written language. These activities can be adapted to fit even the lowest levels, as shown in the beginners' activity portrayed in Screenshot 4, in which students uploaded pictures and made comments on them.

E) Listening: - This skill is probably one of the hardest to practice in the language classroom, mainly due to lack of equipment, background noise in the case of large classrooms and time constraints. Whenever these obstacles fail to appear and the listening activity goes fine, we always have that one student who finishes first and "spoils" the answers for the rest. It is common knowledge among teachers that most students find listening comprehension difficult. For these reasons, we consider Whatsapp a useful tool to give all students the opportunity to do the task at their own pace. We recommend doing these exercises as homework, when they can get the most out of the activity. However, it can also be done in the classroom, as long as they have their own earphones.

F) Speaking: - Oral practice in the classroom is another complicated issue. More often than not, language classrooms are large in numbers, have little class time and many topics to cover. This is when Whatsapp becomes really handy. Just by sending an audio message, students can complete a task. It offers teachers the opportunity to check on pronunciation and fluency, and it gives pupils the chance to be assessed personally. Furthermore, these audio files may become records of students progress.

How it can be used in library work?

There are many people who are not able to read books because of time problem or they may not able to go in the library for so reason. We can do one thing we can record those books in audio format and save it. And we can share it with those people. In this way their problem will be solved.

Now, who will record this? OR who will give time for this? So there may be a solution for this. There is government's scheme for needy students called 'EARN & LEARN' which is called as 'KAMVA AANI SHIKA' in MARATHI. Under this EARN & LEARN scheme if we give this work to those students who need some financial help. Actually help is not right word for this because they are earning it on their own so it may give them financial support. So By recording this books in these students voice not only helpful for college but also those students. In this way we can build letter library network.

Conclusions: - Once our project was in motion, we noticed that most students were enthusiastic about using Whatsapp in class and got involved in the activities. The tasks became more significant to them and those students who did not like speaking in class found a way of expressing themselves by means of a message or even an audio file. It amazed us how an app as simple and everyday life as Whatsapp could change so much our classroom reality and bring some of the outside, real world into our classes. But actually, the final message we would like to give all those teachers out there who might be reading us right now is to try. Simply that, try. It's not as complicated as it seems, and we promise it's worth it. Hence By combining OLD TRADITION and NEW INNOVATIONS in our learning process we can definitely REIMAGIN LEARNING. This is the end or our topic but this may be the beginning of new era. Let's make new way of learning...

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RECIPROCAL TEACHING IN SCIENCE THROUGH CLASSROOM BLOGGING

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Abstract
Today students are exposed to all kinds of technological devices in their daily life which are very handy. Among various options Classroom blogging is an excellent way to use the internet in smart phone. Blogging increases appearance of student on the internet in fruitful way. If used really smartly, a blog can serve as an effectivelearning environment that can extend beyond the school bound frame. Blogging serves as an excellent platform to read, write and interact on topics of interest which motivates students to learn. Reciprocal teaching is an instructional activity that creates a dialogue between teachers and students to construct the meaning of text in science. Palincsar (1986) believes the purpose of reciprocal teaching is to facilitate a group effort between teacher and students as well as among students in the task of bringing meaning to the text.
Keywords: *blogging, technology, science, reciprocal teaching*

Introduction: Scientific literacy is the ability to read and write science content effectively and meaningfully. (Baker et al. 2008). There has been a shift in the minds of curriculum developers toward the idea that students do, in fact, need to practice their reading skills in the science classroom to learn science. Traditionally, writing to learn science has taken the form of paper writing, article writing, research reports and lab reports. Reading and understanding encourages critical thinking, cognition, and metacognition by requiring students to actively think and process concepts taught in school. Blogging with students is one of the most enriching educational experiences. New technologies have changed the way of student-student and student-teacher interaction outside of the class-room. Smart phones connect peers, both locally and glob-ally. Taking this as a problem or opportunity classroom blogging helps to serve the purpose. Mostly in classrooms students read and write exclusively on print media. Hull and Schultz (2001) supports this technological disconnect. Student experiences at home are different than schools. Rheingold identifies "a basic distinction between education and schooling: students, especially young, continue to learn and to adopt new media but institutions, teachers are much slower to change their ways" (2004). Student interest and handy use of online communication should be incorporated into teaching. One way to integrate e-reading and writing into the class-room is with a weblogging.

The Role of Classroom Blogging in Science Learning

About blogs: Merging reading, writing and technology as keys for student learning in science, specific tools such as the weblog should be used in the classroom. A weblog, or blog, is a personalized website which allows collection of entries. The posts or entries can be in the form of comments, videos, and pictures. Student readers can stay updated by subscribing to the blog. Blogs are meant to share writing samples, pictures, and videos with friends, family, and strangers. Not only students but other people may participate and comment on a blog in collaboration. Using a blog in the classroom; teacher can also increase reading abilities, motivation, challenge critical thinking skills by extending the classroom walls, and cash on student interest in technology. Blogging has become so popular in today's society that it has its own language.All of these approaches can be taken to integrate science, reading, and technology, while opening up the gate of online communication.

About reciprocal teaching in Science: Reciprocal teaching is based on the metacognition theory. It follows 4 strategies – prediction, questioning, analysis, summarizing. Reciprocal teaching is best represented as a dialogue between teachers and students in which participants take turns assuming the role of teacher. -Annemarie Sullivan Palincsar.

The **prediction** phase involves readers in actively combining their own background knowledge with what they have gathered from the text. With a narrative text students imagine what might happen

next. With an informational text, students predict what they might learn or read about in subsequent passages.This self-awareness of one's own internal thought process is termed as metacognition. **Questioning** involves the identification of information, themes, and ideas that are central and important enough to warrant further consideration. Questioning provides a context for exploring the text more deeply and assuring the construction of meaning (Doolittle, Hicks, Triplett, Nichols, & Young, 2006) **The** clarification/analysis **strategy focuses on training students in specific steps to help with decoding. Clarifying involves the identification and clarification of unclear, difficult, or unfamiliar aspects of a text like awkward sentence or passage structure, unfamiliar vocabulary, unclear references, or obscure concepts. Clarifying provides the motivation to remediate confusion through re-reading, the use of context in which the text was written and/or read, and the use of external resources (e.g., dictionary or thesaurus) (Doolittle et al., 2006).**

Summarization requires the reader to perform the task of discriminating between important and less-important information in the text. The *Summarizer* will use his/her own words to tell the main idea of the text.

Smart Learner and smart Technology: The ongoing century student shows only finger count similarities to a student of the past era. Learners are been exposed tremendously to the technologies in ways never seen before. Prensky (2001) calls these students "digital natives," because they were born into a digital world, enriched with computers and smart devices such as smart TVs, Smart phones, computers and iPods. Such smart generation expects technology to be a foundation for the classroom, not just a tool. However, their knowledge and interest in technology is rarely used in school especially for learning. The gap between their at-home and at-school experiences regarding reading is increasing. They read a lot on smart phones but hardly show interest to read in classroom specially science content. Incorporation of Technology in the classroom can take two different avenues: learning *from* technology and learning *with* the technology (Irving 2006). Learning from technology usually involves tutorials or computer drilling practice. This type of learning emphasizes more on the computer program that teaches the student. Learning by technology uses simulations and online tool. Indeed Technology alone will not improve student achievement instead if implemented into the classroom in a "pedagogically sound" manner, student achievement can soar (Irving 2006, 16). The smart learner creates smart student of the smart nation.

Read to Learn: Reading is an important part of the active science classroom (Baker et al. 2008; Graham, Harris, and MacArthur 2006). Reading and discussions allows students to acknowledge their prior beliefs and experiences and also provides an opportunity for students to use critical thinking skills. Teachers need to coach students and provide them with ample opportunities to improve reading skills to enhance critical thinking (MacKnight 2000). By blogging, students are required to read information, filter through the relevant pieces, restructure the information, organize it, and determine a meaningful way to summarize it. All of these reading activities foster critical thinking. One way to connect to the real world is to have a real-world audience. For the most part, students who read in the science classroom know that their teacher will probably be the only one who understands their meaning. There is little interest in reading if only oral exam grade is the sole motivating factor.

Differentiated Instruction: A blog meets different learning styles in the classroom. Students may be better in visual, auditory, kinesthetic, social, logical, verbal, or solitary in learning. The best lesson is the one that embrace the most styles of learning. Classroom blogging can be differentiated to meet the needs of all students. "I find it very enjoyable to blog and I can relate to topics easier than I would sitting in a classroom and being lectured to," blogged one high school biology student (Lare 2008). It is for this reason that blogs are so attractive.

Implementation: Teacher educators may struggle with the decision to incorporate a blog into the classroom curriculum. Hence teacher should be comfortable with technology and set parameters and expectations and identify ethical Internet usage practices. Student access to the Internet, smart phone; at school or at home, should be taken into consideration before commencing a classroom blog. School should have access to blog sites such as www.bloglines.com and edublogger. When any Web site is

accessed it is critical to recognize the Family Educational Rights and Privacy Act (FERPA) regarding pictures of students, student work, and identification of students by first or last names. Tying up these loose ends will reduce future difficulties with the class-room blog.

Implementation of Reciprocal teaching through blog

Orientation: A programme will be generated on the blog to orient students about reciprocal teaching strategy. It will include orientation about information, theoretical background, need and importance, objectives, methodology of teaching learning, steps, group formation, role of student, and significance of reciprocal teaching. A sample lesson plan will be shared.

Demonstration: A teacher will share and upload video, pictures, classroom live clips about implementation of reciprocal teaching. A lesson plan format can be discussed over a blog. A demonstration will be given.

Assigning roles to the students: In a group of four; teacher will assign roles to the students as predictor, questioner, analyzer and summarizer. A science text will be shown to the group over a blog and all steps will be analyzed.

Sharing experiences of students: Students are expected to perform the activity in group as per the role assigned which can be monitored by teacher through blog and guided whenever required. Students will leave their comments about the implementation which can be clarified and assessed by teacher online.

Feedback: Overall Feedback can be posted in the form of video in as a text in content where other schoolmates, parents, teachers can also share their views.

Significance: A classroom blog will increase interest about scientific reading of content all over the world ant where any time.This innovative method will get familiarized over media. One can refer the blog and update and implement in teaching learning process. The process will get better.Reciprocal teaching in science will improve prediction, analysis, questioning and summarizing ability among students.It will lead to an interesting implementation of ICT in science. The integration of technology into the class-room provides an easy and quick accessible venue for students to share their voice through a blog.

Conclusion

Blog will increase student learning through the use of a student's preferred learning style, personal interest, and engagement. The immediate publication of a blog and the participation of a worldwide audience increases student motivation for reading. Blogging can serve as a constructive tool in a science-learning environment. Blogs extend the walls of the classroom, creating a learning environment in any place that has access to the Internet. A worldwide audience makes writing authentic and applicable. Technology such as the weblog is simple to use and encourages students to put their reading skills to work by reciprocal teaching in science.

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USING PROJECT BASED LEARNING IN PHYSICAL EDUCATION

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Introduction: Project Based Learning (**Project Based Learning**) often seems best suited for academic subjects, and when it comes to physical education and play, it's difficult to see how **Project Based Learning** fits. Some creative planning, projects have a place in the gym or on the ball field as much as they do in the classroom. Here are some ideas and tips. Andrew Miller explained one way this could work. He presented a scenario where high school seniors were given the task of creating PE units for middle school students, with the goal of encouraging the seniors to apply concepts and strategies they learned in their own PE education to create an engaging unit appropriate for middle school students, similar to those the PE teachers themselves would create. As the students focused on effective solutions, they were required to perform the activities in their unit to ensure that exercise and play were encouraged and achieved, and to prove the units would provide an adequate level of activity. One reason PBL is not often brought into PE classes is that it's difficult to find a way to encourage physical activity while working on a project. It's easy to think of projects about health and wellness that may connect to PE class – such as "create a plan for a healthy lifestyle" – but those do not typically involve actual physical activity. While it may require some creativity, it is possible to ensure students are getting physically active while problem solving, conducting inquiry, creating a product, and all the other elements of **Project Based Learning.** Inform action and communication technology has become an important part of the global world and one of the basic building blocks of modern society in very short time. Sports and opportunities of play, consistent with the rights of the child to optimum development, has been identified by UNICEF as among the crucial components to the delivery of quality education. We all know that incorporating technology in classrooms is a big focus for schools. From reading to science projects, tapping cutting-edge technology can improve the learning process. It can actually be a big advantage. Being part of the Education Tech movement doesn't stop once you enter the school gymnasium. Here's how applying modern technology can benefit students and enhance cross-curricular engagement.

Here are some ideas and tips how (PBL) is useful for physical Education. :

Know the Educational Goal: PBL is effective because it involves the students on a deeper level, providing them with real-world skills they can take into college and beyond. Both of these benefits make it worth considering as an addition to the traditional gym class. While the student's main goal is to create and present a product, the entire project needs to canter on the unit's educational goal. From the beginning, teachers should have a clear understanding of what they hope to accomplish through the **Project Based Learning** process, whether its meeting PE curriculum standards or seeing students excited and engaged by physical activity. The central focus of Gold Standard **Project Based Learning** is giving students a problem or question they have to answer through the project. The problem or question has to go beyond simple knowledge — it needs to require students to apply the knowledge they have gained.Through experience and instruction, knew what activity and play looked like. They were also provided instruction on standards from the National Association for Sports and Physical Education that showed measurable ways they could determine if physical activity and appropriate learning were taking place.

Keep the Task Open Ended: The teacher may have their students include a skill they're working on to help them practice, such as dribbling the ball, cardio stamina etc. The students are then given free rein to experiment and create, designing a game that will incorporate the skill. The open-ended nature

of the challenge makes experimentation natural. Similar ideas include planning and conducting an Olympic Games with original events, or designing and using a running course around the campus (or out in the community, if possible) with obstacles or exercise stations with varying levels of challenge. Reflection and student voice and choice are crucial parts of **Project Based Learning**. For a PE classroom attempting to include PBL, keeping the challenge or task open ended is essential; this is done best by asking students to craft something new. Instead of simply quoting back knowledge, they will be involved in inquiry and innovation.

Utilize Student-Owned Devices: Many high school and junior high students, and in some cases younger students, have a Smartphone with them at all times. This reality is part of today's evolving society that places great emphasis on connectivity. Students often view mobile devices as extensions of themselves, so it only makes sense to leverage the power of these devices. Tech tools and physical education can go hand in hand. Take the use of Google, for instance. Incorporating a lesson in which students move from various stations. An activity such as this lends itself to student collaboration and allows the instructor to interact with small groups for a personalized experience. A scavenger hunt, or similar type of activity, could easily include any number of mobile apps to increase student engagement.

Take advantage of Physical Education Apps: There are multiple education apps that can be integrated into P.E. curriculum. Most notable are apps that involve picture or video analysis. These can be used to examine athletic movements in an attempt to critique and improve upon physical skills. An app called Coach'sEye allows for in-depth observations by way of slow motion video. When it comes to using apps, the only way to know if it'll be successful is by trial and error. If an app doesn't effectively deliver what you had intended, there's a teachable moment in that, as well. Getting your students involved and actively invested is the ultimate goal.

Make the most of the technology use friendly: Wearable tech includes new technology and has completely altered the way we acquire and evaluate personal data. Many physical education departments recognize that feedback from daily activities is important and thus, have begun including the use of heart rate monitors and pedometers into their programs. Students are able to track and analyze activity levels, heart rate, and the number of steps taken throughout the day, among other data. Fitness tracker can really improve the awareness that students have about their perceived activity levels versus what they are truly accomplishing. They can also help students set and achieve fitness goals. Today's students are incredibly open-minded and using technology helps deliver impactful, engaging lessons. If you can get your students excited about how technology can improve their health and lifetime fitness, then you've passed along an invaluable lesson that will serve them into adulthood.

Use Peer Feedback: Peer feedback works well in the PE classroom. In the example of a student creating a new game, the class can be asked to play the game. This gives the students more physical activity, and also gives the game's creator crucial feedback as to what works and what doesn't. Revision, another important spoke on the Gold Standard wheel, is often necessary to perfect the game.

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A STUDY ON USAGES OF APPLICATION (APPS) THROUGH ICT IN INDIANSECONDARY SCHOOLS

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Abstract
After using internet and computer, all countries come near each other and are exchanging information and technologies. India also implements the use of computer and internet in education so that its next generation can take the advantage of technology and can prepare for globally competitive environment. In latest technology of mobile and tablet world, daily new applications are launching. Education related applications are also launching which are changing the mode of education and are reducing the weight of student's bag. The objective of this paper is to know usage and skills to use of applications in ICT by various stakeholders such as Students and Teachers Etc in secondary schools.

Keywords*- ICT, secondary education, applications, student, teachers and creativity etc.*

Introduction: Invention of computer and internet reduce distance among countries in the World. It gives opportunities to exchange information and knowledge across the World in few seconds in one click. Computer and internet revolution give new direction to international relationship by exchange thoughts and new invention from one country to another without cross the border.In mid of 20th century 1954, India understood the importance of computer and involved to develop the design first general purpose computer, which was completed by Tata Institute of Fundamental Research (TIFR)in 1956 and also Indian industries adopted computerization in 80th saw. In the beginning of 21th century India became a big outsourcer of software engineers and USA, Japan, Australia, and Canada like developed countries demand more software engineers from India. IITs, NIITs and private institutes are preparing these engineers. In 1984- 1985, Indian government accepted the importance of computer education in secondary schools.**Definition of ICT**

1. According to UNESCO (2002) ICT refers to forms of technologies that are used to create, store, shareor transmit, exchange information. ICT includes radio, television, video, DVD, telephone(fixed line and mobile), satellite systems, computer and network hardware and software; (equipment and services associated with these technologies, such as videoconference electronic mail)"
2. The United Nations Development Programme (UNDP) defines Information and Communication Technologies: "ICTs are basically information-handling tools - a varied set of goods, applications and services that are used to produce, store, process, distribute and exchange information. They include the „old" ICTs of radio, television and telephone, and the „new" ICTs of computers, satellite and wireless technology and the Internet. These different tools are now able to work together, and combine to form our „networked world", a massive infrastructure of inter-connected telephone services, standardized computing hardware, the internet, radio and television, which reaches into every corner of the globe".

ICT provides opportunities to children for participatingcreatively in the establishment, sustenance and growth of a knowledge society leading to all around socio-economic development of the nation and to be geared for global competitiveness. ICT also provide the opportunities for gaining equality of education. Those student who belong to rural area, can get e book or digital book from internet and can attain lecture of good teacher by video conferencing. It also gives opportunities to student for learning with their speed and store large memory in hard disk.

NCERT and HRD Ministry recognized the importance of ICT and make visions which are

1. After completing school education students should be confident, creative and productive users of new technologies and more importantly understand the impact of those technologies on society.
2. After completing of their compulsory schooling, students can prepare for adult life.
3. Enable equitable and cost-efficient delivery of education to create a strong equitable, imaginative and economically strong knowledge society that which is globally integrated.
4. Promote creativity, empowerment and equality, producing efficient learners, problem solvers, potential researchers and potential entrepreneurs.
5. Support education and training workers to acquire and maintain the skills needed to take fulladvantage of the potential of ICT to transform learning.

In ICT field, mobile and tablets related applications brought a revolution in education. These applications can easily access through internet and some of them can operate during off net.

Objective of Study

1. A study of Usage and skills to use of applications in ICT by various stakeholders such as Students and Teachers Etc in secondary schools

2. Impact on learning process.

Methodolog: This is a descriptive type study and data collection is secondary type. Data is collected through HRD ministry website, NCERT website and policy letters, concern journals, research papers and thesis. The Information and Communication Technology (ICT) in Schools Scheme was launched in December, 2004 to provide opportunities to secondary stage students to mainly build their capacity on ICT skills and make them learn through computer aided learning process. The Scheme is a major catalyst to bridge the digital divide amongst students of various socio economic and other geographical barriers. The Scheme provides support to States/UTs to establish computer labs on sustainable basis. It also aims to set up smart schools in KendriyaVidyalayas and Navodaya Vidyalayas, which are pace setting institutions of the Government of India to act as "Technology Demonstrators" and to lead in propagating ICT skills among students of neighbourhood schools. Based on the experience gained so far, the Scheme was revised, in July 2010.

In advancement of technology, India forwards its step for digitalization. Now a day India wants to convert digital India. New cheap mobiles and apps are launching daily which are helping for completing this vision. Which are also giving the opportunities to student for studyinganywhere anytime.Ministry of human resource development of government of India launched an educational application,by which all school come together at one platform. Its name is E-basta. Department of electronics and information technology developed this online portal to enable schools to browse and compile electronic resources on various educational materials. This portal available free for all studentsfor use .

App is abbreviated form of the word "application" in a software program that is designed to perform a specific function directly for the user or, in some cases, for another application.

Different types of apps include:

1. Web app – stored on remote server and delivered over the internet through a browser interface.
2. Native app – has been developed for use on particular platform or device.
3. Hybrid app –combines elements of both native and web application. Hybrid apps are often mentioned in the context of mobile computing.
4. Killer app – a program that intentionally or unintentionally gets you to uy the system the application runs on.

5. Legacy app - has been inherited from languages, platforms, and techniques earlier than current technology.

Applications decorate withvarious type of contentwhich facilitate to get any information at same platform.E- basta application is a valuable framework in enabling schools to reach out to high quality, multimedia content. It is not bound in any specific language, it is available different languages. It resolves logistic difficulties of physical books and resources.It is used by different stakeholders. It can be downloaded from any android based tablet, mobile phone etc via E-basta app. The app is available for free download from the portal.

Teacher can give the unique name of the e-basta. The student can search for that e basta on e basta portal and download it. A number of attributes are also available for a basta. Publishers can upload digital books without copy right regulation.

Stakeholders which are students and teachers can use which describes as-

Students:- Generally a perception was that ICT can use in mathematics, science, and technical subjects, but scenario applications are facilitating for learning languages like Hindi ,English and regional languages and also facilitate theoretical subjects like history, sociology etc and can also learn music, art. Student can create unique e basta under guidance of his teacher from class I to class XII. These e-books and study materials uploaded by publisher which recommend by teachers, school administration and educational board. E basta is beneficial for those student who live in villages, there are not good and big book shop available, where student are facing difficulty for getting require books and also face deficiency of good teachers. Many student also face a difficulty, this is related with their previous knowledge for concern subject. But they lose memory. E basta navigate these student and they can resolved these problems very easily in few second by one click. It has videos, handouts, documents, posters, text, simulation, animation and audio books etc. Student can learn their speed and can get feedback after exercise of related topic. It develops creativity in students.

Teachers: Generally teachers use chalk and black board in their teaching in secondary schools in India. But acceptance of new technologies in secondary schools by government of India, it is necessary that teachers should update themselves with new technologies and implement in their teaching.E basta contain e-books which is also known as digital books these are uploaded by publishers after recommended by teachers. This is a platform which gives the opportunities to teachers of country for sharing their knowledge, teaching skills each others. Teachers can put their teaching experiences and can develop their teaching skill. They can get teaching aided contents and make their teaching effective and impressive. Research work can also upload in this app which is also helpful for other teachers. Teacher can be created an animation content, can be made a video on his lecture and can be uploaded which is beneficial for those students who live in rural area. This app is motivated to teachers for adopting new technologies and teaching methods which can be connected the student to the World.

Conclusion: India is developing country. It needs reforms in many areas for becoming developed country. Education field also require for reformation and innovation. Scenario India requires high skill and creative full citizen who can compete in a global competitive environment. Education prepare for future life. After implantation of ICT in secondary school, student will prepare with high skill and creativity. In implementation of ICT scheme, secondary schools are decorated with computer and accessories and internet. Studentand teachers can be used internet and computer in specific place in specific time. Students cannot be used internet and downloaded digital books, video, audio books and study contents after leaving school, whereas educational application provides opportunities to the student for using study contents after school. Application gives freedom for using downloaded digital study contents at anytime and anywhere.

Benefits of educational applications are

1. Provide the opportunity for using without limitation.
2. Transform the quality of education as a whole.
3. Promote the equality in education.
4. Helpful for completing vision of digital India.
5. Improve inventive quality, creativity and innovative nature in teachers and students.
6. Easily keep in connect with world.

Mobile and tablet are paying the role of portable school bag for student and educational apps give the opportunities to student that they can keep all knowledge and information in their pocket through hard disk.

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LEARNING MANAGEMENT SYSTEMS FUTUREPERSPECTIVE

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Abstract
Technology and education together are changing the face of global learning. Higher education has been challenged by the emergence of new Information and Communication Technology (ICT) in integrating wide range of ICT into teaching and learning experiences. Among various ICT, eLearning has been recently adopted by many institutions since it has offered to a great extent meaningful learning experiences by accommodating different learning styles, matching individual' s need, fostering self-paced learning, and promoting lifelong learning.e-Learning has provided access to and promoted flexibility in learning that one can learn from anywhere and at anytime without place and time constraints (Bonk and Graham, 2005; Monsakul, 2006)Learning Management Systems also have great potential that makes learning environment readily available at any time and at any place. The Learning Management System (LMS) has been established in a number of universities worldwide to help connect students and lecturers without the confines of the traditional classroom. It is an environment with digital software which is designed to manage user learning interventions as well as deliver learning content and resources to students. This paper discusses Learning Management Systems benefits.

Keywords: *Learning Management Systems, Course Management Systems,* ***Synchronous,*** *Asynchronous.*

Introduction: The best learning experience will always be one that is perfectly customized based on each learner's needs. When instruction fits them like a glove on both level of knowledge and style of learning, students are generally more receptive of what they have to learn, are more engaged, and will better retain the information. Since classrooms don't have one student each, and teachers have to cater to the learning needs of tens of students at the same time, achieving personalized learning is not an easy task. But we're getting there, one step at a time. A learning management system (LMS) is a software application for the administration, documentation, tracking, reporting and delivery of educational courses or training programs. In today's e-learning environment the type of learning that takes place is generally divided into one of two categories: ***synchronous*** and ***asynchronous***. Both learning strategies have their own pros and cons, and the technique that is right for a student greatly depends upon their method of absorbing the information that is being provided. synchronous e-learning are online chat and videoconferencing. Any learning tool that is in real-time, such as instant messaging that allows students and teachers to ask and answer questions immediately, is synchronous. The main benefit of synchronous learning is that it enables students to avoid feelings of isolation since they are in communication with others throughout the learning process. However synchronous learning is not as flexible in terms of time as students would have to set aside a specific time slot in order to attend a live teaching session or online course in real-time. So it may not be ideal for those who already have busy schedules.Asynchronous learning on the other hand can be carried out even when the student or teacher is offline. Coursework and communications delivered via web, email and messages posted on community forums are perfect examples of asynchronous e-learning. In these instances, students will typically complete the lessons on their own and merely use the internet as a support tool rather than venturing online solely for interactive classes.E-learning courses should include both asynchronous and synchronous learning activities. This allows students and teachers to benefit from the different delivery formats regardless of their schedules or preferred learning methods. This approach provides students with access to immediate help if needed, while still giving them the ability to learn at their own pace.

Resources for creating a LMS as Face of the Classroom

Learning: You use an LMS to deliver online coursesand training material to the participants in your class or training.

Management: An LMS helps you organize and manage your online courses, your participants, their results and the effectiveness of your courses.

System: System is just another fancy word for software, so it sounds bigger, and more expensive

Teachers that want to create a blended learning environment often select a Learning Management System. An LMS contains a variety of tools which help create an online presence, support an online course, and provide a collaborate and blended (online and in the classroom) environment. An LMS requires a login by students, a system administrator, and in some cases has a fee for use. Popular LMS systems include Blackboard and Moodle, Edmodo, Google Classroom some important features of an LMS include: grading, discussion forums, online assessment, plagiarism checkers, community portals, posting and uploading of assignments. As teachers create courses within a Learning Management System, they have the opportunity to post assignments, monitor student progress and work, post content (videos, documents, links, and more), and to flip their classrooms!

Blackboard: Blackboard is a subscription/fee based service that provides educators with the tools to create online courses, content, and assessments within a secure environment. This is a popular platform that is used by many secondary and post-secondary institutions. Blackboard has mobile apps, web conferencing, web site hosting, and anti-plagiarism tools.

Moodle: Moodle is an increasingly popular LMS system which is completely FREE. There are some administrative costs associated with having a Moodle system, as you will need a server, system administrator, and some start up costs. Teachers can create a course, upload content, create discussion forums, and track and assess student progress. Moodle is a popular platform for creating an online learning environment, and is an inexpensive way to flip the classroom.

Edmodo: Edmodo is a FREE and secure social learning platform for teachers, students, schools and districts. It provides an easy to use environment supporting collaboration and sharing of information online. Teachers can post assignments, a calendar, content, homework, grades and school notices. Edmodo provides a means to create badges for award student achievement. While Edmodo does not have all of the features of a traditional LMS, it's a good place for teachers who would like to try out a collaborative learning platform with their classrooms.

Google Classroom: Google Classroom is an option for a classroom face in GAFE (Google Apps for Education) districts. Districts that purchase Chrome books for students often install GAFE and recommend Google Classroom for their teachers. It contains some of the features of a Learning Management System by allowing teachers to create, assign, and collect student class work and homework while allowing for integration with Google Drive and Gmail. To learn more about Google Classroom,

Learning Management System meets Modern Learners' Needs

1. **Organizes eLearning content in one location:** Instead of having your eLearning content spread out over different hard drives and devices, you can store all of your eLearning materials in one location. This reduces the risk of losing important data and makes it easier to create your eLearning course. Every member of your eLearning team can also access the information if you're using a cloud-based Learning Management System, thanks to the fact that it's all stored on the remote server. This makes Learning Management Systems a natural fit for online collaboration.
2. **Provides unlimited access to eLearning materials:** Once you upload your eLearning course materials onto the LMS and publish them, your audience has unlimited access to the information they need. Even those who are on the go can login to the eLearning platform via their smart phones and tablets, so that they don't have to wait until their next online training session to

develop skills and perfect work-related tasks. This is one of the main reasons why a LMS is essential for global audiences in different time zones.

3. Easily tracks learner progress and performance: The best Learning Management System gives you the ability to keep track of learner progress and ensure that they are meeting their performance milestones. For instance, if an online learner is not able to successfully complete an eLearning scenario, you can offer them supplemental resources to improve their performance or learning behaviors. Most Learning Management Systems feature reporting and analytics tools that also allow you to pinpoint areas of your eLearning course that may be lacking, as well as where it excels..

4. Reduces Learning and Development costs.: A Learning Management System gives you the power to completely do away with instructor travel costs, online training site rentals, and printed eLearning materials. Your online learners can carry out all of their training online, which means that you can save a sizable sum on your

5. Reduces Learning and Development time.: A Learning Management System can even reduce online training times, thanks to the fact that it gives online learners only the information they need in a direct and organized manner. Instead of having to sit through a lengthy half-hour online training course, online learners can simply click on the online modules they need and absorb the knowledge in a fraction of the time. They can also assess their understanding by taking online exams or quizzes, participate in interactive scenarios and simulations, and watch eLearning videos that highlight complex processes or tasks.

6. Quickly and conveniently expands eLearning courses.: If you want to add additional online modules to your eLearning course in order to update information based on new trends or scientific evidence, you can simply login to the Learning Management System and make the necessary modifications without redoing your entire eLearning course. All of the content is in one location, which allows you to change only the master eLearning course and then deploy it to all of your online learners. This is in stark contrast to a traditional course, where you would have to send every member of your audience an updated manual or updated handouts.

7. Integrates social learning experiences.: A Learning Management System makes it easy to integrate social learning into your eLearning strategy. Since the LMS is already online, you can include links to Facebook and Twitter pages, LinkedIn groups, and online forums that may be beneficial for your learners. \

Conclusion: LMS become increasingly essential for enhancing high quality teaching and learning in higher education, there is a strong need to choose an appropriate LMS in higher education institutions in order to enhance faculty teaching and student learning. As a result, many higher education institutions are actively seeking to start with LMS. LMS has been widely used and will continue to grow in much higher education institutions. It is not only limited to the online environment, but also integrate in the hybrid and web-enhanced teaching and learning environment. In addition, the uses of LMS to facilitate interaction enhance learning abilities and support higher-order learning, including problem solving, critical thinking, and collaboration skills.A modern-featured LMS helps to prepare learners not only for the present but also for the future. New devices are released each year, and it's unfeasible to build a unique design for each and every one. The key features of LMSs are quite simple to adapt and they also take care of learners' supreme needs. An LMS today is a one-stop shop of hosting, assigning, managing, reporting and evaluating eLearning courses. It can be used for a variety of educational, deployment and administrative purposes.

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THE IMPACT OF SOCIAL MEDIA ON STUDENT'S LEARNING

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Abstract
Using social media Web sites is among the most common activity of today's children and adolescents. Any Web site that allows social interaction is considered a social media site, including social networking sites such as Facebook, MySpace, and Twitter; gaming sites and virtual worlds such as Club Penguin, Second Life, and the Sims; video sites such as YouTube; and blogs. Such sites offer today's youth a portal for entertainment and communication and have grown exponentially in recent years. For this reason, it is important that parents become aware of the nature of social media sites, given that not all of them are healthy environments for children and adolescents. Pediatricians are in a unique position to help families understand these sites and to encourage healthy use and urge parents to monitor for potential problems with cyber bullying, "Facebook depression," sexting, and exposure to inappropriate content.

Keywords*-Internet, cyber bullying, online harassment, Facebook depression, sexting, social media, digital footprint, advertising,.*

Introduction: The definition of social media is "the relationships that exist between networks of people". 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. However, every day many students are spending countless hours immersed in social media, such as Facebook, Linkdin,Twitter,Facetime or Skype. At first glance this may seem like a waste of time; however it also helps students to develop important knowledge and social skills, and be active citizens who create and share content. At present, whether social media isfavourable or unfavourable, many students utilize these sites on a daily basis. Many researchers have been diving into a considerable amount of research on how social media influences student retention at colleges. Many parents are worried that their collegestudents are spending too much time on Facebook and other social media sites and not enough time studying. Therefore, our research ascertains the relationship between the social media and students' study efficiency.

BENEFITS OF CHILDREN ANDADOLESCENTS USING SOCIALMEDIA

Knowledge: Social media users share among themselves day in and day out, giving and receiving information at rapid speeds. This information is more than funny cat videos; they share views and opinions; tips, tricks, and even DIY projects; and, among students, helpful information for classes. Their ability to asses, analyze, retain and share information is skyrocketing and they often don't even realize they're developing these skills. Only people born before the Internet was invented are likely to understand the magnitude of this new style of communication.

Socialization and Communication: Social media sites allow teens to accomplish online many of the tasks that are important to them offline: staying connected with friends and family, making new friends, sharing pictures, and exchanging ideas. Social media participation also can offer adolescents deeper benefits that extend into their view of self, community, and the world, including

1. Opportunities for community engagement through raising money for charity and volunteering for local events, including political and philanthropic events;
2. Enhancement of individual and collective creativity through development and sharing of artistic and musical endeavors;
3. Growth of ideas from the creation of blogs, podcasts, videos, and gaming sites;

4. Expansion of one's online connections through shared interests toinclude others from more diverse backgrounds (such communication is an important step for all adolescentsand affords the opportunity for respect, tolerance, and increased discourse about personal and global issues).

Enhanced Learning Opportunities: Middle and high school students are using social media to connect with one another on homework and group projects. For example, Facebook and similar social media programs allow students to gather outside of class to collaborate and exchange ideas about assignments. Some schools successfully use blogs as teaching tools, which has the benefit of reinforcing skills in English, written expression, and creativity.

Accessing Health Information: Adolescents are finding that they can access online information about their health concerns easily and anonymously. Excellent health resources are increasingly available to youth on a variety of topics of interest to this population, such as sexually transmitted infections, stress reduction, and signs of depression. Adolescents with chronicillnesses can access Web sites through which they can develop supportive networksof people with similar conditions. The mobile technologies that teens use daily, namely cell phones, instantmessaging, and text messaging, have already produced multiple improvements in their health care, suchas increased medication adherence, better disease understanding, andfewer missed appointments. Given that the new social media venues allhave mobile applications, teenagerswill have enhanced opportunities tolearn about their health issues andcommunicate with their doctors.

RISKS OF YOUTH USING SOCIALMEDIA

Cyber bullying and Online Harassment: Cyber bullying is deliberately using digital media to communicate false, embarrassing, or hostile information about another person. It is the most common online risk for all teens and isa peer-to-peer risk. Although "online harassment" is often used interchangeably with the term "cyber bullying," it is actually a different entity. Current data suggest that online harassment is not as common as offline harassment, and participation in social networking sites does not put most children at risk of online harassment. On the other hand, cyber bullying is quite common, can occur to any young person online, and can cause profound psychosocial outcomes including depression, anxiety, severe isolation, and, tragically, suicide.

Sexting: Sexting can be defined as "sending, receiving, or forwarding sexually explicit messages, photographs, or images via cell phone, computer, or other digital devices."18 Many of these images become distributed rapidly via cell phones or the Internet. This phenomenon does occur among the teen population; a recent survey revealed that 20% of teens have sent or posted nude or seminude photographs or videos of themselves. Some teens who have engaged in sexting have been threatened or charged with felony child pornography charges, although some states have started characterizing such behaviors as juvenile-law misdemeanors. Additional consequences include school suspension for perpetrators and emotional distress with accompanying mental health conditions for victims. In many circumstances, however, the sexting incident is not shared beyond a small peer group or a couple and is not found to be distressing at all.

Facebook Depression: Researchers have proposed a new phenomenon called "Facebook depression," defined as depression that develops when preteens and teens spend a great deal of time on social media sites, such as Facebook, and then begin to exhibit classic symptoms of depression. Acceptance by and contact with peers is an important element of adolescent life. The intensity of the online world is thought to be a factor that may trigger depression in some adolescents. As with offline depression,preadolescents and adolescents who suffer from Facebook depression are at risk for social isolationand sometimes turn to risky Internet sites and blogs for "help" that may promote substance abuse, unsafe sexual practices, or aggressive or self destructive behaviors.

Privacy Concerns & Digital Footprints: The main risk to preadolescents and adolescents online today are risks from each other, risks of improper use of technology, lack of privacy, sharing too much information, or posting false information about themselves or others .These types of behavior put their privacy at risk.

When Internet users visit various Websites, they can leave behind evidence of which sites they have visited. This collective, ongoing record of one's Web activity is called the "digital footprint."One of the biggest threats to young people on social media sites is to their digital footprint and future reputations. Preadolescents and adolescents who lack an awareness of privacy issue soften post inappropriate messages, pictures, and videos without understanding that "what goes online stays online." As a result, future job sand college acceptance may be putinto jeopardy by inexperienced andrash clicks of the mouse. Indiscriminate Internet activity also cans make children and teenagers easier for marketer sand fraudsters to target.

Influence of Advertising on Buying

Many social media sites display multiple advertisements such as banner ads, behavior ads (ads that target people on the basis of their Web-browsing behavior), and demographic-based ads (ads that target people on the basis of a specific factor such as age, gender, education, marital status, etc)that influence not only the buying tendencies of preadolescents and adolescents but also their views of what is normal. It is particularly important for parents to be aware of the behavioral ads, because they are common on social media sites and operate by gathering information on the person using a site and then targeting that person's profile to influence purchasing decisions. Such powerful influences start as soon as children begin to go online and post. Many online venues are now prohibiting ads on sites where children and adolescents are participating. It is important to educate parents, children, and adolescents about this practice so that children can develop into media-literate consumers and understand how advertisements can easily manipulate them.

Conclusion: Considering all of the above pros and cons, it is necessary to develop certain regulations over the use of such social networking sites, especially for high school and college students. But still, students should get the choice to spend time socializing in an effective way. It should not hamper their school or college performance, and it should be kept in mind that social networking sites create virtual worlds that drastically differ from reality. Students should develop the cognitive and intuitive ability to analyze how much time they want to spend on social media. It is left up to the students to decide what really matters in their life and how much of this virtual life translates to real life.

APPLICATION OF LEARNING MANAGEMENT SYSTEM IN EDUCATION

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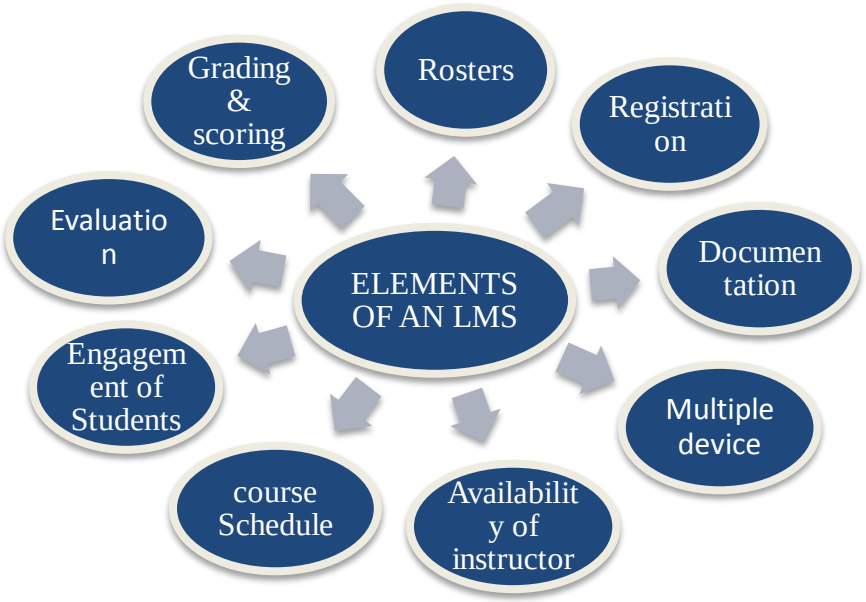
Abstract
In the 21st century, Education faculties make efforts to find combination of students, faculties and system to manage their learning programs. Learning management system is becominginteracted with course registration, administration, documentation, tracking, reporting and delivery of educational courses as well as evaluation of students through exams. LMS is focused on acquiring the knowledge using the help of technologies. In India education is depends on classroom teaching for syllabus coverage. Instructors put in more efforts to manage, store and reuse the course material for repeating the course in the next semester. This system shall act as a central space for student and teacher interaction outside classroom. In the LMS process, instructor can upload course content and the student can access the same using their login. LMS is the most important application for teaching and learning.

INTRODUCTION: Quality education plays a vital role in today's competitive scenario. In this globalized world technology has affected almost every aspect of life. In technological world application of computers to education is such as computer-managed instruction (CMI), integrated learning system (ILS), computer based instruction (CBI), computer assisted instruction (CAI), computer assisted instruction (CAI), etc. These applications focused on drill and practice activities, tutorials and personal instructions. Twenty first centuries training needs to be easy and accessible. A learning management system (LMS) gives opportunity to make, distribute and track training anywhere and on any device. From the last 20 years, digital frameworks are available for managing curriculum, training material and evaluation tools. The LMS allows anyone to create, track, manage and distribute learning material of any kind. So it helps to create effective online teaching learning material in a personal collaborative environment. It is powerful, secure and open platform which is used for E-Learning. So this article focused on learning management system and its benefit to management, instructor and student.

LEARNING MANAGEMENT SYSTEM: It is an open source of software application. This is used for administration, documentation, tracking, reporting and delivery of educational courses as well as training programs. System help the instructor deliver learning material to the students, administer tests and other assignments, track student progress and manage record keeping. Some LMSs help identify progress towards learning and training goals. LMSs are focused on online learning material delivery and support a range of uses, acting as a platform for online courses, also used learning methods such as blended learning and flipped classroom. LMS is used to plan, deliver, publish and manage online courses. Students or participants login to the LMS by using browser. They can select courses and starts their online study. Alternatively an instructor can assign courses based on student's needs. An LMS allows instructor and administrates to track course completions, performance of students. All students' activities in the LMS can be tracked. These activities are useful for evaluation, competency management and other related functions.

COMPONENTS OF AN LMS: There are many varieties of LMS. Everyone is unique and possesses a feature set according to needs of a trainer and educators. There are some elements can be found in many eLearning.



These are as follows.

1. **Rosters**: For tracking attendance and for sending invitations to trainer or class students a digital roll call sheet is available.
2. **Registration**: The device have ability to observe, check or keeping a continuous record of a process.
3. **Documentation**: Course or Curricular content, material or documents can be upload and manage.
4. **Multiple Device**: Desktops, mobile or tablets are used for delivery of Course or Curricular content web based communication.
5. **Availability of Instructor**: Multiple teachers or experts from across the world are available for remote participation.
6. **Course Schedule**: Composition and publication of course schedule, deadlines, assessment and tests.
7. **Engagement of Students**: Email, Whatsapp and discussion forum etc are used for communication between and among students.
8. **Evaluation**: Tests, quizzes and exams are conducted for assessment and testing knowledge.
9. **Grading and Scoring**: Advanced tracking and charting are used for grading and scoring of student's performance.

CHARACTERISTICS OF AN LMS : Today an LMS is a source of hosting, assigning, managing, reporting and evaluating elearning courses. It can be used for a variety of educational purposes.

1. Managing users, roster, instructors, and generating reports.
2. Provide course schedule.
3. Messaging and notification by students.
4. Assessments can be handling by the students pre and post testing.
5. Certification and display students score and transcripts.

BENEFITS OF LMS FOR MANAGEMENT, INSTRUCTOR AND STUDENT:

1. **Benefits for Management**

Event	**Current Scenario**	**With LMS**
Conducting Exams	Ask exam cell to prepare students sitting schedule / Answer sheets	No need to arrange student's sitting schedule as cheating is impossible due to plagiarism check
Semester Result / Education	At par with other colleges	Improves as student get more preparation time for next quiz due
Long term Cost	Expensive due to repetition of work and	Cheaper as course structure can be saved and used later.
Placement Activities	Conduct separate classes for online test preparation	Students become habitual of online test using LMS
Faculty course Load	More course load, less extra work	Less course load due to LMS, more extra work can be given to faculties

2. **Benefits for Instructors**

Event Description	**Current Scenario**	**With LMS**
Answer Copy evaluation	Generally, takes time	Instant evaluation of MCQ's. Easy evaluation of descriptive answer also
Tutorial	Physical class is	Can be done online
Assignment submission	Learners can copy it from peers	Plagiarism check is available because of which copying is auto detected
Conducting Quiz/ Mid-semester exam	Write and forward to the academic cell for printing, may lead to	Exam paper leak can be avoided as the only faculty knows paper before giving to students.
Structured Course	Syllabus without timeline sometimes lead to less time for	Syllabus with timeline and any changes made are visible to students as well.

3. **Benefits for students**

Event Description	**Current Scenario**	**With LMS**
Lecture Notes	Pen-down class notes or take	See it on LMS or access it on the smartphone.
Assignment sheet	Distributed in class or take photocopy	See it on your LMS login
Exam result anxiety	Exists	Does not exists as for multiple choice questions, LMS has instant grading
Absence from class	Phone a friend about class	Check on LMS for E-notes
Previous years Notes	Physical copy gets lost many a times	Notes will be available online and can be searched instantly
Previous Exam	Photocopy it from	Available on LMS

CONCLUSION: In this paper we see that Learning Management System (LMS) works for improvement of teaching and learning. The benefits of LMS are: Contentscan be repeated again and again until learner understands it properly, Multimedia learning methods be used depending upon learner receptivity, E-learning is culture independent; Learning is flexible in terms of timings and completion of syllabus, Individual problem solving is possible. The obstruction for LMS deployment are: Availability of infrastructure like internet, computer is major challenge, Power source is necessary during elearningstudy, Handwriting becomes bad due to overuse of keyboard, Student tardiness is often seen if class contents are available online, Overuse of computer can damage student's eye. This study should be considered as eye opener, as it shows benefits of LMS online working as compared to offline working**.**

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EMERGING TRENDS IN EDUCATION: ICT

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Abstract
Education is important not only for the full development of one's but also for the sustained growth of the nation.The world moving rapidly into digital media and ict .the role of ict in education trends is becoming more and more important and this importance will continue to grow and development in the 21 st century. Today's world is moving at a faster pace as we entered in the ictage.Information regarding any thing is available to us at our finger tipsor just at a click of mouse this is all possible because of ict have entered in all aspect of life. Ict development has gradually entered in the education.They have reflected in the teaching learning methodology,stratigies
Now a Days technology has changed the whole World. It may be education or any othesector of economy. This technology has changed global platform. Where every we study connected to each other with help of this technology.New Emerging Trends in Education :like Cloud based technology in education , Mobile learning :, Digital textbook of Tablet and Laptops , Learning through smart board , Social Mediaetc.This paperwill be focused on new educational technologies and their integration and application in school.

Keyword :ICT,Cloud based technology, Mobile learning, Social Media , Flipped Classroom ,E-readers, Tablets etc.

Introduction: The world moving rapidly into digital media and ict .the role of ict in education trends is becoming more and more important and this importance will contimue to grow and development in the 21 st century. Education is important not only for the full development of one's but also for the sustained growth of the nation. There are profound changes on in the educational system. These changes are needed becauses of ever growing presser in the schools systems themselves. Society itself is changing into knowledge work and because of information and communication technology. School now recognize the influence wireless and mobile technology are having on their students as well as how its shaping new ways of thinking and teaching . Let us see some emerging trend in Education. Today's world is moving at a faster pace as we entered in the ictage.Information regarding any thing is available to us at our finger tipsor just at a click of mouse this is all possible because of ict have entered in all aspect of life.Ict development has gradually entered in the education.They have reflected in the teaching learning methodology,stratigies .The advance of Ict development were restricted only for the defencepurpose

- **Emerging Trends in Education :** Now a Days technology has changed the whole World.It may be education or any othesector of economy.This technology has changed global platform.Where every we study connected to each other with help of this technology.
- **Cloud based technology in education :** Cloud base classroom technology can be ideal in the situation.where the student cannot go into a classroom or attend normal classe.These can include basic text lessons,video lesson or even the student can live chart sessions with the teacher via instantmessanger or video messanging programs like skype.One of the main reasons is as a means of reducing expensive.It costs while providing a service that is easily accessible from any kind of device.These platforms also have thepower to create truly global education communities.
- **Mobile learning :** Student of all generations will be able to fit their education to their lifestyle and convenience and affordability of mobile devices will facilitate.access for all mostly people

use mobile phones for internet rather than computer.The traffic of mobile users has increased twice compared to computers and mobile companies are developing learning apps for the education sector.Mobile learning provides 3a ,anytimes,anywhere,access to content and community,as well as allows for contextual and supplemental learning at given location.ex downloading a museum's apps : a student could participate in an art history class on his /her phone while visiting any museum of art.

- **Digital textbook of Tablet and Laptops :** Rather than traditional on conventional teaching methods institutions are changing their teaching methods with advance technology like; laptops and tablets rather than books and blackboard for the teaching purpose.
- **Learning through smart board :** The smart board provides the facility for learners to active participate in teaching learning process. It is easy to understand the subject through writing ,teaching and drawing .In this learning processes every student has a facility to participate in the discussion via tablets and notebooks.Its make easy and fun learning. We might think it would cost more to provide tablets for every students in school but think about it that how many textbooks the students are saving every year.Textbooks are getting more expensive and they are used afor seven years before a new edition comes out.A digital textbook would be more cost efficient and can easily updated the recent information.
- **Social Media** : There are many ways to use social media for learning. An online group can brings students together to work on a project or assignment .Just as Twitter can be used to organized interactive conversations or discussion based on a specific subjects. Social media is the right wireless infrastructure can be useful teaching learning tool for teacher and student. When using social media for teaching.Teacher have to teach the student how to use it in proper way.Many schools have a digital citizenship coat that students must follow that reinforces a positive message around the use of social media in shool.The best things of social media is that teachers can use a medium that the students can understand and enjoy the learning and get everyone involed.
- **Integration and application of Ict :** Information and communication technology can impact on student learning when teachers are digitally literate and understand how to integrate Ict into curriculum.

  School use a diverse set of ict tools.Ict has also become integral to the teaching –learning interaction through such approachers.

  - Replacing chalkboard with interactive digital white boards and smart board.
  - Student use smart phones ,Class time table,laptopetc for learning during class time.
  - With the help of flipped classroom model student watchs lectures at home on the computer and use classroom time for more interactive exercises

    When teachers are digitally traines and literate to use ict,these approaches can lead to higher thinking skill,provide creative.This is a individualized options for students to express their understanding and make for better prepared to deal with ongoing technological changes in the society.

    The Ict policy in school education aims at preparing youth to participate creatively in the establishment,sustenance and growth of a knowledge society leading to all round socio – economic development of the nation and globalcompetitiverse.

    Digital literacy is being built through the incorporation of Ict into schools some common applications of Ict.

- **One laptop per child**: less expensive laptops have been designed for use in school with feature like lower power consumption, a low cost operating system and special reprogramming and mesh network functions.
- **Tablets :** In expensive learning software or apps can be download into tablets making them a versatile tool for learning.
- **Interactive white or smart board :** It allows projected computer images to be displayed manipulated dragged,clicked or copied .Handwritten notes can be taken on the board and saved for lated use interative boards are associated with whole class instruction rather studend- centered.
- **E-readers :** With the e– reader electronic devices,handreadsof books hold in digital form and they are increasingly utilized in the delivery of reading material. Feature of e readersthat can contribute to positive use include their portability and long battery life,response to text,and the ability to define meaning of difficult words. Challenges before Education system beneficially leveraged to disseminate information.
- **Flipped Classroom :** The flipped classroom model,involving lectures and practice at home via computer – guided instruction and interactive learning activites in class can allow for an expanded curriculum .
- **Conclusion** :Ict can provide diverse options for taking in and processing information,making sense of ideas,and expressing learning.Most of the students learn best through visual and tactile modalities and ict can help this students experience the information instead of just reading and hearing it

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SOCIAL MEDIA AND LEARNING

Mahale S N & Chaudhari M S

Abstract

Social mediais essentially a platform for people to come together virtually, and share ideas, interact and communicate on different levels.Social media platforms allow students to experience the benefits of a natural environment to create and cooperate while curating collections of links they deem worth engaging in. Also sharing their ideas through blogs`, and posting images and articles that are uplifting in nature.

Social Media: Social media is essentially a platform for people to come together virtually, and share ideas, interact and communicate on different levels. Social media has been one impactful factor leading to globalization. People can communicate across the globe with each other. This has of course also provided recognition to people with creative talent and ambition. Although social media certainly provides a bulk of distraction, if cultivated in the right way, it can also be effectively used to enhance the process of learning.

Why use social media in learning?

It does not have to be just an all-time posting business. It just a takes a bit of time to understand what you want social media to achieve for your students, and a bit of time to think about how much effort you can afford to make in this area.

- **It makes learning a more social experience.:** Helping learners and students to exchange thoughts, ideas and beliefs is an encouraging sort of social interaction that develops a positive communication between learners. Through social media, a wide range of students coming from different cultures and backgrounds can mutually discuss about topics. This helps in sharing a broader range of perspectives and shaping an idea from all dimensions. Also in addition, the fact that these learners share the same aim about learning, the forming of a healthy community is established. And it is true that a community has far wider and positive impacts than a single individual. Social learning also has a peer support aspect that enables students to speak themselves out and making learning a vividly enjoyable process.
- **Encourage discussion about real world events.:** Social media is an open platform for discussing real world events and situations that are impactful in some way or the other. Discussion of real world events associated with a course adds context to their studies in a wider approach to the learning of a particular topic. This enables the students to view the subject from a global point of view and effectively make a difference in the learning process. With social media these conversations can involve, not just other students and academic staff, but a global community with a shared interest.
- **Being a catalyst for creation and collaboration:** Social media platforms allow students to experience the benefits of a natural environment to create and cooperate while curating collections of links they deem worth engaging in. Also sharing their ideas through blogs`, and posting images and articles that are uplifting in nature. This platform behaves as an intermediatory channel between students allowing them to share useful content. This content is then globally shared through transfer of data and information. Thus a global audience that is not constituted in the student body contributes to raise the potential for useful feedback covering varied points of views on different subjects. A personal network that is an imposing element of social media does not only offer students greater opportunities through online platforms but also offers a greater range of feedback. These networks that are built online can transform into real world networks which can be useful for work opportunities, developing interests.

- **Bridges the generation gap between teachers and students.:** The world is now seeing a large number of people as social media users. This a place where online conversations take place connecting millions of people. Therefore, it is not totally surprising that students are forming groups and creating communities based over their learning on social media. These student based groups focus on what a learner aspires and is not bound by the scope of the syllabus of a particular subject. Using social media platforms such as Facebook, twitter and Google classroom, the teachers are more exposed to the varying needs of technology thereby adapting them to the modern world. This results in an increased understanding between the teachers and students making learning easier. Thereby with a little effort on the part of a teacher, social media can essentially bridge the gap between teachers and students.

HOW CAN SOCIAL MEDIA BE USED IN LEARNING?

The use of social media platforms such as Facebook, Twitter, Hangouts, and Google classroom etc, can be used as effective tools to help the teachers communicate better with their students. Twitter is great for sharing information, dealing with queries, and interacting with those normally outside the group.

Facebook is good for having a specific group area where interested people can come together, talk and share.

Instagram is great for sharing photos and videos that are useful to the curriculum.

- **Creating a community**

It's common for many students to be challenged by the same leaning concept or course assignment. Social media can help centralize the collective knowledge of an entire class to make studying more collaborative and efficient for everyone.

Designate a course or study group hashtag, such as #Examfinals.

Start a contact list or group for the class to collaborate and share study tip

Invite professors who use social media to follow the group conversation or join chats.

- **Continue the community**

Starting a collaborative study network to tap into the group mind can save everyone time and effort.

For missed classes or lectures, have someone stream or record the lecture Skype, or SnapChat.

Use Google Hangouts to facilitate group study sessions.

Follow or become a fan of the authors who wrote the books that are being used in your class.

Ask questions to experts and influencers. Many are already on Twitter, and is specifically designed to build connections through question/answer exchanges between users.

- **Organize learning resources**

Social media tools can help keep course information organized and accessible.

Save, curate, and share resources using collection-building tools such as Pinterest or Tumblr.

If course documents aren't already posted online, use Google Drive, Box, or Dropbox to gather study materials.

Have classes use content services like Google Docs for team projects; it can make keeping organized and sharing notes much easier.

Social media can help identify additional content to reinforce or extend core instruction.

Look for YouTube videos and playlists for extra learning on the most challenging topics.

Follow existing subject-area hashtags

Send video notes, questions, or reminders to your classmates.

Search on all your social channels often for course topics, keywords, and expert names -- you never know what you'll find!

Social media no longer has to be an obstacle to studying; it can help students create and manage a study community, make the best use of study time, and find new resources to help them learn and retain knowledge.

WHY LEARNING THROUGH SOCIAL MEDIA IS THE FUTURE?

Learning to create, manage and analyze information through social networking will soon become if it is not already, one of the most necessary and sought after skills for a global citizen and as such become a prominent feature of any school curriculum.

- **Curating**

In a world where information is amassing exponentially on the internet, becoming skillful at filtering and selecting appropriate information will become imperative, and much sooner than we think.

The trend is irrefutable (Rosenbaum), and can facilitate reaching political disruption as Twitter founder Evan Williams notes. Some education companies are emerging (Learni.st, Knodium) who understand the context, but exponents agree that successful curators are those who are able to:

Understand a rubric and what texts represent it.

Filter information to suit purpose.

Evaluate content from the Internet and justify suitability/relevance.

Succinctly describe and label choice of texts.

Defend choices against criticisms from peers.

Be creative in choice of content. Understanding an audience and curating content that will suit it, including considering context, use of humor, use of suitable language.

- **Socializing**

This develops a range of enterprise skills, beginning with knowledge of creating a theme or mood or personal brand. Successful promoters are those who are able to:

Know their audience – who is going to provide them with relevant resources, and who is going to connect them to others who have quality resources

Know how to attract quality members/teachers to their network. What mood needs to be created, and is it consistent over their posts and uploads?

Know the importance of posting good quality content.

Know how to post to specific people, and understand specific contact's style and tone

Negotiate meta-language of applications, and utilize specific functions to generate more exposure, including using tags effectively.

Know when to post – timing (time zones, time of day in terms of mood etc).

Persevere – patience in creating contacts, and hanging in there when people don't respond

Follow social media etiquette – what's cool and what's not.

Post for learning and not popularity

The advantages of learning of such skills are clear, but there is one ultimate perk. The creation of an independent learner, a learner who can adapt to changing contexts by engaging their network, a learner who can confidently navigate through the jungle of the Internet. But let's not make students wait while teachers themselves come to terms with the power of the PLN. Students already have a very solid prior knowledge of the power and functionality of networks. They enthusiastically engage with them every day for social and entertainment purposes. The skilled teacher is the one who can take that prior knowledge and enthusiasm and teach students to leverage it to their learning advantage.

Networking is not just a trend, a fad that will die out soon enough. The success of Facebook, Twitter and LinkedIn is not simply a result of cool fashionable technology. Dawson suggests networking is actually very intuitive, and his analogy of it as an organic breathing entity is useful. Indeed, all nature is

organised in such a fashion, from DNA and cell functionality to chemistry to successful social interaction. Many things benefit from not being in isolation.

Let's not let students leave school in isolation, with only Friday on their minds. Let's ensure they are well connected, independent, and empowered to learn anywhere, anytime.

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MOODLE – A MIRACLE SOFTWARE

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Abstract
Teaching is becoming one of the most challenging profession were knowledge is expanding rapidly and much of it is available to students as well as teachers at the same time this paper attempt to explore the role of ICT in teaching learning process. The Moodle – modular object oriented dynamic learning environment which is an open source software most useful in effective teaching learning process, implements the combination of collaborative and cooperative learning, independent study

INTRODUCTION: Future education is sound to the technology driven for this sole reason, various educational Software are in great demand in recent times. But do theseSoftware really meet the need of students to the fullest? To meet the growing demand, a need for smarter Software and techno-scurry education in emerging. Moodle can also be used as a generic knowledge management system.

WHAT IS MOODLE: Moodle modules are moved to an archive, at the end of each academic year. These archives provided the resources used in previous academic years to staff of registered student. You can go directly to the archive vie links in the navigation bar at the top of every page in Moodle.

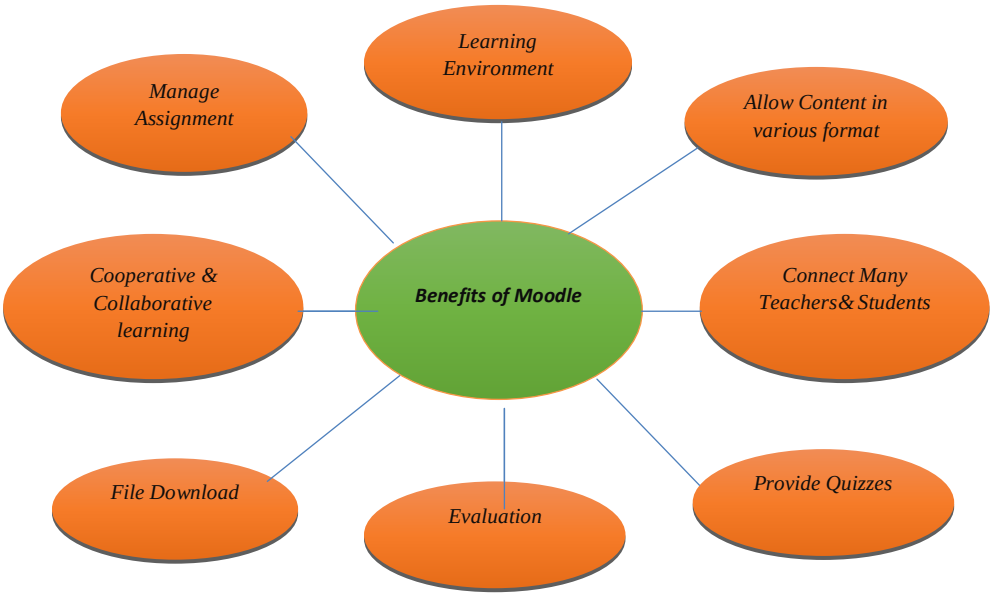
The first version of Moodle was written by Martin Dougiamas, who has graduate degrees in computer science of education. Martin Dougiamas started a Ph.D. to examine "the use of open source software to support a social constructionist epistemology of teaching of learning within internet based communities of reflective inquiry. The acronym stands for modular object-oriented dynamic learning environment. The first version of Moodle was released on 20 august 2002.

DEVLOPMENT: Moodle has continued to evolve since 1999, since 2001 with the current architecture. By the end of 2001, Moodle cold be downloaded viaConcurrent versioning system(CVS) Git arrived in 2010 of replaced CVS in 2013 of basis installation documentation was available. When Moodle 1.0 was released in august 2002, user were discussing Moodle on a new forum, translating Moodle into different languages of creative themes. It was been translated into over 100 different languages of is accessible in many countries worldwide. With improved documentation of new certification, Moodle had established itself by 2007 as a leading of award – winning Open SourceLearning Management System (LMS).

MULTIPLE FEATURES OF MOODLE

1) Moodle is a free of open – source learning management system written in PHP(Pre-processor Hypertext Markup Language) of distributed under the GNU(General pubic license).
2) Moodle provides tools to support the learning experience, such as assignment submission, forums and wikis of quizzes.
3) Moodle is used for blended learning, distance education, flipped classroom of other e-learning projects, universities, workplace of other sector.
4) Staff can choose to add content to the empty module or import content from a previous academic year, using a process called "rollover". Once the module is ready for use, the lecturer makes it available to students of guests.
5) Moodle allows for extending of tailoring learning environments using community sourced plugins.
6) Beside education, Moodle is used for various other related environments such as business communication of employee or system training.
7) A unique and useful Software for students as well as teachers.
8) Multipurpose software also useful in business and employee or system training.

BENEFITS OF MOODLE IN TEACHER LEARNING PROCESS



Moodle provides a learning environment for students which is fun, innovative of creatives, of filled with purpose, to entrance. Their knowledge of help theme in taking up as well as completing assignments. Moodle can be a great advantages for teacher to help as an organizational tool. It allow for many different types of content formats to be uploaded of available for use by the students of the instructor. Moodle provides a learning environment for students which is fun, innovative of creatives, of filled with purpose, to entrance. Their knowledge of help theme in taking up as well as completing assignments. Moodle can be a great advantages for teacher to help as an organizational tool. It allow for many different types of content formats to be uploaded of available for use by the students of the instructor. Moodle has a friendly environment which connects many teachers around the globe to answer the queries or doubts asked by students. This is helpful since many places in the world are not accessible at very moment physically but as internet has connected people around the world. The use of Moodle platform not only improves the teacher and students information literacy but also changes teaching and learning concepts, reflect the students subject status implements the combination of cooperative learning, independent study and personalize learning it is helpful for collaborative learning .

CUNCLUSION: Thus such devices are excessively used for the benefit of teaching learning process. They are used to help students with and without disabilities gain a new sense for digital fluency, find learning material more quickly and even promote events on college campuses to faster greater social connection. Student should learn the content as per their available time. Student can actively participate in learning process. The use of Moodle platform not only improve the teachers and students information literacy but also changes the teaching and learning concepts implement the combination of cooperative learning independent study and personalise learning.

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E-LEARNING THEORETICAL FRAMEWORK

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Nowadays, teacher education and school education is influenced by the development of technology innovation. SWYAM, e- Pathshala, digital India etc are major initiatives in the recent scenario of the Indian education system. However, with the rapid progress in technology and the advancement in learning systems, it is now embraced by the masses. The introduction of education technology is the basis introduction in the field of teacher education and school education. This introduction is the way to enter in the digital era. Slowly but surely, books are getting replaced by electronic gadgets. Today information can also be shared via the Internet, which is accessible 24/7, anywhere, anytime. While teaching can be based in or out of the classrooms, the use of computers and the Internet forms the major component of E-learning. E-learning can also be termed as a network enabled transfer of skills and knowledge, and the delivery of education is made to a large number of recipients at the same or different times. Earlier, it was not accepted wholeheartedly as it was assumed that this system lacked the human element required in learning. The schools which use E-learning technologies are a step ahead of those which still have the traditional approach towards learning. In the light of student's environment, it has also been found that visuals, apart from holding the attention of the student, are also retained by the brain for longer periods. Various sectors, including agriculture, medicine, education, services, business, and government setups are adapting to the concept of E-learning which helps in the progress of a nation. The e-learning systems' theoretical framework contains the three main components of information systems. These components are people, technologies, and services (Aparicio, Bacao and Oliveira, 2016). People interact with e-learning systems. E-learning technologies enable the direct or indirect interaction of the different groups of users. Technologies provide support to integrate content, enable communication, and provide collaboration tools. E-learning services integrate all the activities corresponding to pedagogical models and to instructional strategies. The complex interaction combination is the direct or indirect action with e-learning systems. At the same time, systems provide services according to the specified strategies for activities. In other words, service specifications are e-learning activities aligned with the e-learning pedagogical models and the instructional strategies.

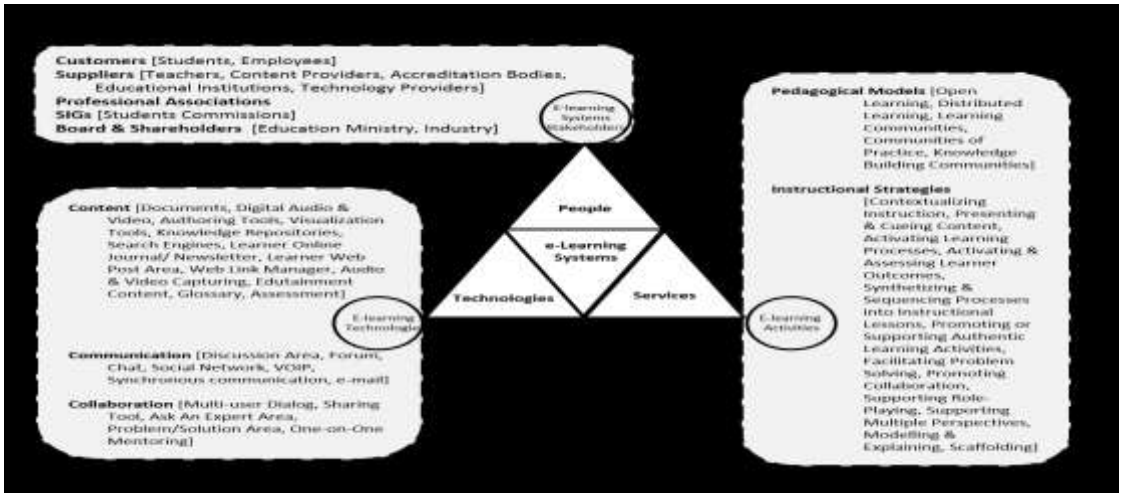

Figure 3:- Holistic e- Learning Systems Theoretical Framework

By Aparicio, Bacao and Oliveira: Investment in educational designers and learning technologists can provide useful support for academics in designing effective e-Learning experiences. For a university to be committed to blend and flexible learning it should have a stated definition of e-Learning in its own context that is shared across the institution in order to guide the development of appropriate administrative and support processes. Distance teaching and resource based e-Learning approaches require significant time investment in order to fully engage students. The academic who writes and plans the subject may not always be the person responsible for teaching the subject. Academic fatigue can result in staff taking the path of non-excellence. Where there are staffing changes and academic buy-out for marking, adequate guidelines and detailed expectations should be provided for the markers. The e-Learning experience can be enhanced by active engagement in improving the learning environment of staff and students through scholarly research. In recent years, e-learning has paved the way for accelerating the paradigm shift through providing more flexible ways of learning. The demands of new technologies and the 24/7 global environment can't be satisfied with the only source of classroom instruction, with its inherent classroom limitations. The students can do self- learning using enormous potentials of Internet and providing them with several online exercises. Online learning is defined as the use of Internet to access learning materials; to interact with the content, instructor and other learners, to obtain support during the learning process (Khan, 1997). In the research literature it is difficult to distinguish the term "e-Learning" from other terms such as "virtual learning", "distance learning", "open and flexible learning", "network learning", "online learning", "multimedia-based learning", "Web-enhanced learning", "Internet-enabled learning", and similar terms. Some researchers define the term so broadly that would be hard to find any learning system that is not blended. Thus, there is a wide variety of responses to e-Learning, but most of definitions are just variations of few common terms.

DEVELOPMENT OF E-TOOL AWARENESS PROGRAMME

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Abstract:
Digital India campaign launched by the Government of India on 2 July 2015 to ensure that Government services are made available to citizens electronically by improved online infrastructure and by increasing Internet connectivity or by making the country digitally empowered in the field of technology. The initiative includes plans to connect rural areas with high-speed internet networks. Digital India consists of three core components. Out of one is Universal Digital Literacy. Teacher is Leader and pathfinder for Society. So he can analyses the impact of Technology over the Society. The education system should be make over by facilitating this campaign. We should make aware the teachers about different E tools which is free available on the internet. These E tools ease teacher's teaching Learning experience.

Keywords- *Digital India, E tools*

1. Introduction

In the history of development of India the new movement has been started that is called digital India by the government of India.(www.digitalindia.gov.in) under this digital India all the society and economics will become supreme in the country. In the concern of the educational field the change in teaching learning is expected in this digital Indian scenario following aspects will be useful for the drastic change in educational technology.

1. Digital Infrastructure as a core utility to Every Citizen
2. Governance and services on demand
3. Digital Empowerment of Citizens

For the fulfillment of the above needs facilities will be provided therefore the current educational system need to be updated.

1.2 Need of the Research

Students

1. Present Research study is needed to develop awareness about E-tools in Learning and research in higher Education.
2. To create interest among the student for E-tools.
3. Help the students to select the creative and innovative E-tool for learning the topic.

Teachers

4. Present Research study is needed to teach concepts of E-tool.
5. Teachers redefine their role in the student centric curriculum.
6. Make the learning material more comprehensive.

1.3 Importance of the Research

1. Present research study was important because it will important for the teachers in higher Education system.
2. It helps to use E-tool easy and interestingly.
3. This research study is significant to the collaborative approach towards their main stream with ICT tool.
4. Current research study is important to develop interest in the E-tools.

1.4 Research problem

1.4.1 Statement of Problem

Development of the E-tool awareness Programme for the teachers of Higher Education in Nashik district and its effectiveness.

1.4.2 Explanation of the problem: In the modern era of the technological development 79.33% people have connected with internet (en.wikipedia.org/wiki/List_of_countries_by_number _phones_in_use) Internet service should not be used only to Chat and make video calls but it should be used for the advancement of teacher for teaching, learning, administration and research in higher education.

1.5 Functional Definitions

1.5.1.1 E-tool awareness Programme - E-tool awareness Programme is an orientation programme that designed to make professors aware about E-tools

1.5.1.2 E-tool – **E-tool** is Computer Applications and websites which are helpful for teachers for teaching, learning, administration & Research in higher Education.

1.5.1.3 Higher Education – The institutes which provides under graduate and post graduate program in their education institute.

1.5.1.4 Effectiveness- Effectiveness is the capability of producing a desired result. When something is deemed effective, it means it has an intended or expected outcome, or produces a deep, vivid impression. (http://www.oxforddictionaries.com/definition/english/effectiveness)

1.5.1.5 Nashik District - Nashik District is located between 18.33 degree and 20.53 degree North latitude and between 73.16 degree and 75.16 degree East Longitude at Northwest part of the Maharashtra state, at 565 meters above mean sea level. (**http://nashik.nic.in/)**

1.6 Research Question - Researcher wants to know whether teachers from higher education benefited from

E-tool awareness Programme ?

1.7 Objectives of the Research

1. To analysis the current available E-Tools on Internet.
2. To develop **E-tool awareness Programme**
3. To verify the effectiveness of **E-tool awareness Programme**

1.8 Assumptions

1. The teachers in higher education are frequently using Internet & technology.
2. Along with library books teachers are using internet references.
3. Internet are using for reading research papers.
4. Teachers are using YouTube for learning new topics.

1.9 Research Hypotheses

Null Hypothesis – There is no significant difference between mean scores of achievement of Pre Test and Post Test.

1.10 Variables

1.10.1 Independent variable

In present research study **E-tool awareness Programme** is independent variable

1.10.2 Dependent variable

In present research study Score of Schedule of the teachers is dependent variable

1.10.3 Research Design

One-group Pretest - Posttest design

1.11 Scope, Limitations and Delimitations

1.11.1 Scope of the research

1. The present research study is related to teachers in higher education in Nashik.
2. Present research study is useful to construct knowledge and develop understanding about ICT tools.

1.11.2 Limitations

1. The **E-tool awareness Programme** is developed by the researcher.
2. The research tool is made by researcher.
3. The research is limited to Nashik district.
4. It is limited to **awareness** of the E-tools concept.

1.11.3 Delimitation

1. Present research study was limited to the college teachers of Nashik District.

2. Schedule was prepared by the researcher.
3. The finding of the research study is based on the analysis of the responses given by the teachers.

1.12 Research Methodologies

1.12.1 Method of Research

I. Survey Method

1. To analysis the E-tools from internet.

II. Development of E-tools awareness Programme

2. To develop E-tools E- tools awareness Programme

III. Experimental Method

3. To verify the effectiveness of E-tools awareness Programme

1.12.2 Population and sampling

Population: The target population for the present research study was **100** teachers from higher Educational Institute, Nashik

Sample: 10 Teachers from higher education were selected randomly.

Sampling: Non probability Convincing sample method

1.12.3 Research Tools: Interview Schedule (Researcher Made)

1.12.4 Statistical analysis

Mean

Standard Deviation

t-Test

1.13 Possible Cognitive Contribution

Gaining Knowledge of E-tool will become more useful for teachers in higher Education.

1.14 Major Findings

1. Acceptance of Directive Hypothesis: There are significance difference between pre-test and post-test mean score, so the Directive
hypothesis is accepted and Null hypothesis is rejected.

Awareness Programme is effective for aware the teachers about E-tool.

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प्राथमिक शिक्षकांच्या ICT कौशल्यांचाअध्यापनात वापर- एक अभ्यास

वंदादेवी भालाबागुल & डॉ. संजीवनी रा. महाले

सारांश

आंतरराष्ट्रीय स्पर्धेत टिकून राहण्यासाठी माहितीसंप्रेषणतंत्रज्ञान यासारखा उत्तम पर्याय नाही. यासाठी देशपातळीवर होणाऱ्या विविध प्रयत्नांपैकी एकम्हणजे शिक्षणात माहिती संप्रेषण तंत्रज्ञानाचावापर होय. शालेय पातळीवर डिजिटल शाळा ही संकल्पना स्वीकारण्यात आली आहे. यासाठी शाळेत आवश्यक असलेले साधनेआणि त्यासाठी शिक्षकांच्या अंगीआवश्यक असलेल्याकौशल्यासाठी प्रशिक्षण यांचा विचार शासनाने केला आहे. शिक्षक शालेय स्तरावर संगणकाचावापर करतात परंतु हा बदल शिक्षणव्यवस्थेच्या बदलत्या स्वरूपानुसार केला पाहिजे. त्यातील महत्त्व पूर्ण म्हणजे बाबी म्हणजे शालेयप्रशासकीय कामकाजात , अध्ययन - अध्यापनातआणि मूल्यमापनात होय . प्राथमिक शिक्षकांनीमाहिती संप्रेषण तंत्रज्ञानासंबंधित घेतलेल्या प्रशिक्षणाचा, त्याचाआपल्याअध्यापनात परिणामकारक वापरआणि त्यांना आवश्यक असलेल्या तंत्रज्ञाना धष्टीतकौशल्ययांचाअभ्यासकरण्यात आला.

प्रस्तावना : ज्याप्रमाणे दिवसेंदिवस ज्ञानाच्या कक्षा रुंदावत चाललेल्या आहेत तसे -तसे जग अधिकाधिक जवळ येवू लागले आहे. या ज्ञानाचा विस्तारातील महत्त्वपूर्ण वाटा हा तंत्रज्ञानाचा आहे. औद्योगिक क्रांती पासून आजतागायत विविध क्षेत्रात तंत्रज्ञानाच्या आधारे मानवाने आपल्या प्रगतीचा वेग वाढविलेले दिसून येतो . याला शिक्षणक्षेत्र अपवाद नाही . शिक्षणक्षेत्रात तंत्रज्ञानाचा वापर वेगवेगळ्या स्वरूपाच्या / प्रकारच्या कार्यासाठी केला जात आहे . शिक्षणातील विविध नवप्रवाहाचा साकल्याने विचार केला तर असे लक्षात येते कि त्या नवप्रवाहांनुसार शिक्षकांनी देखील आप -आपल्या अंगी आणि त्याला अनुसरून असलेले कौशल्य आत्मसात करणे आवश्यक आहे . आजच्या बदलत्या तंत्रज्ञाना धिष्ठित युगात स्वत : मध्ये बदल करणे आवश्यक आहे. या बदलत्या परिस्थितीचा परिणाम म्हणून शिक्षण प्रक्रियेच्या स्वरुपात देखील बदल अपेक्षित आहेत.

शिक्षणप्रक्रियेच्यास्वरुपात बदल

- आशयाकडून → कौशल्याकडे
- शिकविण्याकडून → शिकण्याकडे
- वर्गाकडून → विद्यार्थ्याकडे
- परीक्षा/ प्रमाणपत्राकडून → जीवनावश्यकक्षमतांकडे
- ठराविक शिक्षणकाळाकडून → आजीवन शिक्षणाकडे

जेव्हा जेव्हा शिक्षण प्रक्रियेत स्वरूपात बदल अपेक्षित जातो , तेव्हा तेव्हा ह्या बदलासाठी शिक्षक -प्रशिक्षणात बदल करणे अपरिहार्य होते . शिक्षण तंत्रज्ञाना धिष्ठित

करण्यासाठीदेखील शक्ष कांचे प्र शक्षण घेण्यात आले . यालाच डजिटल एज्युकेशन असे म्हणतात. यासाठी सर्व प्रथम शाळाह्या डजिटल झाली पाहिजे.

डजिटल शाळा-

"ज्या शाळेत तंत्रज्ञानाचा त्रिवेणी संगम होतो , ती डजिटल शाळा होय"अध्ययनअध्यापन, मूल्यमापन आ ण शालेय व्यवस्थापन शाळेचे कामकाज या तीन बाबीत वर्गीकृत केले जाते जर कोणतीही शाळा या तिन्ही गोष्टी इलेक्ट्रॉनिक उपकरणांच्या आधारे काम करत असेल तर त्या शाळेला डजिटल शाळा असे म्हणता येईल यात पुढील बाबी अपे क्षत आहेत.

- अध्ययनअध्यापन संगणक व इतर तंत्रज्ञानावर आधारित शक्षण ईलर्निग: वद्यार्थ्यांना पाठ्यांशाचे आकलन होईल व वद्यार्थी स्वत: यात सहभागी होऊन अध्ययन करतील या पद्धतीने पाठ्यक्रमाच्या गरजेनुसार संगणक , मोबाईल , रेडीओ, टीव्ही, इंटरनेट , प्रोजेक्टर, इंटरअॅकटीव बोर्ड इत्यादी इलेक्ट्रॉनिक साधनांचा वापर शाळेत करणे तसेच व वध संकल्पनाचे मॉडेल बनवूनअनिमेशन , प्रेझेंटेशन अथवाव्हिडीओ माध्यमातून प्रभावी सादरीकरण करणे म्हणजे ईलर्निग"
- मूल्यमापन संगणकाद्वारे मूल्यमापन ऑनलाईन एक्झा मनेश"ईलर्निंग पद्धतीने एखादा पाठ्यांश शकवून झाल्यानंतर त्याचे वद्यार्थ्यांना कतपत आकलन झाले आहे हे तपासण्यासाठी संगणकाद्वारे मूल्यमापन करणे .पुन्हा त्यात अप्रगत वद्यार्थी शोधून त्यांची संबं धत घटकावर पुन्हा तयारी करून घेणे व परत त्यांचा स्तर तपासणेसोबत व शष्ट कालावधीत वर्गाची व प्रत्येक वद्यार्थ्याच्या प्रगतीची नोंद सॉफ्टवेअरद्वारे ठेवून त्याचे वेळोवेळी निरीक्षण करून त्याप प्रमाणे पुढील नियोजन करणेया पद्धतीत अपे क्षत असतेऑनलाईन एक्झा मनेशनमुळे शक्षकांचा व वद्यार्थ्यांचा वेळ वाचतोव कमी कालावधीत नियोजन करणे सोपे जाते
- शाळा व्यवस्था शाळा व्यवस्थापन प्रणालीस्कूल मॅनेजमेंट शालेय कामकाजातील एक महत्वपूर्ण भाग म्हणजे शाळा व्यवस्थापन व वध रजिस्टरद्वारे पारंपरिक पद्धतीने माहिती जतन करण्याची प्रथा सगळीकडे आढळतेहीच माहिती डीजीटल स्वरुपात साठवली तर अनेक समस्या सुटतात

अशा परिस्थितीत शक्षकांनी नवनवीन बदलाचा स्वीकार करून आपल्या अंगी आवश्यक ते कौशल्ये बाणणे गरजेचे आहे.माहिती संप्रेषण तंत्रज्ञानाच्या साधनांचा अध्यापानात वापर करताना शक्षकांच्या अंगी पुढील क्षमता वक सत करणे महत्वाचे आहे.

- का, केव्हा, कोठे आ ण कसे ? माहिती संप्रेषण तंत्रज्ञानाचे साधने शैक्ष णक उद्दिष्टांची पूर्ती करता येण्यासाठी वापरता येतील ह्याचा निर्णय घेण्याची क्षमता
- वर्ग परिस्थितील अध्ययनवातावरणात घटककार्यातून अपे क्षत शैक्ष णक उद्दिष्टे सध्या करण्यासाठी माहिती संप्रेषण साधनांच्या वापराचे व्यवस्थापन करण्याची क्षमता

- पूर्ण वर्गासाठी क लहान गटात मल्टि म डया प्रे झेंटेशन वापरणे उपयुक्त ठरेल हा निर्णय घेता येण्याची क्षमता
- वषयासंदर्भात व शष्ट मल्टि म डया प्रे झेंटेशनSoftwareनिवड वश्लेषण करता येण्याची क्षमता
- वद्यार्थ्यांना इंटरनेटमधून माहिती शोधणे , तुलना आ ण वश्लेषण करणे यासाठी मदत करता येण्याची क्षमता
- वद्यार्थी, सहकारी यांच्याशी व शष्ट उद्दिष्टांच्या पूर्तीसाठी संवाद साधण्यासाठी योग्य माहिती संप्रेषण तंत्रज्ञानाच्या साधनांची निवड आ ण वापर करता येण्याची क्षमता
- स्वत:च्या व्यावसायिक वकासासाठी , प्र शक्षण कार्यक्रम निवडीसाठी आ ण नव्या प्रगतीमध्ये सहभागी होता येण्यासाठी माहि ती संप्रेषण तंत्रज्ञानाचा प्रभावी वापर करता येण्याची क्षमता

शक्षणातील माहिती-संप्रेषण तंत्रज्ञानाचा अध्यापनशास्त्रीय पाया-

शैक्ष णक तंत्रज्ञानाचाभर हा मुख्यत : शकण्याची प्र कया , अध्यापनाची प्र क्रया , मूल्यमापनाची प्र क्रया अ धका धक वद्या र्थीकेंद्री करणे यावर असतो . त्यादृष्टीकोनातून सुनियोजित, सुसंबद्ध पाठ्यक्रम नि र्मती, वद्यार्थ्यांशी संवाद साधणाऱ्या आ ण वद्यार्थ्या च्या वचार प्र क्रयेला चालना देणाऱ्या तंत्रांचा वापर केला पाहिजे .भारतासारख्या देशात जिथे बहुसंख्य समाज शक्षणापासून वं चत आहे आ ण जातीय, लंग भावात्मक आ ण वर्गीय वषमतेचे तीक्ष्ण आयाम आहेत तिथे अशाप्रकारच्या तंत्रज्ञान समर्थनाचे कती परिणाम घडून येऊ शकतात याचा अंदाज येऊ शकतो . आजच्या शक्षण व्यवस्थेनेसमावेशानाचे तत्व अवलंबिलेले आहे . यासाठी माहिती संप्रेषणाचा वापर शक्षकांनी सकारात्मक दृष्ट्या करणे आवश्यक आहे.

शीर्षक–प्राथ मक शक्षकांच्या ICT कौशल्यांचा अध्यापनात वापर- एक अभ्यास

उद्दिष्टे-

१) प्राथ मक शक्षकांच्या ICT बाबतच्या आवश्यक असलेल्या कौशल्याचा अभ्यास करणे.
२) प्राथ मक शक्षकां ना देण्यात आलेल्या प्र शक्षण व त्याच्या अध्यापनात केलेला वापर याचा शोध घेणे.
३) प्राथ मक शक्षकांनाअपे क्षत असलेल्या भ वष्यकालीन ICT सं बं धत होणाऱ्या प्र शक्षणाचाशोध घेणे.

कार्यपद्धती- सदरील अभ्यासासाठी वर्णनात्मकसंशोधन पद्धतीतील सर्वेक्षण पद्धतीचा वापर करण्यात आला.

न्यादर्श- प्राथ मक स्तरावरील शक्षकां च्या ICT वापराबाबत च्या कौशल्य आ ण ICT चा अध्यापनात वापर करण्याबाबत च्या माहिती संकलनासाठी प्राथ मक स्तरावरील एकूण ३७ शक्षकांचीयादृच्छिक पद्धतीने निवड करण्यात आली.

माहिती संकलनाचे साधने-

सदरीलअभ्यासासाठी प्रश्नावली आ ण मुलाखत या साधनांचा वापर करण्यात आ ला. प्रश्नावलीच्या माध्यमातून संख्यात्मक आ ण गुणात्मक माहिती मळ वण्यासाठी बध्द आ ण मुक्त स्वरूपाच्या प्रश्नांचा समावेश करून मश्र स्वरूपाच्या प्रश्नावली वापर करण्यात आला.

माहिती वश्लेषण-

कोष्टक क्र. १ शक्षकांचे ICT संबं धत झालेल्या शक्षण आ ण प्र शक्षणाबाबत माहिती

अ. क्र.	तपशील	शक्षक संख्या	शेकडेवारी
१.	MS-CIT	३२	८६ %
२.	शालेय स्तरावरील प्र शक्षण	१३	३५ %
३.	शालेय स्तरावरील प्र शक्षण न	२१	५७ %

अन्वयार्थ:- संक लत करण्यात आलेल्या माहितीनुसार जास्तीत जास्त शक्षकांनी MS-CIT चे शक्षण घेतलेले असून केवळ ३५ % शक्षकांनी शालेय स्तरावरील देण्यात आलेल्या प्र शक्षण घेतलेले आहे, तरअर्ध्याहून जास्त शक्षकांनी प्र शक्षण घेतलेले नाही.

संक लत केले ल्या माहिती च्या आधारे केवळ ३५ % प्राथ मक स्तरावरील शक्षकांनी घेतलेले असून त्यांनी १ ते १० दिवसांचे प्र शक्षण घेतलेले आहे.यातील काही शक्षकांनी जिल्हा शक्षण व प्र शक्षण परिषद ,महाराष्ट्र राज्य शैक्ष णक संशोधन व प्र शक्षण परिषद या शासकीय संस्था तर काही शक्षकांनी 'प्रथम' यासंस्थेमार्फत देण्यात आलेले ५ दिवसीय प्र शक्षण घेतलेले आहे.या प्र शक्षणांचे स्वरूप हे व्याख्यान, दिग्दर्शन आ ण प्रत्यक्ष अनुभव असे होते.

कोष्टक क्र. २अध्यापनातICT च्या व वध सु वधा वापर

अ.क्र.	तपशील	शक्षक संख्या	शेकडेवारी
१.	मोबाईल	३४	९२ %
२.	संगणक	२६	७० %
३.	इंटरनेट	१०	२७ %
४.	संगणक कक्ष	०६	१६ %
५.	इतर	०६	१६ %

अन्वयार्थ:- प्राथ मक स्तरावरील शक्षक अध्यापनासाठीमाहिती संप्रेषण तंत्रज्ञानाच्या सु वधांपैकी सर्वा धक मोबाईलचा आ ण संगणकाचा वापर करतात तर इंटरनेट चा काही प्रमाणात वापर करताना दिसून येतात.याप्राथ मक शक्षकांपैकी केवळ ५ % शक्षकांनाशैक्ष णक Software तयार करण्याची माहिती आहे.

कोष्टक क्र. ३ शक्षकांचाICT शैक्ष णक कार्यासाठी वापर

अ. क्र.	तपशील	शक्षक संख्या	शेकडेवारी

१.	अध्यापन	३१	८४ %
२.	अभ्यासपूर्वक कार्यक्रम	१३	३५ %
३.	प्रशासकीय कामकाज	१६	४३ %
४.	मूल्यमापन	०९	२४ %

अन्वयार्थ:- प्राथ मक स्तरावरील शक्षक माहिती संप्रेषण तंत्रज्ञा नाचा वापर सर्वा धक प्रमाणात अध्यापनासाठी करतात त्याचप्रमाणे माहिती संप्रेषण तंत्रज्ञानाचा वापरशाळेतील प्रशासकीय कामकाजासाठीदेखील करतात.

कोष्टक क्र. ४ शक्षकाICT चा वषयानुरूप करत असलेला वापर

अ. क्र.	तपशील	शक्षक संख्या	शेकडेवारी
१.	मराठी	२३	६२ %
२.	हिंदी	१७	४६ %
३.	इंग्रजी	२७	७३ %
४.	इतिहास	२१	५७ %
५.	भूगोल	२४	६५ %
६.	ग णत	२९	७८ %

अन्वयार्थ:- शक्षक माहिती संप्रेषण तंत्रज्ञानाचा वापर शालेय वषयातील ग णत आ ण इंग्रजी या वषयात सर्वा धक वापर करतात.

कोष्टक क्र. ५ अध्यापनात संगणकाच्या व वध मार्गाचा वापर

अ. क्र.	तपशील	शक्षक संख्या	शेकडेवारी
१.	पॉवर पाईट	२२	५९ %
२.	You Tube	२८	७६ %
३.	खाजगी	१३	३५ %
४.	इतर	१३	३५ %

अन्वयार्थ:- शक्षक अध्यापनात You Tubeवरील व्हिडीओअ धक धक वापर करतात.

निष्कर्ष–

१. माहिती संप्रेष ण तंत्रज्ञानबाबत शक्षकां चे प्र शक्षण झालेलेआहे परंतु त्याचा लाभ खूप कमी शक्षकांनी घेतलेले आहे.
२. शक्षक आपल्या अध्यापनात सर्वा धक प्रमाणात मोबाईल आ ण इंटरनेट या साधनांचा वापर करतात.

३. अध्यापन या कामासाठी प्राथ मक शक्षक वापर करताना दिसून आले तर त्या चप्रमाणे शालेय कामकाजात पणमाहिती संप्रेषण तंत्रज्ञानाचा वापर करतात.

४. प्राथ मक स्तरावरील शक्षक ग णत आ ण इंग्रजी या शालेय वषया च्या अध्यापनासाठी सर्वा धक वापर करतात.

५. शक्षकांनीVirtual Classroom (आभासी वर्ग), नेटवर्कीग, ॲप्लिकेशननि र्मती, सॉफ्टवेअर नि र्मतीपावरपाईट सादरीकरण, Blog आ णWeb Site नि र्मती, ॲनिमेशन, Education Software,Video Clip तयार करणे यासाठी भ वष्यकालीन प्र शक्षणाची अपेक्षा व्यक्त केलेली आहे.

समारोप-

स्पर्धेच्या या युगात प्राथ मक स्तरावरील शक्ष कांनी माहिती संप्रेषण तंत्रज्ञानाचावापर आपल्या दैनंदिनअध्यापनातअ धक धक प्रमा णात केल्यास आपल्या वर्गातील वद्यार्थी तंत्रज्ञाना धष्ठित होईल आ ण त्यातून शक्ष कांचा देखील अप्रत्यक्ष रित्या व्यावसायिक वकास होईल.यासाठी शालेय स्तरावर शासनाने अजून ही गुणवत्तापूर्ण प्र शक्षणाचे आयोजन करून त्याचा लाभ प्रत्येक शक्ष काला कसा होईल याचा वचार केला पाहिजे . माहितीसंप्रेषण तंत्रज्ञानाशी संबं धत अपे क्षत प्र शक्षणां चेपरिणामकारक नियोजन, अंमलबजावणी आ ण त्याचे अनुधावन होणे आवश्यक आहे.

संदर्भ ग्रंथ-

बरवे मी., धारणकर मा., (२०१०), माहिती संप्रेषण तंत्र वज्ञान, पुणे, नित्यनुतन प्रकाशन.

बरवे मी., धारणकर मा., (२००६), शक्षणात संगणक आ ण माहिती संप्रेषण तंत्र वज्ञान, पुणे, नित्यनुतन प्रकाशन.

चव्हाण के., महाले सं., पाटीलसु. (२००३), माहिती संप्रेषण तंत्रज्ञान आ ण शैक्ष णक मूल्यमापन, ना शक, प्रज्ञा प्रकाशन.

वीरकर प्र., (२००६), माहिती संपर्क तंत्रज्ञान आ ण शक्षण, पुणे, पुणे वद्यार्थी ग्रह प्रकाशन.

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शाळाबाहय विदयार्थ्यासाठी संमिश्र अध्ययन (Blended Learning) प्रभावी माध्यम

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प्रास्ताविक - संगणकीय वडिजीटल युगात शिक्षणक्षेत्रात सातत्याने नवनवीन संकल्पना विकसितहोत आहेत.ज्ञानाच्या प्रचंड प्रस्फोटा बरोबरच विदयार्थ्यांची ज्ञानकक्षा, जिज्ञासुवृत्तीव तंत्रस्नेहीवृत्तीदिवसेंदिवस झपाटयाने विकसितहोतआहे. मोबाईल, दुरदर्शन, संगणक यांच्या सततच्या सहवासामुळे विदयार्थी या साधनांना हाताळण्याचे तंत्रज्ञानआत्मसात करतआहे. पर्यायाने शाळेतसुरूअसलेली पारंपारिक अध्यापन पदधती विदयार्थ्यांना नीरसवाटणे स्वाभाविकच आहे.हर्बाटच्या पंचपदीनुसार अध्ययन अनुभव देणे तरआजच्या विदयार्थ्यांना न रूचणारेव कंटाळवाणे वाटतात.व्याख्यान, कथा-कथन पदधतीही विदयार्थ्यांच्या उपस्थितीला मर्यादा निर्माण करणारीआहेत.पर्यायाने बालवर्गापासून तर प्राथमिक, माध्यमिक उच्च माध्यमिक व महाविदयालयीन स्तरापर्यंत पारंपारिक पध्दतीऐवजीआधुनिकव बहुमाध्यम, विविध तंत्र, कौशल्य, साधनांचा एकत्रित वापर करून या सर्वांचे संमिश्रण म्हणजे संमिश्र अध्ययन (Blended Learning) चा वापर करणे क्रमप्राप्त आहे. तरच स्पर्धात्मक युगात शाळांमध्ये विदयार्थी संख्या टिकूनराहणारआहे. यासाठी शासकीय, निमशासकीय वखाजगीस्तरावर मोठया प्रमाणात स्पर्धा सुरू झाल्या आहेत. ज्या शाळेत मुबलक प्रमाणात शै.साहित्याचा वापर ई-लर्निगसुविधा, भौतिक सुविधा उपलब्ध आहेतअशा शाळांमध्ये पाल्यांना पालक दाखल करतात यासाठी असणारी फी अथवा देणगीगौण मानली जाते. तरसुविधांनाव दर्जाला प्राधान्य दिले जाते. एकीकडेडिजीटल भारत, डिजीटलशाळाही संकल्पना राज्यभर व देशभर राबविली जातअसतानाचगरिबीव रोजगाराच्या सुविधाचाअभाव या कारणामुळे मजुरीसाठी काही कुटूंबस्थलांतरीत होतात.या कुटूंबातील पाल्यांना शिकविण्याची इच्छाअसूनही पालक स्थलांतरामुळे शाळेत पाठवू शकत नाही.ही दाखलपात्र मुलं पालकाबरोबर येतात व शिक्षणाच्या प्रवाहाबाहेर राहणे याचे एकमेव कारण म्हणजे गरिबीव पालकांची परिस्थिती शासकीय यंत्रणा व पालक दोनहीघटकांचीइच्छाअसूनहीव प्रयत्न करूनहीस्थलांतरीत कुटूंबातील मुलं किमान ३ ते ४ महिने शाळाबाहय होतात.शिक्षणक्षेत्रातीलसर्वघटक बालकांना मोफत व सक्तीच्या शिक्षणाचाआधिकारआधिनियम २००९ चीअमंलबजावणी करीतआहेत.सर्वत्र ६ ते १४ वयोगटातील मुलं शालेय प्रवाहात टिकूनरहाणेहीसर्वचघटकांची जबाबदारीआहे. यामुळेच स्थलांतरीतहोऊनआलेल्या शाळाबाहय विदयार्थ्यांना त्यांच्या स्थलांतराच्या कालावधीतशिक्षणाचीसुविधा उपलब्ध करून देण्यासाठी केलेला प्रयत्न व त्यासाठी संमिश्र अध्ययन (Blended Learning) पध्दतीचाकेलेला उपयोग या विदयार्थ्यांसाठी एक प्रभावी माध्यम ठरला.

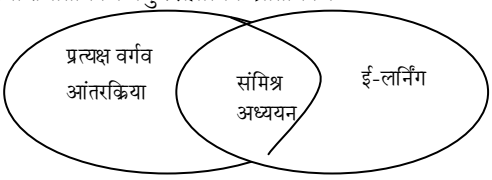
संमिश्र अध्ययन - (Blended Learning). ई-लर्निच्या माध्यमातून अध्ययन करीतआसताना वर्गआंतक्रीयांवरती मर्यादा पडतातकिंबहुना त्यास दुर्लक्षिले जाते. यामुळे परिणामकारक अध्ययन अनुभूती घडून येत नाही.मात्र ज्यावेळी आपण प्रत्यक्ष वर्गआंतरक्रिया आणिई-लर्निंगचीविविध माध्यमे यांचा समर्पक एकत्रित वापर करतो तेव्हा संमिश्रआध्ययन घडून येते. यासाठी Hybrid Learning - Mixed Learingअसेहीशब्दप्रयोग केले जातात. याचा मुख्यअर्थ एकात्मीकरण अथवा संमिश्रण (Integration) To blend याचाअर्थ संमिश्रन करून वर्गआंतरक्रिया घडवूनआणणे होय.

Blended Learning is a learningprogramme where more than one delivery mode is used.T. Barkar(२००५).

Blended Learning is a learning that is facilitated by the effective combination of different modes of delivery, models of Teaching and styles of learning and is based on transparent communication amongst all parties involved with course.
Heinz and pmcter(२००७)

संमिश्र अध्ययन म्हणजे विविधअध्ययनअध्यापन पध्दती तंत्रे, अध्ययनाची विविध माध्यमे यांचा अर्थपूर्ण अध्ययन वातावरणातआंतरक्रियात्मकरित्या वापर करणे होय यामध्ये अध्ययनासाठी एकापेक्षा अधिक माध्यमांचा वापर केला जातो.प्राप्त ज्ञानव कौशल्यांच्या वापरासाठी उपयुक्त ठरणा-या माध्यमांची निवड केली जाते. संमिश्र अध्ययन शिक्षकांच्या सहकार्याने व पर्यवेक्षणाखाली वर्गामध्ये ववर्गाबाहेरहीघडून येते.यामध्ये आकारिकवसंकलित मूल्यमापनाच्या विविध मार्गांचा अवलंब केला जातो.ज्ञानरचनावाद (constrativism) बोधात्मक (cognitivison) जॉर्ज सिमन्सच्या Connectivismयाअधिष्ठानाव्दारे संमिश्र अध्ययन उभारलेले आहे.

ज्ञानरचनावादीअध्ययन बोधात्मक अध्ययन
ज्ञानरचनावादीवातावरणअनुदेशात्मक वातावरण



संमिश्र अध्ययनाची उदिष्टे

- अर्थपूर्ण वर्गआंतरक्रिया घडवूनआणणे.
- अर्थपूर्ण अध्ययन अनुभव देणे.
- विदयार्थ्यांना वर्गातववर्गाबाहेरअध्ययनाची संधी देणे.

- विविध आंतरक्रियादवारे वविविध माध्यमांदवारे विदयार्थ्यांचा अध्ययन स्तर उंचावणे.

कार्यपध्दती - संमिश्र अध्ययन पध्दतीचाअवलंब करतानाविचारात घ्यावयाची महत्त्वाची बाब म्हणजे विदयार्थ्यांची सामाजिक, सांस्कृतिकअर्थिक पार्श्वभूमी व परिस्थिती लक्षातघेणे. हानिकषस्थलंतरीत विदयार्थ्यांसाठी अत्यंत उपयुक्त व महत्वाचा आहे. भाषिक समस्या,परिस्थिती, कौटुंबिकअडचण, अशाअनेक समस्यांनीग्रस्तही मुले असतात. जगण्यासाठीची धडपड यामुळे पालक इच्छाअसूनही पाल्यांना शिक्षणाचीसंधी उपलब्ध करून देऊशकत नाही. संमिश्र अध्ययनाच्या कार्यवाहीतील ही महत्वाची बाबविचारातघेऊन या विदयार्थ्यांना अध्ययन अनुभव देऊन त्यांच्या शिक्षणातीलखंड भरुन काढण्याचा केलेला प्रयत्न. विविध अध्ययन-अध्यापन पध्दती तंत्रे, अध्ययनाची विविध माध्यमे यांचा अर्थपूर्ण अध्ययन वातावरणात आंतरक्रियात्मकरित्या वापर - या संमिश्र अध्ययन पध्दतीच्या मुख्य विचारधारेचा उपयोग - शाळाबाहय विदयार्थ्यांना शिक्षणाचीसंधी उपलब्ध करून देताना केलाव या संमिश्र अध्ययन पध्दतीमुळे ही मुलं अध्ययनात रममाण झाली उत्स्फूर्त प्रतिसाद देऊ लागली. स्थलांतरीत कुटूंबाना भेट देत असतांनाव पालकांसमवेत संवाद सुरू असताना माझ्याजवळील मोबाईल मी या विदयार्थ्यांना दाखविलाव त्यातील शब्दवाचनही चित्रफीत सुरू करून एकेका विदयार्थ्यांना शब्दावर बोट ठेवण्यास सांगितले बोट ठेवल्याबरोबर शब्दांचेवाचन मोबाईलमधून होऊ लागले. मुलांना खूप आनंद झालासर्व मुलं माझ्याभोवती जमा झालीव अत्यंत कुतूहूलाने सहभाग घेऊ लागली.व पुन्हा पुन्हाहीच चित्रफीत सुरू ठेवण्याची मागणी करूलागले.इथेच मला समजले की या मुलांना शिकण्याची आवड आहे.गरज आहे त्यांच्या पर्यंत शिक्षणपोहचण्याची पालकांनी पाल्यांना नजीकच्या शाळेत पाठविण्यास वेगवेगळया अडचणीसांगून नकार दिला.यामुळे या मुलांना त्यांच्या राहण्याच्या ठिकाणजवळ अध्ययन-अनुभव देण्याचे निश्चित केले. सुरूवातीला प्रत्येकाचा अध्ययन स्तरनिश्चित करणे आवश्यक वाटले. म्हणून तोंडी, प्रात्यक्षिक व सोप्या लेखीचाचणीदवारा प्रत्येकाचा अध्ययन स्तरनिश्चित केला. यामुळे स्पष्ट कार्यपध्दतीठरविता आली.गट करून प्रत्येक गटाला एकाचवेळी अध्ययन अनुभव देण्याचे नियोजन केले. कमी वेळेतअधिक अध्ययन-अनुभव देण्यासाठी अधिक प्रमाणात शै.साहित्य व मुलं अधिक काळ शिकवण्याच्या प्रक्रियेत रमतील अशासाधनांचीनिवड करणेगरजेचेवाटले यासाठी मोबाईल, ज्ञानरचनावाद कार्यपध्दती या साधनव तंत्रांचा उपयोग करण्याचे निश्चित केले संमिश्र अध्ययन पदधतीच्या तत्वानुसार मुलांच्या गरजा ओळखून त्यांना अध्ययन अनुभव दिले.

- **शब्दवाचनावर आधारित स्मरणखेळात मोबाईलचा उपयोग.**

विदयार्थ्यांचे समान दोनगट केले.दोनहीगटासखेळाचा नियम समजाऊन दिला.ववेळेची मर्यादा समजावून दिली. प्रत्येक गटास १० शब्द मोबाईलवर दाखविलेव दाखविलेलेशब्द आठवून एका मिनिटात पुन्हा सांगणे.जोगट जास्तीत जास्तशब्द सांगणार तो विजयी.

मोबाईलवर १० संख्या प्रत्येक गटास दाखविणेव दाखविलेल्या संख्या आठवून एका मिनिटात पुन्हा सांगणे जोगट जास्तीत जास्त संख्या सांगणार तो विजयी.

- **स्मरणखेळात मोबाईलमधील घडयाळाचा उपयोग.**

रूमालाखाली काहीशब्दकार्डव अंककार्ड, वस्तु झाकून ठेवल्या व दोन समान गट करून दोन मिनिटात झाकलेल्या वस्तू, शब्दकार्डव अंक ओळखणे.यासाठी दुस-या गटाजवळ मोबाईल देऊन त्यातील घडयाळाचा [स्टॉप वॉच] उपयोग करणे. मोबाईल सुरू करणेवेळसुरू करणेव २ मिनिटे मोजणे या क्रिया दुसरागट करूलागला यातुन मुलांना अंकगणन, कमी जास्त तुलना इ.स्वानुभव मिळालेत तर पहिला गट वेळेकडेलक्ष देऊन जास्तीत जास्तशब्द व अंकवस्तू कशारितीने ओळखता येतील यासाठी प्रयत्न करुलागले. या स्मरण खेळातूनगणित, भाषा व कार्यानुभव या विषयांचा एकाचवेळी अध्ययन अनुभव देता आले. तंत्रव कौशल्यांचा स्वत: वापर करण्याची संधी विदयार्थ्यांना मिळाली.

स्मरणखेळ सुरू असताना संमिश्र अध्ययन कार्यवाहीच्या तत्वानुसार विदयाथ्यांचे आकारिक मूल्यमापनाच्या दृष्टीनेनिरीक्षण केलेव आवश्यकनोंदी केल्या.वेळेअभावी नोंदीलगेच करता येणे शक्य नसल्यामुळे अध्ययन अनुभव देऊन झाल्यानंतर लगेचच आठवणीने कोणी कोणता प्रतिसाद दिला याबाबतच्या नोंदी विवरणपत्रात नोंदविला काहीच प्रतिसाद व सहभाग न घेणा-या विदयार्थ्यांना पुढील अध्ययन-अनुभवात प्रथम संधीदिली.

लवचिक वेळापत्रक - वाचनव अनुलेखनात या मुलांना लवकर कंटाळा यायचा व त्याऐवजी गाणी अथवाखेळ घेण्याचा आग्रह करायचे त्यांच्या इच्छेनुसार अध्ययन अनुभवात बदल न केल्यास त्यांच्या प्रतिसाद कमी मिळत असेवलगेच त्यांच्या इच्छेनुसार बदल करावालागत असे. अशावेळी प्रार्थना, गाणी, इंग्रजी कविता, Rhymes ऐकविणे त्यासोबत कृती करून गायन करणे यात मुलं अधिक रममाण होत असत.

यु टयुब - दुर्गम व डोंगराळक्षेत्रातील विदयार्थ्यांची बोलीभाषा ही मुख्य अडचणहोती.कवितेाव प्रार्थना गायनात सुरूवातीस अडचणी आल्या मात्र दररोजच्या सरावानेवश्रवणाने मुलांच्या उच्चरणातव गायनात सुधारणा झाली.प्राथनेच्या सुरातसुर मिसळून ही मुले सुंदर प्रार्थना गायन करूलागली.

ज्ञानरचनावाद कार्यपध्दती -

कोणत्याही दडपणाशिवाय विदयार्थी कसे अध्ययन करतीलहे पाहणेहा ज्ञानरचनावाद मूळ गाभा आहे. ज्ञानाचीरचना प्रक्रिया म्हणजे ज्ञ ानरचनावाद ज्ञानाचीरचना करण्याची प्रक्रिया कार्यान्वीतठेवणेहा ज्ञानरचनावादाचा पाया आहे.

ज्ञानरचनावादाचीगृहितके - १]ज्ञानाचीरचना म्हणजे अध्ययन प्रक्रिया होय. २] विदयार्थी स्वत:ज्ञानाचीरचना करतात. ३]पूर्वानुभवाचा अर्थलावणे म्हणजे अध्ययन. ४] पूर्वानुभवादवारे विदयार्थी ज्ञानरचना करतात. ५] वातावरणाशी होणा-या आंतरक्रियांमधून विदयार्थी ज्ञ ानरचना करतात.

ज्ञानरचनावादाचा या गृहीतकानुसार विदयार्थ्यांचेगट करून प्रत्यक्ष कृतीतूनशैक्षणिक साहित्याच्या मदतीने विदयार्थ्यांना स्वत: शिकण्याची सुविधा उपलब्ध करूनदिली.

१] तोंडीहिशेबव व्यवहारज्ञान - स्वानुभवाद्वारे बाजारव दुकानातुनवस्तू आणणेहिशेब करणे प्रत्येक नाणीव नोटा मोजणे एकत्र करणे.

२] दररोजचादिनांकवार, वेळसांगणे -मागील पुढील दिनांक आठदिवसांनी येणारा वार पुढील महिना दिनदर्शिकेचा उपयोग करून विदयार्थी स्वत:सांगत.

३] गटकार्य -गटानुसारशब्दकार्ड, वाक्यप्रचार, स्वंयअध्ययनकार्ड, बेरीजवजाबाकी, तुलना इ. साहित्य मांडणी केल्यानंतर विदयार्थी स्वत:चवाचनाचाव उदाहरणे सोडविण्याचा सराव करत आवश्यक तेथे अडखळणा-या व थांबणा-या विदयार्थ्यांना सुलभक म्हणून मार्गदर्शन केले.

पारंपारिक पध्दतीनेवठरााविक वेळापत्रकाचा अवलंब करून या स्थलंतरीत कुटूंबातील मुलांना अध्ययन अनुभव दिले असते तरही मुलं अधिक काळ अध्ययनात रमली नसती. परंतु संमिश्र अध्ययन पध्दतीचा अवलंबामुळे निश्चितच या विदयार्थ्यांकडून अपेक्षित प्रतिसाद मिळाला त्यांना शिक्षणाचीसुविधा त्यांच्या सोयीनुसार उपलब्ध करून देता आली. वनिश्चित संमिश्र अध्ययन Blended Learning या विदयार्थ्यांना शिकण्यासाठी प्रभावी माध्यम ठरले.

संमिश्र अध्ययन पदधतीची अमंलबजावणी करतानाघेतलेली दक्षता.

- स्थलांतरीतहोऊन आलेल्या विदयार्थ्यांच्या अडचणी समजून घेऊन निश्चित कोणते अध्ययन अनुभव दयावेत याचा आराखडानिश्चित केला.
- विदयार्थ्यांच्या इच्छेनुसारव आवडीनुसार अध्ययन अनुभव देण्यासाठी वेळापत्रक लवचिकठेवावेलागले.
- अडखळणा-या वकमी प्रतिसाद देणा-या विदयार्थ्यांना वैयक्तिक सरावदिला. गटकार्यात प्राधान्यदिले.
- सातत्यपूर्ण सर्वंकष मूल्यमापन कार्यपध्दतीनुसार विदयार्थी वर्तनबदलाच्या निरीक्षण करूनवेळोवेळी नोंदी घेतल्या कमी प्रतिसाद देणा-या विदयार्थ्यांच्या प्रथम नोंदी घेतल्या विशेषत: विदयार्थी कोठे अडखळतात याबाबत दक्षताघेतली.
- भावनिक समायोजन - अतिशय प्रेमाने व मैत्रिपूर्ण वातावरणात या विदयार्थ्यांसमवेतशैक्षणिकसंवाद साधला.

फलनिष्पती.

- शैक्षणिक साहित्य दृक श्राव्य साधनांचा वापर यामुळे विदयार्थ्यांच्या अध्ययन स्तरातवाढ झाली.
- विदयार्थी - विदयार्थी, विदयार्थी - शिक्षक, शिक्षक- पालक अशा जास्तीच्या आंतरक्रिया घडून आल्या अध्ययन एकांगी न होता परस्परांशी निगडीत अध्ययन घडून आले.
- विविध माध्यमांच्या वापरामुळे विदयार्थ्यांच्या दिर्घकाळ स्मरणात राहणारेव अर्थपूर्ण अध्ययन अनुभव मिळाले.
- विदयार्थी सतत अध्ययनशील राहीले मनोंरजक पदधतीनेविदयार्थ्यांना अध्ययनाची संधी मिळाली.
- विदयार्थ्यांना शिक्षण म्हणजे प्रत्यक्ष जीवनाची तयारी असा अनुभव यानिमित्ताने देता आला.

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प्रास्ताविक : अध्यापनासाठी जशा वेगवेगळ्या अद्यापन पध्दती आहेत, आपण त्या पध्दती आशयाचे स्वरुप, विद्यार्थ्यांचा स्तर, उपलब्ध साधन सामग्री यांचा विचार करुन वापरतो. त्याचप्रमाणे सद्याच्या माहिती तंत्रज्ञानाच्या युगात अध्ययन अध्यापनासाठी वेगवेगळ्या साधनांचा जसे, संगणक, लॅपटॉप, नोटपॅड, एलसीडी, प्रोजेक्टर, मोबाईल, वेगवेगळ्या वेबसाईट्स, ई-मेल यांचा वापर करणे आवश्यक आहे. साधनांप्रमाणेच काही तंत्रे आहेत, त्याचाही अध्यायन- अध्याापनासाठी योग्य असा वापर करता येतो. तंत्रांमध्ये व्हिडीओ कॉन्फरन्सींग, पॉवर पॉईंट प्रेझेन्टेशन, वेबीनार्स, ब्लॉक्स, विविध शैक्षणिक ॲप्लिकेशन्स यांचा समावेश होतो. या तंत्रांचाही परिणामकारक अध्यापनासाठी शिक्षकाला उपयोग करता येतो. याचप्रमाणे सोशल मिडीयाचा म्हणजेच व्हॉटसॲप, फेसबुक, इन्स्टाग्राम, मेसेंजर यांचा अध्ययन अध्यापनासाठी चांगला उपयोग होतो.

वरील साधने व तंत्रे यांचा यथायोग्य वापर करुन अध्यापन केल्यास विद्यार्थ्याचे चांगले अध्ययन होऊ शकते.

माहिती संप्रेषण तंत्रविज्ञानाव्दारे अध्यापनासाठीची साधने : यात संगणक, लॅपटॉप, नोटपॅड, एलसीडी, प्रोजेक्टर, मोबाईल, ई-मेल वेगवेगळ्या वेब-साईटस, इंटरनेट यांचा समावेश होतो. आयसीटीच्या युगामध्ये संगणक हा मुलभूत घटक आहे. संगणकाव्दारे आपण कमी वेळेत जास्त आशय विद्यार्थ्यांसमोर मांडू शकतो. कारण संगणकाच्या काही आगळ्या वेगळ्या क्षमता आहेत. जसे संगणक हे एक इलेक्ट्रॉनिक साधन आहे, ते स्वयंचलित आहे, विश्वसनिय आहे, त्याचा काम करण्याचा वेग प्रचंड आहे, एकाच वेळेला अनेक गणिती क्रिया करता येतात म्हणून आपल्याला संगणकाचा वापर करुन परिणामकारक अध्यापन करता येते.संगणक हे स्वयं-अध्ययनाचे साधन आहे. संगणकाप्रमाणेच लॅपटॉप व नोटपॅडचा उपयोग करता येतो. लॅपटॉप हा पोर्टेबल संगणकच आहे. लॅपटॉपव्दारे हवे त्या ठिकाणी, हव्या त्या वेळेला अध्ययन-अध्यापन करता येते. एलसीडी प्रोजेक्टर संगणकाला जोडून पडदयावर मोठया आकाराची प्रतिमा घेता येते. संगणकाची (Screen) स्क्रिनच पडदयावर मोठया आकारात घेता येते. संगणकात तयार केलेल्या पॉवर पॉईंट प्रेझेन्टेशन स्लाईडस एलसीडी प्रोजेक्टरव्दारे एकाच वेळेला अनेक विद्यार्थ्यांना दाखवता येतात. पॉवर पॉईंट प्रेझेंटेशन्स सर्वात उपयुक्त व दर्जेदार असे बहुमाध्यम ॲप्लीकेशन सॉफ्टवेअर आहे. त्याव्दारे इंटरनेटचा वापर करुन ऑनलाईन काही वेब साईटला भेट देऊन काही प्रोग्राम्स दाखवता येतात. डाऊलोड करुन स्टोअर करुन ठेवता येतात. सध्या एम-लर्निंग सर्वात पॉप्युलर झालेले आहे- कारण जवळपास सर्वांजवळ ॲन्ड्रॉईड मोबाईल आहेत. म्हणजेच मोबाईल हे सुध्दा एक स्वयं अध्ययन इलेक्ट्रॉनिक साधन आहे. त्याव्दारे तुम्ही तुमच्या कुवतीनुसार, वेळेनुसार, आवडीनुसार हवे त्या ठिकाणी अध्ययन करु शकतात. शिक्षक दैनंदिन अध्यापनासाठीही मोबाईलचा वापर करतात. इंटरनेटच्या साहायाने मोबाईलमध्ये वेगवेगळे शैक्षणिक ॲप्स डाऊनलोड करुन ते वापरता येतात. मोबाईलमध्ये इंटरनेट चालु असेल तरच मोबाईलचा वेगवेगळ्या वेबसाईटसच्या सर्फिंगसाठी उपयोग होतो. मोबाईलव्दारे मल्टीमिडियाचा वापर करुन आपण परिणामाकारक अध्यापन करु शकतो. इंटरनेटवर ई-मेल ही एक अत्यंत उपयुक्त व चांगली सुविधा आहे. ई-मेल म्हणजे इलेक्ट्रॉनिक्स मेल ई-मेलचे पायाभूत वैशिष्टये म्हणजे संदेश तयार करणे, संदेश पाठविणे, संदेश वाचणे आलेल्या संदेशाला उत्तर देणे, संदेश जपुन ठेवणे, संदेश नष्ट करणे इत्यादी गोष्टी काही सेकंदात करता येतात. ई-मेलचा उपयोग करण्यासाठी आपल्याल इंटरनेटवर जीमेल, याहु, हॉटमेल इत्यादी संकेत स्थळावर ई-मेल खाते उघडावे लागते. ई-मेलसाठी वैशिष्टयपूर्ण पत्ता असतो त्याला ई-मेल ॲड्रेस असे म्हणतात.

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ईमेलव्दारे संदेशाची देवाण-घेवाण करण्यासाठी ई-मेल ॲड्रेस बरोबरच स्वतःचा पासवर्ड लागतो. आपला पासवर्ड कोणालाहि माहित नसतो म्हणून आपले ई-मेल खाते कोणीही उघडून पाहु शाकत नाही. तसेच ई-मेल वापरातरांना काही नियम पाळावे लागतात. त्यांना मेल-प्रोटोकॉल्स असे म्हणतात. एकच संदेश अनेक लोकांना एकाच वेळेला पाठवण्याची सुविधा आहे. त्याला मेल मर्ज असे म्हणतात. अध्ययन अध्यापन टेक्नोसॅव्ही शिक्षक ई-मेलचा चांगला उपयोग करु शकतात. त्याचप्रमाणे आपण वेगवेगळ्या वेबसाईटचाही अध्ययन-अध्यापनासाठी उपयोग करु शाकतो. शैक्षणिक क्षेत्रातील वेगवेगळ्या उपयुक्त वेबसाईटस वरील कार्यक्रम, उपक्रम, शिक्षक, विषयतज्ज्ञ, विद्यार्थ्यांमध्ये होणा-या आंतरक्रिया, निरीक्षण, मूल्यमापन, तसेच प्रदर्शन, परिसंवाद, प्रश्न, प्रयोग इत्यादींच्या माध्यमातून शिक्षक व विद्यार्थ्यांमध्ये आंतरक्रिया घडून येतात. अशाप्रकारे माहितीसंप्रेषण तंत्रविज्ञानाव्दारे अध्यापनासाठी वरीलप्रमाणे साधनांचा उपयोग करता येतो.

माहिती संप्रेषण तंत्रविज्ञानाव्दारे अध्यापनासाठीची तंत्रे :- यात व्हिडीओ कॉन्फरन्सींग, वेबीनार्स, ब्लॉग्ज, विविध शैक्षणिक ॲप्लिकेशन्स, मेसेंजर, इन्स्टाग्राम यांचा समवेश होतो. व्हिडीओ कॉन्फरसींग हे तंत्र अध्ययन-अध्यापनासाठी सर्वात उपयुक्त असे तंत्र आहे यात व्यक्ती परस्परांपासून दूरच्या अंतरावर असतील तरी एकमेकांना पाहु शकतील आणि एकमेकांशी बोलू शकतात. ही व्दिमार्गी प्रक्रिया आहे. शिक्षक विद्यार्थी एकमेकांना पाहु शकतात, एकमेकांशी बोलू शकतात, विचार मत आणि भावना यांचे आदान-प्रदान करु शकतात. आपले विचार व शंकाचे समाधान करु शकतात. एखादया बैठकीसारखे याचे स्वरुप असते. केवळ दूरशिक्षण प्रणाली साठीच व्हीडिओ कॉन्फरन्सींग उपयुक्त आहे असे नाही तर पारंपारिक शिक्षण घेणा-या विद्यार्थ्यांनाही हे तंत्रज्ञ

ाान उपयुक्त आहे. आज वर्गाध्यापनाच्या वेळी दिली जाणारी माहिती विद्यार्थ्यांना अपुरी वाटु लागली आहे अधिक तज्ज्ञ व्यक्तींचे मार्गदर्शन आवश्यक वाटते. तेव्हा व्हिडीओ कॉन्फरन्सींग हे तंत्रज्ञान उपयुक्त ठरते. हया तंत्रज्ञानाची उपलब्धता होण्यासाठी संगणक प्रणाली, वेबकॅमेरा, स्पिकर फोन, पडदा इतयादी उपकरणांची आवश्यकता असते. थोडक्यात व्हिडिओ कॉन्फरन्सींग तंत्रज्ञ ानासाठी स्मार्ट क्लासरुमची आवश्यकता असते. तसेच ब्रॉडबँड इंटरनेटची स्टुडिओशी जोडणी करावी लागते. यात दोन व्यक्तींना प्रत्यक्ष संपर्क साधून संवाद करता येतो. अनेक व्यक्तींना सहभाग घेता येतो. व्हिडीओ कॉन्फरन्सींगमुळे चर्चासत्रे, मुलाखती यांचे प्रभावीपणे आयोजन करता येते. चित्रे, आकृत्या, नकाशे, दृक-श्राव्य क्लिप्स, स्लाईडस इत्यादींचा वापर करुन विद्यार्थ्यांना प्रभावीपणे माहिती देता येते. म्हणूनच व्हिडिओ कॉन्फरन्सींग हे अध्ययन-अध्यापनासाठी प्रभावी असे तंत्र आहे. ब्लॉग्ज हे एक उपयुक्त माहिती स्त्रोताचे तंत्र आहे. इंटरनेटवर व्यक्तीगत नोंदी करण्यासाठी वेब पेज तयार करता येते. त्यावर आप-आपल्या नोंदी करता येतात. या नोंदी इतर लोकांनाही खुल्या असल्यामुळे वाचकांनाही त्या वाचायला आवडतात. प्रतिक्रिया देतात. यामुळे ब्लॉग्ज हे एक प्रकारे वैयक्तिक वर्तमानपत्रासारखे ठरते. ब्लॉग = वेब+लॉग = इंटरनेटवर नोंदी करावयाची जागा. आपण ब्लॉगचा उपयोग अध्ययन-अध्यापनासाठी चांगल्या प्रकारे करु शकतो. शिक्षक विद्यार्थ्यांना गृहपाठ ब्लॉगवर देऊ शकतील, अभ्यासक्रम योजना, लेखनशौली वृध्दिंगत करण्यासाठी ब्लॉगचा उपयोग करता येतो. याचप्रमाणे विविध शैक्षणिक ॲप्लीकेशन्सचाही अध्ययन अध्यापनासाठी उपयोग करता येतो. उदा. डिक्शनरी, परिपाठ, आर्ट गॅलर, फोटो गॅलरी, फोटोशॉप, फोटो इंडिटर इत्यादींचाही कौशल्याने शिक्षक उपयोग करु शकतात.

माहिती संप्रेषण तंत्रविज्ञानाव्दारे अध्यापनासाठी सोशल मिडिअमचा उपयोगः- सोशल मिडियामध्ये प्रामुख्याने व्हॉटसअप आणि फेसबुकचा समावेश होतो. त्याच बरोबर मेसेंजर व इन्स्टाग्रामचाही समावेश होतो. व्हॉटसअप हे सर्वात स्वस्त व पॉप्युलर असे मोबाईल ॲप आहे. त्यात तात्काळ, टेक्स्ट मेसेजेस व्हिडीओ, ऑडीओ, पिक्चर्स, चलत चित्र इतयादींची देवाण-घेवाण करता येते. त्यांत ग्रुप तयार करता येतात, एका ग्रुपमध्ये सध्या २५६ मेंबर्स करता येतात. एक किंवा अनेक मेसेजेस एकाच वेळेला एक किंवा अनेक लोकांना पाठवता येतो. वेगवेगळया वेबसाईटसच्या लिंक्स शेअर करता येतात. म्हणून व्हॉटसअप हे अत्यंत उपयुक्त असे शैक्षणिक ॲप आहे. त्याचा योग्य वापर शिक्षक व विद्यार्थ्यांनी केल्यास परिणामकारक अध्ययन अध्यापन होऊ शकते.

फेसबुक ही सुध्दा सोशल मिडिआची वेबसाईट आहे. फेसबुकचेही खूप चांगले फिचर्स आहेत, महत्वाच्या सुविधा उपलब्ध आहेत. त्यात टेक्स्ट, व्हिडिओ, ऑडिओ, चलन चित्रे, पिक्चर्स इत्यादींची देवाण-घेवान करता येते. पाठवता येतात, डिलीट करता येतात, ऐकाच वेळेला एक किंवा अनेक मेसेजेस आपल्या मित्रांना पाठवता येतात. जर आपले स्टेटस पब्लिक असेल तर आपल्या सर्व पोस्ट इतर लोकही पाहू शकतात वाचू शकतात, प्रतिक्रिया चांगल्या, वाईट देऊ शकतात. फेसबुकचा वापर आपण संगणक, लॅपटॉप, मोबाईल, इत्यादींवर करु शकतो.

मॅसेंजर हे फेसबुकशी संबंधित मेसेज पाठवण्याचे तंत्र आहे. मेसेंजरव्दारे फेसबुकवरील तसेच नॉर्मल मेसेजेस पाठवता येतात, देवाण-घेवाण करता येतात.

इन्स्टाग्राम हे ही फेसबुक मेसेंजर प्रमाणेच टेक्स्ट मेसेजेस, व्हिडिओ, ऑडिओ, पिक्चर्स, पाठवता येतात, देवाण-घेवाण करता येते.

शिक्षक व विद्यार्थी यांनी व्हॉटसॲप, फेसबुक, मॅसेंजर व इन्स्टाग्राम यांचा योग्य वापर केल्यास अध्ययन-अध्यापन प्रक्रिया परिणामकारक होण्यास मदत होईल.

अशा प्रकारे परिणामकारक अध्ययन अध्यापनासाठी माहिती संप्रेषण तंत्रज्ञानातील साधने व तंत्रे यांचा उपयेाग करणे आवश्यक आहे.

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Sm. ^mband Eg. Amma.
gh`mJr àmÜ`mnH$, AS:ihr. Eg.hmS{ejUemó _hm{dÚmb`JJmna amS, Zm{eH$

àmñVm{dH$:

Amåhm ^maVr`mMr _mZ{gH$Vm _mRr AO~M Amh. EH$Va hmUmè`m ~Xbmg {Vd {damY AÝ`Wm Ë`mMm O`O`H$ma Aem QmH$mÀ`m {damYm^mgmV Amåhr ~è`mMXm AS\H$bbm AgVm. gJUH$mMm CX` Pmbm Vîhm _mZdr AWmOZmdaM JXm `Bb Aem {^VrZ Ë`mMm {Vd {damY H$bm Jbm. AmVm _mÌ gJUmH$mMm BVH$m CXm CXm H$bm OmVm` H$s, gJUmH$m{edm` OrdZ OJU OU अशक्यक होय अशाच प्रकारची काहीशी परिस्थती आपणास शिक्षणक्षेत्रात देखिल आढळून येते. पारंपरिक पुस्तकी शिक्षणात आम्ही ñdV:bm EdT) O l S\Z Rdb H$s, Ë`mn{bH$S) {ejU à{H$`m Ag eH$V hM _imV AmåhmbmÝ`Zîhv. `mD$bQ AmO _mRçm शहरांमधील उच्चभ्रू वर्गाने मात्र संगणाक हाच अध्ययनाचा एकमेव मार्ग म्हणून त्यावर शिक्कामोर्तब केले आहे. अशा या विरोधाभासात Am{U AamOH$VV Amnbr {ejUà{H$`m AS\H$bbr {XgV Amh. विशेषत: भारतातील उच्च शिक्षणmMm {dMma H$aVm nanamJV, ~è`mM Aer H$mbggJVMm A^md Agbbr Am{U dmñVdmnmgZ {d^º$ Aer à^mdhrZ ì`dñWm AmnUmg_ma C^r RmH$V. Ë`m_iM `m ì`dñWVZ ~mha nS\Uma ^maVmM ^{dVî` h AmOÀ`m ñnYÀ`m `JmV _mJ nS\VmZm AmnUmg {XgV. A{PP à_Or åhUVmV, - "What we do not have is the very good delivery system of higher education to implement"

वैश्विकिकरणाच्या काळात भारतीय उच्च शिक्षणाच्या बाबतीत काही यक्ष प्रश्नांचे उत्तर आपण शोधायला हवे.

1. उच्च शिक्षणात वास्तविकता आणि काल सुसंगतता कशी राखता येईल?
2. AÜ``ZmÏ`m_Ü` ì`mdgm{`H$ ÑïrH$mZmMr OS\UKS\U H$aVmZmM Ë`mMm Z{VH$ gm_m{OH$ {dH$mg H$gm gmYVm `Bb.
3. gVV hmUmam kmZmMm àñ\ìt आणि माहिती संप्रेषण तंत्रज्ञानाच्या क्रांतीला भारतीय उच्चशिक्षणात कसे सामावून घेता `Bb.
4. OmJ{VH$ XOmÀ`m JUdÎmmnU Aä`mgH$_mÀ`m _mÜ`_mVZ gj_ AÜ``ZmWu H$gm KS{dVm `Bb?

AmOVmJm`V {ejH$db`m{H$V nñVH$s {ejUmV Amåhr EdT) Ja\$QZ Jbm AmhmV H$s Ë`mVZ H$di {ZpîH$` lmVM Amåhr {Z_mU H$b Amhv. {ejH$m_Ü` CÎmaXm{`Ëdm À`m ^mdZMm A^md, narjm H$ÐrVVm Am{U [XemhrZ {ZH$mb d àË`m^aU hr `m ìvyवस्थेची वैशिष्ट्ये बनली आहेत. आधुनिक काळात संगणकाचा उदय होऊन त्याचा शिक्षणक्षेत्रात वापर शक्य आणि अनिवार्य Amh, hm {dMma nT) Amb. Jë`m XeH$mV BQ>aZQ>Mm A{dîH$ma hmD$Z Ë`mZ gd {dídmbm _m{hZr KmVbr Am{U AmOVa B-b{ZJ, _m~mBb b{ZJ AmZbmBZ b{ZJ h {ejUmM gdmV bmH${à` ñdê$n åhUZ àJV amï'm_Ü` ê$O hmD$ nmhV Amh.

_mÌ `m ñdê$nmVrb {ejUà{H$`V AZH$ _`mXm, Xmf d AS\Wi OmUdV AmhV. ^maVmgma»`m lS\çmV dgbë`m Xem V `m~m~V lnM _`mXm OmUdVmV. Am{WH$ g_ñ`m, {ejH$ {dÚmWu AmVa{H$`m, {ejH$mMr ~m{YbH$s, gm_m{OH$ O~m~XmarMm A^md `m~m~V Amjn KVb OmVmV, åhUOM AmnUmg nUnU gJUH$mÀ`m gmhmæ`mZ AÜ`mnZ H$aU Cn`º$ RaUma Zmhr, d ñnYÀ`m `JmV `eñdrnU {Q>H$Z amhÊ`mgmRr gJUmH$mg gmS\Zhr MmbUma Zmhr, `mgmRrM nman[aH$ dJAÜ`mnZ d AmZbmBZ AÜ`mnZ `m_Ü` `m½` g_Ýd` Am{U EH$mpË_H$aU gmYU Amdí`H$ Amh. `mÑï'rZ ãbS\S) b{ZJ (g{_l AÜ``Z) (Blended Learning) h `m XmÝhr nÕVrV Xdm gmYÊ`mgmRr `emMm amO_mJ RaV Amh.

ãb|S\S\b{ZJ - AWm (Meaning of Blended Learning)

ãbS\S) b{ZJ hr gH$ënZm lnM ZdrZ Amh Ag Zmhr. _mÌ `mMm g lmb n`má dm gñnï') Agm {dMma AmOnmdVm H$bm Jbm Zmhr. `m gH$ënZMm dma 1997 À`m g_mag B½bS_Ü` àW_V: H$aÊ`mV Ambm. ãbS\S) b{ZJÀmm CJ_ d àMmam_Ü` Jh_ ñn{Z`a `mM Zmd àm_»`mZ KVb OmV.

- ãbS\S)b{ZJgmRr dJdJi eãXà`mJ dmnab OmVmV. CÎma A_[aH$V `mgmRr Hybrid learning (hm`{~b b{ZJ) Va H$mhr {RH$mUr Mixed learning `m ZmdmZ ãbS\S) b{ZJ Ami lb OmV. `m gd gH$ënZm EH$M ~m~ A{^àV H$aVmV, Vr åhUO EH$mpË_H$aa AWdm g{_lU Integration – to blend `mMm AW g{_{lV H$aU AWdm EH$mpË_H$aU H$aU Agm hmVm.
- ãbS\S)b{ZJ åhUO - B AÜ`mnZmgmRr dmnaë`m OmUmè`m {d{dY _mÜ`_mM EH$mpË_H$UU qH$dm g{_lU H$ê$Z dJAmVa{H$`m KSdZ AmUU hm`.

ì`m»`m - (English)

1) T Barbar (Qr ~m~a)

2) Haiz & Maktar **(हाईज अॅन्ड मक्टर)**

`m ì`m»`mdê$Z AmnUmg ãbS\S) b{ZJMm gñnï) d n`má AW bjmV `Vm. ãbS\S) åhUO - {d{dY AÜ``Z AÜ`mnZ nÕVr, VÌ, AÜ``ZmMr {d{dY _mÜ`_ `mMm AWnU AÜ``Z dmVmdaUmV AmVa{H$`mË_H$ [aË`m dmna H$aU hm`. `m_Ü` AÜ``ZmgmRr EH$mnjm A{YH$ _mÜ`_mMm dmna H$bm OmVm. àmá kmZ d H$meë`mÀ`m dmnamgmRr Cn`º$ RaUmè`m _mÜ`_mMr {ZdS) H$br OmVBlended Learning {ejH$mÀ`m ghH$m`mZ d n`djUmImbr dJm_Ü` d dJm~mhahr KS\Z `VV. `m_Ü` AmH$m[aH$ d gmH$m[aH$ _ë`_mnZmÀ`m {d{dY _mJmMm Adb~ H$bm OmVm. kmZaMZmdmX, ~mYmË_H$ d OmO {g_ÝgÀ`m Connectivism **(कनेक्टिव्हीझम) च्या अधिष्ठानाद्वारे ब्लेंडेड लर्निंग उभारले आहे.**

ãbS\S)b{ZJMr d[eîQç :

1) **EH$mnjm A{YH$ ómVmMm g_mde AgVm:**

ãbS\S)b{ZJ_Ü` Ame`, CX{XîQç, {dÚmÏ`mÀ`m JaOm bjmV KD$Z EH$mnjm Am{YH$ ómVmMm g_mde AÜ`ZmgmRr H$bm OmVm. EH$mnjm A{YH$ ómVmMm dmna H$ë`m_i AÜ``Z A{YH$ n[aUm_HmaH d à^mdr KS\Z `V.

2) **{d{dY nÕV d VÌ|mMm EH$mpË_H$aU AgVm:**

AÜ``ZmgmRr O {d{dY ómV {ZdS)b OmVmV Ë`m_Ü` EH$mpË_H$aU / g{_IU KS\Z `V. Ë`m_i EH$m nÕVrVrb _`mXm qH$dm C{Udm Xgar nÕV VÌ dmnê$Z Xa H$aVm `V.

3) **AWnUm dJAmVa{H$`m KS\Z `mVmV:**

`m b{ZJ_Ü` {d{dY nÕVrMm, VÌmMm dmna AWnU dJ AmVa{H$`m KS\Z `Ê`mgmRr H$bm OmVm. AÜ``Z CX{XïmZ AZê$n AemM AmVa{H$`mMr VaVX H$ë`mZ AWnU AÜ``Z gÕm KS\Z `Ê`mg _XV hmV.

4) **{dÚmÏ`mZm ñdmVÍ` AgV:**

{ejH$ d {dÚmWu EH$ÌV[aË`m AÜ``ZmMr JUdÎmm dmT{dÊ`mM H$m` H$arV AgVmV. `mgmRr `m½` {ZU` KU à{VH$s`m ZmX{dU `m_Ü` {dÚmÏ`mZm ñdmVÍ` AgV.

5) **dJAmVa[H$`m d AmZbmBZ AmVa{H$`m KS\VmV:**

ãbS\S)b{ZJ_Ü` nmran[aH$ nÕVrMm dmna H$ê$Z Am{U AmZ bmBZ nÕVrMm dmna H$ê$Z AÜ``Z KS\Z `V. AÜ``Z à{H$`Àm`m àma^r, àË`j à{H$`Xaå`mZ Am{U à{H$`m nU Pmë`mda nmran[aH$ nÕVr d gJUH$m{Y{ðV nÕVr `mMm dmna H$bm OmVm.

6) **विविध इलेक्ट्रानिक माध्यामांचा वापर:**

AÜ``ZmgmRr T.V. V.D.O., Am{S\Am, V.D.O. aH$m{S\J, Qbr H$mÝ\$apÝgJ, V.D.O. H$mÝ\$apÝgJ, d~ AmYm[aV AÜ``Z, B-_b, MQ, A{^ê$nVm, ãbmO, {dH$s, AmZbmBZ OZëg, _m~mBल लर्निंग इ. इलेक्टॉनिक साधनांचा वापर H$bm OmVm.

७) AÜ`ZmgmRr ñWi, H$mi d diM ~YZ ZgVm:

{dÚmWu Amnë`m j_Vm, AmdS), CnbâY gmYZ {dMmamV KD$Z AÜ``ZmgmRr VËna AgVmV. ñWi, H$mi d diM ~YZ Zgë`mZ {dÚmWu Ë`mÀ`m gm`rZgma AÜ``Z H$aVmV.

८) {Z`{_V àË`m^aUmMr gm` AgVm:

àË`j dJ AmVa{H$`_Ü` Am{U AmZbmBZ_Ü` gÜXm gVV àË`m^aUmMr gm` AgV. gmVË`nU AdbmH$Z H$ê$Z àË`m^aUmMr gm` {ejH$ H$arV AgVmV. `m_i AÜ`Zmg JVr àmá hmÊ`mg _XV hmV. AmH$m[aH$ d gmH$m[aH$ _ë`_mnZ nÕVr dmnaë`m OmVmV.

ãbS\S)b{ZJgmRr Cn`º$ _mÜ`_i Am{U {ZUI` KQH$:

- ãbS\S)b{ZJ _Ü` EH$mnjm A{YH$ _mÜ`_mMr {ZdS) AÜ``ZmgmRr H$br OmV.
- _mÜ`_mMr `m½` {ZdSrdaVrM ãbS\S)b{ZJM `e-An`e Adb~Z AgV.
- ãbS\S)b{ZJgmRr dJAmVa{H$`_Ü` Cn`º$ RaUma. ñWJVrZ AÜ``Zmg Cn`º$ RaUma Am{U àË`j AmZbmBZgmRr Cn`º$ RaUmè`m _mÜ`_mMr {ZdS) H$aU Amdí`H$ AgV amZ H$Qg (Ron Kurtus) `mZr `m _mÜ`_mMr VrZ JQmV {d^mOZr H$br Amh.

ãbS\S)b{ZJgmRr {ZUI` KQH$:

- ãbS\S)b{ZJgmRr ndV`mar åhUZ {ejH$mZm {ZU` KQH$ InM Cn`º$ RaVmV.

- {ZU`KQ)H$m~m~VM {ZU` {e j H$ ñdV:g H$mhr àíZ {dMmê$Z ãbS>S> b{ZJM Am`mOZ H$aÊ`mgmRr H$mhr _hÎdmM {ZU`) KV AgVmV.
- ãbS>S>b{ZJMm nm`m aMÊ`mMm à`ËZ `W hmV Agë`mZ h {ZU` KQ)H$ _hÎdmMr ^{_H$m nma nmS>VmV.
- darb KQ)H$m~m~VM {ZU` {e j H$mZr ¿`md`mM AgVmV.
- `m {ZU`mdaM ãbS>S> b{ZJMr n[aUm_HmaHmVm R>aV AgV.
- darb {ZU` KQ)H$ {dMmaV KD$Z {e j H$mZr ãbS>S> b{ZJM Am`mOZ H$aÊ`mMm à`ËZ H$amdm.

ãb|S>S>b{ZJMr H$m`dmhr (Execution Blended Learning)

- ãbS>S>b{ZJM Am`mOZ H$arV AgVmZm àW_V: {ZU` KQ)H$ {dMmamV KVb OmVmV.
- Ë`mZê$n AZXeZmË_H$ CX{XïmMr {ZpíMVr H$br OmV.
- CX{XïmZê$n AÜ``Z AmìhmZmMr {ZdS> H$br OmV.
- {ZdS>bë`m AÜ``Z AmìhmZmMr ì`már d _`mXm g{Z[íMV H$ê$Z ¿`mdr bmJV.
- `mgmRr AÜ``ZmWuMr JUd{eîQ>ç {dMmamV KVbr OmVmV.
- `mgd KQ)H$mMm {dMma H$ê$Z AÜ``Z Amam l Sm {ZpíMV H$bm OmVm.
- AÜ``Z Amam l S>çm_Ü` àm_»`mZ VrZ ~m~tZm àmYmÝ` {Xb OmV.

1) H$m`:(Task)

{Z[íMV H$bë`m AÜ``Z AmìhmZmgmRr H$mUË`m àH$maM H$m` H$amd `mMr àW_V: {Z[íMVr H$amdr bmJV. CXm. àH$ën, emYZ, g_ñ`m, {d_mMZ, nÀNm B.

2) ómV: (Source)

H$m` {ZpíMV H$ë`mZVa Ë`mà_mU CnbãY hmD$ eH$Umè`m Amdí`H$ ómVmMr {ZpíMVr H$amdr bmJV.

- `m_Ü` dJAmVa{H$`Vrb Cn`º$ KQ)H$ Am{U B b{ZJ_Yrb Cn`º$ ómVmMm g_mdm H$bm OmVm.
- `m XmÝhr ómVmM EH$mpË_H$aU (Blending) H$b OmV.
- XmÝhr ómVmM CX{Xï> edQ>r EH$M AgV. V åhUO AÜ``ZmMr CX{Xï> gmÜ` H$aU.

3) AmYma: (Support)

- {Z[íMV H$bë`m CX{XïmMr nVVm {H$VnV Pmbr h nmhÊ`mgmRr AmH$m[aH$ d gmH$m[aH$ Aem XmÝhr àH$maÀ`m _mnZ H$m`{ZVr R>admì`m bmJVmV.
- gXa à{H$`mgmRr AmYma^V ~m~rX l rb {ZpíMV H$amì`m bmJVmV. CXm. bd{MH$ d i mnÌH$, AZXeZ, JQ> gh^mJ, ñd{Z`ÌU BË`mXr
- ómV Am{U AmYma {dMmamV KD$Z Amdí`H$ ^m{VH$ gm`rg{dYm CnbãY H$ê$Z ¿`mì`m bmJVmV.
- hr gd ndV`mar Pmë`mZVa àË` j H$m`dmhrg àma^ hmVm.
- {dÚmÏ`mMr AÜ``ZJVr d {Xem `m½` Amh H$s Zmhr `mM gmVË`nU AdbmH$Z H$b OmV.
- {dÚmÏ`mÀ`m AÜ``ZmXaå`mZ ñdV: {e j H$m_m\$V Am{U AmZbmBZ àË`m^aU {_ i b `mMr H$m i Or KVbr OmV.
- edQ>r AÜ``ZmÏ`mZm An{j V \${bV {H$VnV gmÜ` H$b h nS>Vm i Z nm{hb OmV.

H$m`dmhr

- àË` j dJAmVa{H$`mgX^mV nman[aH$ ì`m»`mZ nÕVrMm `W Ë`mJ H$aÊ`mV Ambbm Amh.
- _mÌ dJAmVa{H$`M _hÎd b j mV KD$Z nTrb KQ)H$ g_m{dï> H$aU JaOM Amh.
  1. **à[H$`À`m nmaÝr** - AÜ``Z Ü``, AmìhmZ Am{U à{H$`gX^mV _mJXeZmgmRr Am{U àaUm XÊ`mgmRr {e j H$mÛma CX~mYZ.
  2. **à{H$`XaåZ** - [dÚmÏ`mM eH$m {ZagZ, àíZmÎma H$RrU gnënZmgX^mV MMm, JQ>MMm, ~m{Yb{H$Mr Om{Ud H$ê$Z XÊ`mgmRr, àaUm XÊ`mgmRr dJ AmVa{H$`m.
  3. **à{H$`m nmUl Pmë`mZVa** - EH$U H$m` gmXa H$aÊ`mgmRr, {ZîH$fmM gmXarHaU, kmZ, Hmeë`, j _Vm, dÎmr `mMr MmMUr {e j UH$_mM nZamdbmH$Z
- `m~am~aM amZ H$aQ>P `mMr gM{dbë`m {d{dY _mÜ`_mMm, ómVmMm dmna H$aVm `Bb.

CXm.

^JmÌb {df`

- ãbS>S> b{ZJgmRr ^JmÌb {df`mVrb B{Oá `m KQ)H$mÀ`m AÜ`mnZmgmRr {e j H$mZ Oa dmna H$amd`mMm Ra{db Va Ë`mM ^mJm{bH$ ñWmZ, hdm_mZ, bmH$OrdZ, dZñnVr, àmUr d ì`dgm` `m~m~V AÜ`mnZ H$amd`mM Amh.

- **àW_V: {ZU\` KQH$ {dMmamV KD$Z AÜ`mnZmgmR>r nydi{Z`mOZ H$aVrb**

- {e j H$ dJmV gadmVrb T.V. d D.V.D. À`m _mÜ`m_mVZ B{Oá XemVrb H$mhr Ñí` Xm I dVrb
- ZVa {e j H$ `m Ñí`m~m~V dJmV MMm KS>dZ AmUVrb.
- MMZVa dJmVrb H$mhr {dÚmÏmbJM BQ>aZQ>À`m _mÜ`_mVZ Ame`m~m~mV A{YH$ _m{hVr KÊ`mMm à`ËZ H$aVrb.
- Ë`mZm àmá Pmbbr _m{hVr ãbm½OdaVr QmH$Vrb.
- {e j H$, ãbm½Odarb _m{hVr nS>Vm i Z B-_bÀ`m _mÜ`_mVZ {dÚmÏ`mZm AmdÍ`H$ VW ~Xb gMdVrb.
- WmS>çmM {XdgmV gXaÀ`m KQH$mgX^mV dJmV JQmJQmZ gmaXrH$aU hmBb.
- `m gmXarH$aUmM H$_è`mÀ`m _mÜ`_mVZ aH$m{S>J H$ê$Z {dÚmÏ`mÀ`m ãbm½Oda QmH$b OmBb.
- `m gmXarH$aUm~m~V OmJ{VH$ ñVamdê$Z VÁkmZm à{V{H$`m XÊ`mg Am_{ÌV H$b OmBb.
- VÁk ì`º$s Ë`m~m~VMm A{^àm` {dÚmÏ`mZm XVrb.
- `m àH$ma {dÚmÏ`mM AÜ``Z KS>Z `Bb.
- EH$àH$ma {dÚmWu kmZmMr {Z{_VrM H$aVrb Am{U kmZaMZmdmXr AÜ``Z KS>Z `Bb.
- AemàH$ma AZH${dY Amam I SçmM {Z`mOZ d H$m`dmhr KS>dZ AmUVm `Bb.
- `m_ i M ãbS>S>b{ZJÛma KS>Uma AÜ``Z h I è`m AWmZ Learning to know Am{U Learning to do Agb.
- **प्रथमदर्शनी हे अध्ययन क्लिष्ट वाटत असेल तरी विविध माध्यमांचा वापर करून प्रत्येक शिक्षकान** EH$ à`mJ åhUZ EH$m Var KQH$mÀ`m AÜ`mnZmgmR>r ãbS>S> b{ZJMm dmna H$aU AmdÍ`H$ Amh.
- `amn_Ü` àmW{_H$, _mÜ`{_H$ ñVamdaVr AÜ``ZmgmR>r `mMm dmna H$bm OmVm.

ãbS>S>b{ZJ_Ü`m {e j H$mMr ^{_H$m:

- ãbS>S>b{ZJh {dÚmÏ`mH${ÐV Agb Var {e j H$mM _hÎd `pËH${MVhr H$_r hmUma Zmhr.
- `mD$bQ> {e j H$mM _hÎd A{YH$ ì`mnH$ ~Zb.
- {e j H$mZr ãbS>S> b{ZJ_YZ {d{dY ^{_H$m nma nmSì`mV.

देवकांबळे शोभा व्यंकटराव & डॉ. एम.एस. चौधरी
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सारांश
सध्याच्या काळात निरनिराळया सेमिनार, वर्कशॉप, किंवा कॉन्फरन्समध्ये भाग घेण्याचा प्रसंग शिक्षकांवर पूर्वीपेक्षा जास्तवेळा येतो.शिक्षकांनी तयार केलेली प्रेझेन्टेशन शिक्षणशास्त्रीय तत्वांवरच आधरीत असली पाहीजेत पण पुष्कळ वेळा तयार फॉरमॅटच आपण वापरला पाहीजे. या समजामुळे तसेच नवीन साधनांच्या वापराबद्दल असणा-या दडपण व भितीमुळे आपल्याला असलेल्या ज्ञानाचा वापर शिक्षक मोकळेपणाने करीत नाहीत. सॉफटवेअर प्रेझेंटेशन प्रोग्राम तयार करतांनालक्षात ठेवण्याच्या ब-याच गोष्टी असतात. यांचा वापर करुनच प्रेझेन्टेशन अध्यापनात साधन म्हणून वापरणे सहज शक्य असते. शिक्षकाजवळ आशय तयार असतोच. त्या आशयाला प्रेझेन्टेशन तंत्राचा मुलामा दिला की, प्रभावी प्रेझेन्टेशन सॉफटवेअर प्रोग्राम तयार होइल आणिस्वतःलासंगणकाचा वापर करता येतो असा आत्मविश्वासही प्राप्त होईल

प्रास्ताविकः आधुनिक युग हे माहिती व तंत्रज्ञानाचे युग आहे.माहिती तर मानवी जीवनाची अविभाज्य घटक आहे.मानवाच्य प्राचीन काळापासून आतापर्यंत मानवाच्या जीवनात माहितीला महत्वाचे स्थान आहे.या माहिती आर्थिक, सामाजिक व राजकीय विकासाशी फार जवळचे नाते आहे.माहिती हीघटना, निरिक्षण या घटनेची मूलभूत माहिती, त्या घटनेचेहोणारे ज्ञानव अनुभव इत्यादींशी निगडीत असते.माहिती आणि तंत्रज्ञानामुळे समाजामध्ये फार मोठे बदल झाले आहेत. माहितीची गरजसर्वांनाच आहे.माहितीमुळे सर्व घडामोडी होत असतात. माहितीच्या सर्वव्यापकतेमुळे माहिती प्रधान समाज माहितीयुग अशा नवीन संकल्पना अस्तित्वात आल्या.

माहिती आणि संप्रेषण तंत्रज्ञान (अर्थव स्वरुप)

(Information and Communication Technology (ICT)

माहिती, संप्रेषण तंत्रज्ञान तसेचसंगणक तंत्रज्ञानाचा आपण अभ्यास केला यावरुन माहिती आणि संप्रेषण तंत्रज्ञानाच्या काही व्याख्या पुढील प्रमाणे.

१. New Digital Technology applied for Communication is called ICT.
२. संगणकाव्दारे केलेले माहितीचे आदान प्रदान म्हणजे माहिती संप्रेषण तंत्रज्ञान होय.
३. विविध तंत्रे, पध्दतीकिंवा प्रणालीचा वापर करुन माहितीची निर्मिती करणे, गोळा करणे तसेच माहितीवर प्रक्रिया करुनसाठविणे आणि योग्य वेळीतिचेसादरीकरण करुन प्रेषक वग्राहक यांच्यामध्ये संप्रेषण घडवून आणणारेशास्त्र म्हणजे माहिती संप्रेषण तंत्रज्ञान होय.
४. उपलब्ध माहितीला योग्य तो अर्थ देऊन योग्य त्या तंत्रज्ञानाने माहितीचे आदान प्रदान करणारेशास्त्र म्हणजे आयसीटी (ICT) होय.

विविध व्याख्यांवरुन आपणास असे म्हणता येईल की, आयसीटी मध्ये नवीनडिजीटल तंत्रज्ञानाचाविचार केलागेला आहे. संगणक आणी संगणकाच्या जाळयाव्दारे माहितीचे आदान प्रदान होते.

आयसीटी (ICT) चे प्रमुख सहाघटक :-

१. व्यक्ती (People)
२. प्रक्रिया (Prodedure)
३. माहिती (Information)
४. हार्डवेअर(Hardware)
५. सॉफ्टवेअर (Software)
६. संप्रेषण (Communication)

माहिती व तंत्रज्ञानाचा उपयोग करतांनाशिक्षकांची भूमिका

संगणक आधुनिकव अदययावत तंत्रशास्त्राची देणगी असून त्याची काम करण्याची विविधता थक्क करुनसोडणारी आहे. त्यामुळे स्वतःहून पुढाकार घेऊन संगणक वापर करण्याबद्दल एक दूरत्वाची भावना सामान्य लोकांच्या मनात ठाण मांडून बसलेली असते. संगकण वापर ही आपल्या आवाक्यातली बाब नाही असेहीवाटत असते. त्यामुळे कोणत्याही संस्थेत, परिस्थितीत, संगणकाचा वापर सुरु करणेही प्रयत्नसाध्य गोष्ट ठरते.

1. संगणकस्विकारासाठी (मनोभूमी) पार्श्वभूमी तयार करणारा

संगणक स्विकारण्यासाठी पार्श्वभूमी तयार करतानां यातील निरनिराळया गोष्टी कराव्या लागतात. संगणकाच्या उपयोगासंबंधी माहिती संस्थेतीलशिक्षकव कर्मचा-यांना करुन देणेही पहिली गोष्ट आहे. यासाठी पुढाकार घेणा-या शिक्षकाचेकिंवा एखादया आमंत्रित व्याख्यात्याचे भाषण ठेवता येते. या प्रास्ताविकानंतर संगणक उपयोगासंबंधीचे छापील साहित्य सर्वांनावाटावे

निरनिराळयासहजवसुकरतेने वापरता येणा-या सॉफटवेअरशी शिक्षकांचा परिचय करुन दयावा. त्यांना अनुभव घेऊ दयावा.अर्थात अनुभव ग्रहणासाठीशिक्षकलगेच तयार होत नाहीत. कलाकलानेव युक्ती प्रयुक्तीने त्यांना वापरासाठी उदयुक्त करावेलागते.वापरासंबंधातील भिती नाहीशी झाली कीसततव परिणामकारक वापर सुरु ठेवण्याच्या दृष्टीने प्रयत्नशीलराहावेलागतेवही न संपणारी गोष्ट आहे.येणा-या नवनव्या सॉफटवेअर संबंधी माहिती आपल्या प्राप्त परिस्थितीनुसार वापराचे नियोजन अशाविविध भूमिका यासाठी कराव्या लागतात.

अभ्यासक :- संगणकहे अतिशय वेगाने प्रगत होत जाणारेसाधन आहे.संगणकहार्डवेअरव सॉफटवेअर निर्मितीत वेगाने प्रगती होत आहे. नवनव्या सोयीसुविधा वापर सुकरता या गोष्टी उपलब्ध होत आहेत. या सर्वांची माहिती अदययावत राखण्यासाठी अभ्यासकाची भूमिका वठवणे आवश्यक आहेसतत अभ्यासाने उपलबध साहित्य वापरासंबंधी नवनवीनगोष्टी माहित होतात.

नियोजक :- संगणकाचा वापर जास्तीत जास्तशिक्षकांनी करुन जास्तीत जास्त विदयार्थ्यांना फायदा मिळावा म्हणून काटेकोर नियोजनाची गरजलागते.शिक्षकांना कर्मचायांना नियमितपणे प्रशिक्षण दिले तर नवनवीन सॉफटवेअरची यथायोग्य माहिती होऊन संगणकाचा अधिकाधीक वापर होत जातो. यासाठीही नियोजन करावयास हवे.

अध्यापक :- संगणकाच्या वापरातील हीसर्वात महत्वाची भूमिका आहे.अध्यापनासाठी निरनिराळया विदयार्थ्यांसाठी उपयोग करणे, अध्यापन संगणकाच्या वापराने प्रभावी व्हावे म्हणून प्रयत्न करणे, त्यासाठी आवश्यक त्या सर्व कृतींचा वापर करणे.

परीक्षक :- परीक्षक या नात्याने शिक्षकाला पुष्कळच काम करावेलागते, शाळेत वेगवेगळया परीक्षा असतात जसे चाचण्या, सत्र परीक्षा यासाठी प्रश्नपेढी तयार करणे, वेगवेगळया प्रश्नपत्रिका तयार करणे, त्या तपासणे व त्याचे गुणपत्रक तयार करणे या सर्व कामी संगणकाचा वापर करता येणे सहज शक्य आहे. प्रत्येक घटकशिकवतांना मुलांना किती समजले, कोणत्या अडचणी आहेतहेहीशिक्षक बघत असतातच त्यासाठीही संगणक वापरता येईल.

मुल्यमापक :- मुल्यमापन हा अध्ययन अध्यापनाचा अविभाज्य भाग असतो. अध्ययन अध्यापनासाठी संगणक वापरल्याने खरेचवेगळी उद्दीष्टे साध्य झाली का, झाली नसल्यास साध्य होण्यासाठी काय करायला हवे ?त्रुटी कोणत्या व त्यावर उपाय कोणते याचा विचार मुल्यमापनात करावालागतो.

संशोधक :- स्वतःच्या व्यावसायिक प्रगतीसाठी व समाधानासाठी शिक्षकसंशोधन करतात. संशोधनातसंगणकाचा वापर सर्व टप्प्यांवर होतो. संगणकाच्या प्रभावी वापरासाठी हीसंशोधन करता येईल.छंद जोपासणा-या प्रत्येक व्यक्तीत सृजनशीलता असतेव तीला वेगवेगळया अभिव्यक्ती असतात. कोणालालिहावेसेवाटते तर कोणाला कलांबद्दल आसक्ती असते.सृजनशील निर्मितीसाठी संगणकाचा वापर करता येईल.

मार्गदर्शक :-संगणकाचा वापर कोणी, केव्हा, कसा करावा कोणकोणत्या गोष्टीसाठीसंगणकाचा वापर करता येईल इ. संबंधीचे मार्गदर्शन शिक्षक, पालक, विदयार्थी यांना करणेहीसुध्दा एक जबाबदारीसंगणक वापरात पार पाडावी लागते. संगणकाचा वापर करतांनाशिक्षक अशारीतीने वेगवेगळया भूमिका बजावूशकतो. या सगळया भूमिका एकदम व एकाचवेळी पार पाडल्या पाहीजेत असे नाही. यातील काही भूमिका व्यवस्थापनाशी, काही भूमिका अध्यापन तर काही भूमिका वैयक्तिक प्रगती साधन्याशी संबंधित आहेत. यातील जास्तीत जास्त भूमिका योग्य रितीने पार पाडण्याचा निश्चय शिक्षकाने केला तरसंगणकाचा प्रभावी वापर शैक्षणिक संस्थामधून अवश्य केल जाईल

इंटरनेटव्दारे अध्ययन-अध्यापन करतांना: इंटरनेटमुळे माहितीचे भांडार विदयार्थी वशिक्षक यांना प्राप्त झले आहे.आणिई-लर्निंग यासारखे शब्दही कानावर पडू लागले आहेत. इंटरनेटच्या विकासात काही तंत्रज्ञानहीविकसित झाले आहे.जसेवेबसाईटस, ई-मेल सुविधा, व्हिडीओ कॉन्फरन्सींग, टेलि कॉन्फरन्सींग इ. विदयार्थ्यांना स्वयं अध्ययनासाठी प्रेरणा देणारेहे एक आधुनिक तंत्रज्ञान आहे.

इंटरनेटव्दारा अध्ययन-अध्यापन

१. वेब आधारीत
२. ई-मेल व्दारा.
३. विकी
४. सिडी रोम
५. चॅट
६. ब्लॉग्ज
७. टेलि कॉन्फरन्सींग
८. डिजीटल लायब्ररी
९. दूरदर्शन
१०. व्हीडीओ कॉन्फरन्सींग

उदा. शिक्षकांनी विदयार्थ्यांना इंटरनेटव्दारा अध्ययन करण्यासाठी प्रथम काही समस्या दयाव्यात त्याचप्रमाणेविविधशैक्षणिक पानांच्या संग्रहांचे पत्तेही दयावेत. विदयार्थी आपल्या पध्दतीनेही माहिती संग्रहीत करुन अध्ययन

करुशकतील. संगणकाचा वापर करतांनाशिक्षक अशारीतीने वेगवेगळया भूमिका बजावूशकतो. या सगळया भूमिका एकदम व एकाचवेळी पार पाडल्या पाहीजेत असे नाही. यातील काही भूमिका व्यवस्थापनाशी, काही भूमिका अध्यापन तर काही भूमिका वैयक्तिक प्रगती साधन्याशी संबंधित आहेत. यातील जास्तीत जास्त भूमिका योग्य रितीने पार पाडण्याचा निश्चय शिक्षकाने केला तरसंगणकाचा प्रभावी वापर शैक्षणिक संस्थामधून अवश्य केल जाईल

इंटरनेटव्दारे अध्ययन-अध्यापन करतांना

इंटरनेटमुळे माहितीचे भांडार विदयार्थी वशिक्षक यांना प्राप्त झले आहे.आणिई-लर्निंग यासारखे शब्दही कानावर पडू लागले आहेत. इंटरनेटच्या विकासात काही तंत्रज्ञानहीविकसित झाले आहे.जसेवेबसाईटस, ई-मेल सुविधा, व्हिडीओ कॉन्फरन्सींग, टेलि कॉन्फरन्सींग इ. विदयार्थ्यांना स्वयं अध्ययनासाठी प्रेरणा देणारेहे एक आधुनिक तंत्रज्ञान आहे.

इंटरनेटव्दारा अध्ययन-अध्यापन

१. वेब आधारीत
२. ई-मेल व्दारा.
३. विकी
४. सिडी रोम
५. चॅट
६. ब्लॉग्ज
७. टेलि कॉन्फरन्सींग
८. डिजीटल लायब्ररी
९. दूरदर्शन
१०. व्हीडीओ कॉन्फरन्सींग

उदा. शिक्षकांनी विदयार्थ्यांना इंटरनेटव्दारा अध्ययन करण्यासाठी प्रथम काही समस्या दयाव्यात त्याचप्रमाणेविविधशैक्षणिक पानांच्या संग्रहांचे पत्तेही दयावेत. विदयार्थी आपल्या पध्दतीनेही माहिती संग्रहीत करुन अध्ययन करुशकतील.

संदर्भ

१. *चव्हाण, महाले, पाटील (२००४), माहिती संप्रेषण, तंत्रज्ञान आणिशैक्षणिक मूल्यमापन, प्रज्ञा प्रकाशन, नाशिक*
२. *चव्हाणकिशोर (२०१०) माहिती आणि संप्रेषण तंत्रज्ञान, इनसाईट पब्लिकेशन्स, नाशिक*
३. *बरवे मीनाक्षी (२००८) संगणकशिक्षणवशिक्षक, नित्य नुतन प्रकाशन, पुणे*

वर्गाध्यापन आ ण मोबाईल अप्स (Classroom Teaching and Mobile Apps)

प्रा. डॉ . कैलास खोंडे (अ स. प्रोफेसर)

म वि प्र समाज, शिक्षणशास्त्र महाविद्यालय,नाशिक *Email Id :- krkhonde81@gmail.com*

प्रास्ता वक – २१ वे शतक हे मोबाईलचे शतक आहे, असे जरी म्हटले तरी वावगे ठरणार नाही.मोबाईलच्या आगमनाने जागतिक क्रांतीच घडली आहे.क्षणार्धात माणूस ग्लोबल बनत आहे. जे मनात आले तेंस्वर्गातच पूर्ण होते. अशी यापूर्वीची कल्पना होती परंतु मोबाईलच्या युगामध्ये मात्र 'तुम्हाला जी माहिती हवी आहे, जे शकायचे आहे ते' मोबईल गुरु पुरवत आहे. अगदी स्वयंपाकघरापासून भजी तळण्यापासून ते ती 'हाजम' होईपर्यंत सर्वच मोबईल युटूब मध्ये उपलब्ध आहे. अगदी टू व्हीलर फोर व्हीलर गाडी शकण्यापासून ते एखादी नवखी भाषा शकण्यापर्यंत .. एवढेच काय तर संस्कृती ते वकृती या परिभाषेत बसणारे सर्वच सहज एका क्लिकसरशी आपणास उपलब्ध आहे. मोबाईलचा वधायक व शैक्ष णक वापर केला तर तो एका शक्षकासमान होऊ शकेल.. मोबाईल मधील असंख्य फीचर्स आपणास वर्गाध्यापन करतांना उपयोगी ठरू शकतात. 'एक चत्र हजार शब्दांचे कार्य करते' त्यापेक्षाही 'एक Live चत्र लाखो शब्दांचे कार्य करते' असे म्हटले तरी वावगे ठरणार नाही.

जगात डाऊनलोड केले जाणारे मोबाईल अप्स

मोफत अप्स	सशुल्क अप्स
सन 2012- 57.33 अब्ज	सन 2012- सुमारे 6.65 अब्ज
सन 2013- 92.88 अब्ज	सन 2013- सुमारे 9.19 अब्ज
सन 2017-253.91अब्ज	सन 2017- सुमारे 14.78 अब्ज

वरील अब्जावधी मोबाईल अप्स मध्ये हजारो अप्स केवळ शैक्ष णक स्वरूपाचे आहेत त्यात रोज हजारो नवीन गणती होत असते. Android व मायक्रोसॉफ्ट आयफोन साठी उपलब्ध असलेली असंख्य अप्स मोफत असून त्याचा वर्गाध्यापनात वापर वाढायला हवा.

शैक्ष णक मोबाईल अप्स: एक दृष्टीक्षेप

- आज मतीला सुमारे 500,00 iosआ ण 300,000 पेक्षा जास्त Android व Microsoft साठी उपलब्ध असलेली अप्स आहेत.
- आज वद्यार्थ्यांसाठी अप्सची असणारी संख्या जवळपास 80% आहे. तीच संख्या 2009 मध्ये केवळ 47% होती.
- प्रत्येक वयोगटानुसार अप्स उपलब्ध आहेत.
- प्र स्कूल पासून ते संशोधन क्षेत्रापर्यंतचे अप्स उपलब्ध आहेत.

शैक्ष णक अप्सचे प्रकार

1. In classroom
2. Out of classroom

3. Formal
4. Informal
5. Synchronous
6. Asynchronous
7. Individual
8. Collaborative
9. Access of resource (in house mobile library)

Co-ordination (Twitter)

10. Communication (Skype, Facebook, sms)
11. Collaboration (Google Apps)
12. Capturing and integrating data (Camera)
13. Productivity (calenders, organisms and campus maps)

Built in tools (GPS, voice recorder)

वरील प्रत्येक मुख्य प्रकारात असंख्य मोबाईल अप्स उपलब्ध आहेत, त्यापैकी काही वर्गाध्यापनात वापरता येणारी मोबाईल अप्स वर आता चर्चा करूया.

वर्गाध्यापनात वापरावयाची काही मोबाईल अप्स

1. कोरा (Quora):

कोरा एक जगप्र सद्ध अप्स आहे. 21 जून 2010 पासून क्या लफोर्निया येथून ते अध्ययनार्थ्यांच्या सेवेसाठी सज्ज आहे. कोरा हा प्रशोनोत्तर स्वरूपातील काम करणारा मोठा स्रोत आहे, कोणीही, केव्हाही, कोणत्याही वषयावर आपली शंका प्रश्न वचारू शकतो त्यावर तात्काळ कंवा प्रश्नांच्या स्वरूपानुसार उच्चदर्जाचे अभ्यासपूर्ण संशोधना भमुख उत्तर प्राप्त होत असते. प्रशोनोत्तर प्राप्त होणारा हा साखळीमय ग्रुप आहे. यात शक्षण, बँक, औद्यो गक, तंत्रज्ञान, संशोधन अगर कोणत्याही वषयातील मुबलक स्वरूपातील माहिती उपलब्ध आहे. शक्षणक्षेत्रात online teaching, learning साठी वा offline साठीही याचा उपयोग होतो, हे अप्स गुगल व android व Microsoft साठी उपलब्ध आहे.

2. स्लाईडशेर (Linkedin slide share)

हे 2.0 वेबबेसडअप आहे. ही वेबसाईट युटयूब सारखीच वचारात घेण्यासामान आहे. या अप्स मध्ये असंख्य वषयावरील असंख्य प्रकारात पॉवर पॉइंट प्रेझेंटेशन (PPT)उपलब्ध असतात. मायक्रोसॉफ्ट कॉर्पोरेशन ने 6 ऑक्टोबर 2006 रोजी हे अप्स सुरु केले आहे. जगभरातील नामवंत शक्षणतज्ज्ञ, वचारवंत, शास्रज्ञ, संशोधक या अप्सशी जोडलेले आहेत. 70 दशलक्ष लोक हे अप वापरतात. फक्त आपणास मेल आयडी ने या अप्सशी जुळता येते. या अप्सशीPDF, Videos, व webinars सहाय्यानेही जुळता येते. स्लाईडशेरचा वापर जगातील कीर्तिमान संस्था White House, NASA, World economic forum, IBM इ.करत आहेत.

3. टीईडी (TED)

अर्थातच नावामध्येच या अपचा उद्देश लपलेला आहे. TED म्हणजेच Technology, Entertainment, Design होय. 33 वर्षापूर्वी म्हणजेच 23 फेब्रुवारी, 1984 रोजी Sapling Foundation यांनी साईटची रचना केली आहे. जगभारतील प्रमुख भाषांमध्ये हे अप उपलब्ध आहे. शक्षण, तत्त्वज्ञान, समाजशास्र,

संशोधन, मानसशास्त्र, वज्ञान, ग णत इ. वषयातील नामवंत अभ्यासकांच्या व्याख्यानांचे व्हिडीओ या अपमध्ये उपलब्ध असतात. प्रेरणात्मक, जिज्ञासावृद्धी त्याचबरोबर जीवना भमुख वषयांवरील महान व्यक्तींचे प्रेरक प्रसंग या अप्स मध्ये असंख्य व्हिडीओ उपलब्ध आहेत. आपण पाहिजे ते हा आपल्या वद्यार्थ्यांना व्हिडीओ दाखवू शकतो. एक चांगला प्लाटफॉर्म या नि मत्ताने उपलब्ध आहे.

4. वर्डसलाड (Word salad)

वर्डसलाड हे शब्दपुंजा प्रमाणे काम करते. या अप्स च्या सहायाने शक्षक आपल्या अध्यापनात एखाद्या मुद्याचा अग्रत संघटक तयार करतात. तो व वधांगी वा बहुरंगी स्वरुपात असतो. अनेक शब्द एकत्र आल्यामुळे शब्दांचा एक प्रकारचा गुच्छ आपल्या डोळ्यासमोर येतो. तो अत्यंत वलोभानीय व आकर्षक दिसतो. त्यामुळे वद्यार्थ्यंना अध्ययनात मजा वाटते. कोणत्याही घटकावर मजेशीर व रंगीबेरंगी शब्दांची आकृतीच आपल्या डोळ्यासमोर येते त्याद्वारे शक्षकांना व वद्यार्थ्यांना व वधांगी वचार करता येतो. प्रस्तुत आकृती पीडीएफ कंवा इमेज स्वरुपात जतन करता येते.

कोर्टाना (Cortana)

कोर्टाना हे अप्स मायक्रोसॉफ्ट ने तयार केले असून ते Windows, iosव Android मध्ये उपलब्ध आहे. या अप च्या सहायाने वना कीबोर्ड कोणतीही व्यक्ती आपाल्या नैस र्गक आवाजाच्या माध्यमातून व आवाजाच्या गतीने कोणताही मसुदा टाईप करू शकतो. अतिशय मजेदार व उपयोगी असे अप आहे. सध्या इंग्रजी, फ्रेंच, जर्मन, इटा लयन, स्पानिश, चीनी, जपानी व पोर्तुगीज भाषेमध्ये उपलब्ध आहे. मायक्रोसॉफ्ट, लु मया डेनिम या मोबाईलमध्ये उपलब्ध आहे.

इतर काही महत्वपूर्ण अप्स

अजूनही बरीच शैक्ष णक अप्स आहेत. त्यांचा हि वापर शक्षक करू शकतात. आ ण अध्ययन अध्यापन आ ण संशोधन प्र क्रया रंजकपणे व सुलभपणे शवाय अत्यंत जलद गतीने करू शकतात. काही अप्स ची यादी पुढे देत आहे. जी शक्षक प्र शक्षकांसाठी उपयुक्त आहेत.

Voice dream 2) Thing link 3) Scrolle / ledit app 4) Audio book 5) Pod cast app 6) Audio recorder / dragan recorder 7) Socrative 8) Audio slides -30 hands / pic trone 9) Tele prompster app

वरीलप्रमाणे सर्व अप्सचा शक्षकांना दैनंदिन अध्ययन अध्य्पानात वापर केलात तर अध्यापनात रंजकता शवाय गती येईल.

संदर्भ

1. *http://rn.m.eilripri.org*
2. *Microsoft.com/en-us/windows/cortana*
3. *http://slideshare.en.*
4. *http://www.wordclouds.com*
5. *www.androidauthority.com*
6. *http://www.ted.com*

जिल्हा परिषदेच्या प्राथमिक शिक्षकांमध्ये तंत्रस्नेही शिक्षक घडविण्यासाठी घेतलेल्या प्रशिक्षणांच्या परिणामकारकतेचा अभ्यास.

डॉ.संजीवनी महाले & श्री.नानासाहेब कुऱ्हाडे
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सारांश

प्रगत शैक्षणिक महाराष्ट्र कार्यक्रमांतर्गत महाराष्ट्रात प्राथमिकशिक्षणात क्रांतिकारी बदल होतांना दिसत आहेत. प्रत्येक जिल्ह्यात विविध बाबींच्या साह्याने गुणवत्तेत प्रगती होत आहे.अध्ययन-अध्यापन प्रक्रिया अधिक सुलभ,दर्जेदार,आनंद दायी होण्यासाठी नाविन्यपूर्ण उपक्रमांची अंमलबजावणी केल्या जाते.त्यात ज्ञानरचनावाद,ई-लर्निंगचा वापर ,ए.बी.एल. अशा विविध पद्धतींचा वापर होत आहे.त्यामुळे मराठी माध्यमांच्या शाळांमध्ये उत्साहाचे व आश्वासक वातावरण निर्माण होत आहे.इंग्रजी माध्यमांकडून मराठी माध्यमांकडे पालकवर्ग आकृष्ट होऊ लागला आहे.याचे ग्रामीण भागात शाळा,शिक्षक,पालक सर्वांवर सकारात्मक परिणाम दिसून येत आहेत. मराठी माध्यमाच्या शाळांमधील शिक्षकांचा आत्मविश्वास वाढत आहे.यात पर्यवेक्षीय यंत्रणेसह शिक्ष कामध्ये शिक्षण प्रक्रीये बाबत अधिक सुसंगत यशस्वी प्रयोगांची माहिती मिडिया,सोशल मिडीयाद्वारा दिल्या गेल्या.महाराष्ट्रातील यशस्वी शाळा,बीट,तालुक्यांचे अभ्यास दौरे,डिजिटल,ई-लर्निंग शाळा,ज्ञानरचनावादी शाळा, यांची माहिती देण्यात आली. यामध्ये संदीप गुंड नावाचे शिक्षकाने आदिवासी भागात आपल्या कलात्मकतेने शैक्षणिक प्रवास यशस्वी करून दाखविला.त्यांच्या कार्यशाळेचे राज्यभरात आयोजन करण्यात आले. दूरदर्शन वर त्यांच्या मुलाखती दाखविण्यात आल्या.नाशिक येथील कार्यशाळेस संशोधक स्वतः उपस्थित असल्याने तेथील कार्यशाळेचा वृतांत मा.गट शिक्षणाधिकारी यांना दिला.प्रगत शैक्षणिक महाराष्ट्र उपक्रमासाठी सर्व शाळा डिजिटल व प्रगत होण्यासाठी अशी तंत्रस्नेही कार्यशाळा तालुक्यात होणे गरजेचे आहे.यात शंभर टक्के शिक्षकांचा सहभाग असणे आवश्यक आहे.या साठीप्रत्यक्ष कार्यशाळा आयोजित करण्यात आली. आजपावेतो 130 पेक्षा अधिक शाळा डिजिटल झाल्या.यात तंत्रस्नेही शिक्ष कांची भूमिका महत्वाची आहे. कार्यशाळेचे यशस्वी आयोजन व त्यानंतर दिसून आलेले परिणाम सकारात्मक वाटले.परिणामकारकफलश्रुती दिसून आली आहे.

प्रस्तावना:

प्राथमिक शिक्षणात अनेक नवनवीन प्रवाह सामील होत आहेत.अनेक माध्यमाच्या शाळा ग्रामीण भागा पर्यंत पोहचल्या आहेत.जिल्हा परिषद शाळांचा पट दिवसेंदिवस कमी होत चालला आहे.अशा परिस्थितीत 'तंत्रज्ञानाचा शिक्षणात वापर' हे एक चांगले माध्यम पुढे आले आहे. तंत्रज्ञानाचा वापर करून विद्यार्थी गुणवत्तेत पुढे जात आहे.संदीप गुंड सरांनी आदिवासी भागात तंत्रज्ञानाचा वापर करून जिल्हा परिषदेच्या शाळांबाबत आश्वासक वातावरण तयार केले. त्यांनी महाराष्ट्रभर कार्यशाळा आयोजित केल्या.संशोधकाला त्याच्या शाळेत व तालुक्यातही असा बदल हवा वाटत होता.म्हणून तालुकास्तरावर अशी कार्यशाळा आयोजित करावी वाटली व आयोजित केली.तंत्रज्ञानाचा वापर मराठी माध्यमाच्या शाळांसाठी तारणहार ठरावा,विद्यार्थी अद्ययावत ज्ञानाशी जोडले जावेत.पटसंख्या ,गुणवत्ता वाढावी यासाठी तंत्रस्नेही कार्यशाळा हातभार लावेल,अशी खात्री वाटली. म्हणून तालुकास्तरावर कार्यशाळा आयोजीत केली.तिचा प्रत्यक्षपरिणाम पडताळून पाहण्यासाठी प्रस्तुत संशोधन हाती घेण्यात आले.

शोधनिबंधाचे शीर्षक :

जिल्हा परिषदेच्या प्राथमिक शिक्षकांमध्येतंत्रस्नेही शिक्षक घडविण्यासाठी घेतलेल्या प्रशिक्षणांच्या परिणामकारकतेचा अभ्यास.

उद्दीष्टे

1)शालेय शिक्षणात तांत्रिक साहाय्य मिळविण्यासाठी विविध पर्यायांचा अभ्यास करणे.
2)ई-लर्निंग पद्धतीच्या वापराबाबत शिक्षकांमधील अभिवृत्तीचा शोध घेणे.
3)स्थानिक गरजेनुसार अध्ययन-अध्यापन प्रक्रिया विकसित करण्यासाठी प्रशिक्षण-कार्यशाळा योजना विकसित करणे.
4)जिल्हा परिषदेच्या शिक्षकांना तंत्रस्नेही शिक्षक प्रशिक्षणाद्वारा अध्ययन –अध्यापन प्रक्रिया विकसन व परिणामकारकतेचाअभ्यास करणे.

विषयाची गरज व महत्त्व

गरज:

मानवी जीवनाच्या प्रत्येक अंगावर माहिती तंत्रज्ञा नाचा प्रभाव जाणवत आहे.यातून शि क्षण क्षेत्र ही सुटलेले नाही.उलट अधिक प्रभावित झाले आहे.ज्ञानावर आधारित नव्या समाजाचा उदय होत आहे. बदलत्या परिस्थितीतशिक्षण प्रक्रियेत सुद्धा बदल अपेक्षित आहे. अलीकडेई-लर्निंगचा वापर शाळांमध्ये मोठ्या प्रमाणात सुरु झाला आहे. अध्ययन –अध्यापनासाठीई-लर्निंगचा प्रभावी मार्ग वाटू लागला आहे.माहिती तंत्रज्ञा न युगातील ज्ञानप्रसाराचा,वितरणाचा प्रभावी मार्ग म्हणून ई-लर्निंगची वाटचाल सुरु झालेली आहे.बालकाचा मोफत व सक्तीचा अधिनियम -2009 लागू झाल्याने 6 ते 14 वयोग टातील प्रत्येक बालकाला गुणवत्तापूर्ण शिक्षणाचा हक्क मिळाला आहे.या कायद्यामुळे शिक्षण प्रक्रियेत अनेक कालसुसंगत बदल होत आहेत.यासोबत गुणवत्तापूर्ण शिक्षण मिळणे गरजेचे असून शिक्षणात आधुनिक तंत्र ज्ञानाचा वापर होणे गरजेचे आहे. गतिमान युगात तांत्रिक साहाय्य घेऊन गतिमान व प्रभा वीसाधनांचावापर करून नवनवीन साधनांच्या साह्याने विद्यार्थ्यांचे अध्ययन व सुलभीकरण होण्यात मदत मिळत आहे.यासाठी तंत्रज्ञान मोठ्या प्रमाणावर साहाय्य करत आहे.अध्ययन –अध्यापन घडत असतांना वर्गातील प्रत्येक विद्यार्थ्याची संपादणूक पातळी वाढविण्यासाठी शिक्षकाला ई-लर्निंग सहाय्यभूत ठरत आहे. ई-लर्निंग मध्ये डिजिटल,व्हर्चूअल क्लासरूम ,वेब ट्रेनिंग बेस्ड, ,काम्पुटर बेस्ड लर्निंग ह्या सगळ्यांचा समावेश आहे.इंटरनेट ,इंट्रानेट, ऑडीओ-व्हिडीओ टेप्स इंटरऑक्टीवटी व्ही .,बोर्ड अशा निरनिराळ्या मार्गांनी ई-लर्निंग विद्यार्थ्यांपर्यंत पोहचवले जात आहे.

महत्त्व:

ई-लर्निंगची सुविधा उपलब्ध करणे,त्यांचा प्रत्यक्ष वापर करणे ,वापरासाठी प्रशिक्षित शिक्षकवर्ग निर्माण असणे महत्त्वाचे आहे.तंत्रस्नेही शिक्षक घडविण्यासाठी कार्यशाळा व प्रशिक्षण गरजेचे आहे. तंत्रस्नेही शिक्षक स्पर्धात्मक युगात विविध आव्हानांना सामोरे जाऊन अध्ययन-अध्यापन प्रक्रिया सचेतन करत आहे.विद्यार्थ्याचे अवधान –एकाग्रता वाढवून गुणवत्तेच्या अंगाने पुढे सरसावणे गरजेचे आहे.म्हणून संशोधकाने जिल्हा स्तरावर तंत्रस्नेही कार्यशाळा प्रशिक्षण घेतल्यावर संशोधकालास्वतःच्या तालुक्यासाठी तंत्रस्नेही शिक्षक संदीप गुंड सरांची कार्यशाळा घेणे महत्त्वाचे वाटले.शाळा ,शिक्षक,व तंत्रज्ञान यांचा जवळचा संबंध असल्याचे लक्षात आले म्हणूनच ही कार्यशाळा घेण्या ची प्रेरणा मिळाली. प्रगत शैक्षणिक महाराष्ट्र कार्यक्रमात तंत्रस्नेही शिक्षकाची भूमिका अत्यंत महत्वाची आहे.तालुकास्तरावर एवढी मोठी कार्यशाळा प्रथमतः पार पडली.

संशोधनाची व्याप्ती व मर्यादा

व्याप्ती:

प्रस्तुत संशोधनात तंत्र स्नेही शिक्षकाची बदलती भूमिका अत्यंत महत्वाची आहे .शैक्षणिक वातावरण,गुणवत्ता,आकलन यात ई-लर्निंग,ज्ञानरचनावाद,यांचीभूमिका अत्यंत महत्वाची आहे .यासाठी ई-लर्निंग सुविधा उपलब्ध करणे,त्याविषयीचे वापराचे ज्ञान अवगत करून घेणे आवश्यक आहे.ज्ञान घेऊन प्रभावी वापर करणे,परिणामकारकता अजमावणे महत्वाचे आहे.

1)हे संशोधन संपूर्ण महाराष्ट्रातील तंत्रस्नेही शिक्षकांसाठी लागू आहे.

2)प्रस्तुत संशोधन ई-लर्निंग / डिजिटल शाळा संबधी आहे.

3)प्रस्तुत संशोधन तंत्रस्नेही शिक्षकासंबधी 2016 या शैक्षणिक वर्षापुरते आहे.

मर्यादा:

प्रस्तुत संशोधनात पुढील घटकांच्या बाबतीत अनेकमर्यादा घालण्यात आलेल्या होत्या.

1)प्रस्तुत संशोधन नाशिक जिल्ह्यातील येवला तालुक्यातील डिजिटल-ई-लर्निंग शाळांपुरते मर्यादित आहे.

2)प्रस्तुत संशोधन येवला तालुक्यातील तंत्रस्नेही शिक्षकांपुरते मर्यादित आहे.

3) प्रस्तुत संशोधन येवला तालुक्यातील तंत्रस्नेहीकायर्शाळेत सहभागी शिक्षकांपुरते मर्यादित आहे.

संबधित साहित्य व संशोधनाचा आढावा

प्रगत शैक्षणिक महाराष्ट्र कार्यक्र म आणि गुणवत्ता विकास कार्यक्रम या मुख्य विषयाशी संबधित संशोधन विषय आहे. डिजिटल-ई-लर्निंग शाळा करण्यात शिक्षकाची अत्यंत महत्वाची भूमिका आहे. तंत्र स्नेही शिक्षक जो विद्यार्थ्यांची अध्ययनक्रिया व शिक्ष काची अध्यापन प्रक्रिया यांच्यातील आंतरक्रिया यांचा योग्य मेळ घडवून आणण्यात साहाय्य करतो.तंत्र ज्ञानाचा वापर करून महाराष्ट्रातील काही शाळांमध्ये गुणात्मक बदल झाले.असे मिडिया,सोशल मिडिया यांच्या माध्यमातून ऐकले.ई-लर्निंग वापराचे फायदे,झालेले बदल , विद्यार्थ्यांचा कृतियुक्त सहभाग,दीर्घकाळ स्मरण असा गुणात्मक बदल होतो. या सर्व बाबीमुळे संगणकाचा शिक्षणात वापर करणे क्रमप्राप्त झाले आहे. डिजिटल-ई-लर्निंग शाळांचीयशस्विता ऐकल्याने संशोधक व तालुक्यातील सर्व प्राथमिक शिक्षक ह्या सर्वांना ह्या प्रवाहात सामील होणे महत्त्वाचे वाटले.

The barrier most referred to in the literature is lack of effective traning .(albirini 2006;Balanskat et al 2006;Beegs 2000;Ozden 2007;schoepp 2005;Toprakci 2006.)One finding of pilgrim's (2001) study was that there were not enough training opportunities for teachers in the use of ICTs in a classroom environment.

The research additionally highlights the mportance of personal factors associated with higher levels of computer use by teachers(Becker2000).These include teacher's openness to change and recongnition of the trans-formative potential of using technology.The converse is that practitioners concerns about disruption to established pedagogic approaches may lead to caution and additional limits on change.(Dr.Minakshi Barve,principal,TTA.P).

संशोधन कार्यपद्धती

प्रस्तुतसंशोधनासाठी सर्वेक्षण संशोधनपद्धतीचा वापर करण्यात आला.

सामग्री एकत्रीकरण साधने

प्रश्नावलीद्वारे शिक्षकांकडून प्रशिक्षण-कार्यशाळा ,कृती व परिणामकारकता जाणून घेण्यासाठी एकूण 22 प्रश्न विचारले गेले.

न्यादर्श

प्रस्तुत संशोधनासाठी सहेतुक नमुना निवडला .येवला तालुक्यात शिक्षकांसाठी तीन तंत्रस्नेही कार्यशाळा –प्रशिक्षण वर्गाचे आयोजन करण्यात आले होते.त्यातील 128डिजिटल-ई-लर्निंग शाळांपैकी 32 शिक्षकांची न्यादर्श म्हणूननिवड करण्यात आली. प्रशिक्षणानंतर तालुक्यात ई-लर्निंग बाबत काय-काय बदल झाले हे उद्दिष्टनिहाय मिळालेल्या सामग्रीचे विश्लेषण व निष्कर्ष पुढे मांडलेले आहे.

मिळालेल्या प्रतिसादांची संख्या व टक्केवारी कोष्टकात दिली आहे.तंत्र स्नेही शिक्षकांना काही परिणाम अधिक प्रमाणात आवडले. प्रत्येक प्रतिसाद शंभर टक्केपैकी नोंदविला आहे. काही पर्यायात अधिक मुद्दे/प्रतिसाद दिलेले आहेत.प्रश्नावलीत प्रश्नानिहाय बहु पर्याय दिले आहेत.मिळालेल्या प्रतिसादांची नोंद कोष्टकात खालीलप्रमाणे दिली आहे.

कोष्टक क्र.1 प्रश्न 1शिक्षक म्हणून आपल्यापुढे तांत्रिक साहाय्य मिळविण्यासाठी कोणकोणते पर्याय होते?

स्वतः प्रशिक्षित होतो.	प्रशिक्षण घेतलें	सहकाऱ्यांचे साहाय्य घेतले
संख्या टक्के	संख्या टक्के	संख्या टक्के
5 18%	17 61%	12 43%

निरीक्षण: तांत्रिक साहाय्य मिळविण्यासाठी 61%; सहकार्यांचे साहाय्य घेणारे शिक्षक 43%;इतर 18% शिक्षक होते.

निष्कर्ष:बहुतांश शाळातील शिक्षकांनी प्रशिक्षण-कार्यशाळा यांचा लाभ घेतला.इतर सहकाऱ्याचेही सहकाऱ्याचेही साहाय्य घेत असल्याचे जाणवले.तर स्वतः प्रशिक्षित असणाऱ्या शिक्षकांची संख्या अल्प होती.

कोष्टक क्र.2 प्रश्न2–मराठी माध्यमाच्या शाळांपुढे कोणकोणती आव्हाने आहेत?

भौतिक सुविधांची उपलब्धता	पटसंख्या टिकविणे	गुणवत्ता विषयक	इतर
संख्या टक्के	संख्या टक्के	संख्याटक्के	संख्या टक्के
1761%	15 54%	15 54%	5 18%

निरीक्षण: मराठी माध्यमाच्या शाळांपुढे भौतिक सुविधांची कमतरता,पटसंख्या टिकविणे,गुणवत्ता वाढविणे ही मुख्य आव्हाने आहेत.

निष्कर्ष:ई-लर्निंग साठी भौतिक साधनांची उपलब्धता होऊन तंत्रज्ञानाचा वापर होणे गरजेचे आहे.जेणेकरून पटसंख्या वाढून गुणवत्ता वाढण्यास अधिक मदत होईल.

कोष्टक क्र. 3

प्रश्न3–मराठी माध्यमाच्या शाळांपुढील आव्हानांप्रतीशिक्षक म्हणून तुमच्या कोणकोणत्या भूमिका आहेत?

माहिती तंत्रज्ञानाचा वापर करणे	गुणवत्ता वाढविणे	पटसंख्या वाढविणे व टिकविणे	प्रशिक्षित होऊन स्पर्धेला सामोरे जाणे	इतर
संख्या टक्के	संख्याटक्के	संख्या टक्के	संख्या टक्के	संख्या टक्के
25 89%	2279%	13 46%	16 57%	6 21%

निरीक्षण:शिक्षक प्रशिक्षण घेऊन तंत्रस्नेही शिक्षक बनून तंत्रज्ञान वापरण्यास उत्सुक आहेत. 89%शिक्षक तंत्रज्ञानाचा वापर करण्यास तयार आहेत.

निष्कर्ष: शिक्षकांच्या भूमिका सकारात्मक आहेत.ई-लर्निंग व अन्य तंत्रज्ञानाचा अध्ययन –अध्यापनात वापर करण्यास, स्पर्धेला जाऊन गुणवत्ता वाढविण्यास तयार आहेत. माहिती तंत्रज्ञानाचा वापर करण्यास इच्छुक आहेत.

कोष्टक क्र. 4

प्रश्न4 तुम्हांलास्वत:ला तंत्रस्नेही शिक्षक व्हावे असे वाटते का?

होय	नाही	अन्य
संख्याटक्के	संख्याटक्के	संख्या टक्के
26 93%	2 7%	- -

निरीक्षण : तंत्रस्नेही शिक्षक व्हावे यासाठी शिक्षकांचा 93% प्रतिसाद आहे.

निष्कर्ष : तंत्रस्नेही शिक्षक व्हावे असे शिक्षकांना मनापासून वाटते.

कोष्टक क्र . 5

प्रश्न5 महाराष्ट्रातील इतर शाळा डिजिटल-ई लर्निंग शाळांमधील यशोगाथेची माहिती कोठून मिळाली?

मिडिया	सोशल मिडिया	दूरदर्शन	शैक्षणिक मासिके	इतर
संख्या टक्के	संख्या टक्के	संख्या टक्के	संख्या टक्के	संख्या टक्के
15 54%	24 86%	6 21%	6 21%	7 25%

निरीक्षण: महाराष्ट्रातील इतर शाळा डिजिटल-ई लर्निंग शाळांमधील यशोगाथेची माहिती 86% शिक्षकांना सोशल मिडिया द्वारे मिळाली.

निष्कर्ष: सोशल मिडिया हे सद्यस्थितीत माहितीच्या देवाण-घेवाणीचे प्रगत,सुलभ साधन आहे.त्या द्वारे ई- लर्निंग शाळांची माहिती मिळाली .

कोष्टक क्र . 6 प्रश्न6 तंत्रस्नेही शिक्षक होण्यासाठी तुम्हांस प्रशिक्षणासाठी आवश्यकता होती काय?

स्वतः प्रशिक्षित होतो.	सहकाऱ्यांची मदत घेत होतो	प्रशिक्षण –कार्यशाळा आवश्यक	स्वयं–अध्ययनाने शिकता येते
संख्या टक्के	संख्याटक्के	संख्या टक्के	संख्या टक्के
15 54%	14 50%	11 39%	4 14%

निरीक्षण: तंत्रस्नेही शिक्षक होण्यासाठी39%शिक्षकांना प्रशिक्षणासाठी आवश्यकता वाटते.50% शिक्षक सहकाऱ्यांची मदत घेतात.

निष्कर्ष: तंत्रस्नेही शिक्षक होण्यासाठी,माहिती –तंत्रज्ञानाचा वापर परिणामकारक होण्यासाठी प्रशिक्षण –कार्यशाळाची आवश्यकता आहे.

कोष्टक क्र . 7

प्रश्न 8 तुमच्या शाळेत ई-लर्निंग ची सुविधा आहे काय?

होय	नाही	अन्य
संख्या टक्के	संख्या टक्के	संख्या टक्के
26 93%	5 18%	2 7%

निरीक्षण:सर्वेक्षण करतांना बहुतांश डिजिटल ई-लर्निंग शाळांची निवड केली असल्याने 93% शाळाह्या डिजिटल-ई-लर्निंग झाल्याचे दिसून आले.

निष्कर्ष: येवला तालुक्यातील एकूण 237 पैकी 150 शाळांमध्ये डिजिटल ,ई-लर्निंगचावापर केला जातो. ई-लर्निंगबाबत सकारात्मकता दिसून येते.

कोष्टक क्र . 8

प्रश्न 11 तंत्रस्नेही शिक्षक प्रशिक्षणा पूर्वी तुमची शाळा डिजिटल- ई-लर्निंग झाली ,तेव्हा शिक्षक व ई-लर्निंग साहित्य यात आंतरक्रिया कशा होत्या?

पुरेशा	कमी	वाढल्या	इतर
संख्या टक्के	संख्या टक्के	संख्या टक्के	संख्या टक्के
9 32%	12 43%	3 12%	3 12%

निरीक्षण: तंत्रस्नेही शिक्षक प्रशिक्षणापूर्वी43% शिक्षकांच्या ई-लर्निंग साहित्य यात आंतरक्रिया कमी होत्या.

निष्कर्ष:तंत्रज्ञानाचा वापर करण्यासाठी प्रशिक्षण-कार्याशाळाची आवश्यकता दिसून येते.

कोष्टक क्र .9

प्रश्न 10 तुमची शाळा डिजिटल –ई-लर्निंग करण्यासाठी तुम्ही पुढीलपैकीकोणकोणत्या मार्गांचा अवलंब केला ?

लोकसहभाग	सेवाभावी संस्थांचे साहाय्य	वस्तुरूपाने	इतर
संख्याटक्के	संख्या टक्के	संख्या टक्के	संख्या टक्के
26 93%	1 4%	6 22%	8 29%

निरीक्षण: शाळा डिजिटल –ई-लर्निंग करण्यासाठी 93%शिक्षकांनीलोकसहभागाचा वापर केला असून वस्तुरूपाने काही साहित्य मिळविले आहे.

निष्कर्ष: शाळा डिजिटल –ई-लर्निंग करण्यासाठी होण्यामध्येलोकसहभागाची मोठी भूमिका बजावलेली दिसून येते.

कोष्टक क्र .10 प्रश्न 13 तंत्रस्नेही कार्यशाळा-प्रशिक्षणातून शिकलेल्या गोष्टींची नोंद करा.

संगणक आवड निर्माण झाली	शाळा डिजिटल-ई-लर्निंग करण्यास प्रोत्साहन मिळाले.	softwear चा वापर शिकले	आत्मविश्वासात वाढ झाली	ई-लर्निंग वापराचे ज्ञान मिळाले	डिजिटल वापर वाढला
संख्या टक्के	संख्याटक्के	संख्या टक्के	संख्याटक्के	संख्या टक्के	संख्या टक्के
18 64%	1864%	20 71%	15 54%	1036%	12 43%

निरीक्षण: 64%शिक्षकांना शाळा डिजिटल-ई-लर्निंग करण्यास प्रोत्साहन मिळाले.संगणक आवड निर्माण झाली . 57%शिक्षकांना ई-साहित्य माहित झाले.54%शिक्षकात आत्मविश्वास निर्माण झाला..

निष्कर्ष: तंत्रस्नेही कार्यशाळा-प्रशिक्षणातूनडिजिटल-ई-लर्निंग शाळा याबाबत माहिती,
वापराचे ज्ञान मिळाले.आत्मविश्वास वाढला.तालुका मोठ्या प्रमाणावर डिजिटल झाला.

कोष्टक क्र .11 प्रश्न 14 तज्ज्ञांद्वारे प्रशिक्षणातून किती प्रमाणात अपेक्षा पूर्ण झाल्या?

पुरेशा प्रमाणात	कमी प्रमाणात	अन्य मत
संख्याटक्के	संख्या टक्के	संख्या टक्के
21 75%	414%	4 14%

निरीक्षण: तज्ज्ञांद्वारे प्रशिक्षणातून, तंत्रस्नेही कार्यशाळामधून शिक्षकांना शाळा डिजिटल –ई-लर्निंग करण्यास प्रोत्साहन मिळाले.संगणक आवड निर्माण झाली.शिक्षकांना ई-साहित्य माहित झाले.शिक्षकात आत्मविश्वास निर्माण झाला.75% शिक्षकांच्या अपेक्षा पूर्ण झाल्या.

निष्कर्ष: तंत्रस्नेही कार्यशाळेची तालुकास्तरावर गरज होती.मोठ्या प्रमाणात अपेक्षा पूर्ण झाल्या.

कोष्टक क्र .12 प्रश्न 15 अधिक प्रशिक्षणाची आवश्यकता असल्यास कसे?

प्रत्यक्ष दिग्दर्शन		दिग्दर्शन व सराव		ऑन लाईन प्रशिक्षण हवे		व्याख्यान स्वरुपात		इतर असल्यास नोंदवा	
संख्या	टक्के	संख्या	टक्के	संख्या	टक्के	संख्या	टक्के	संख्या	टक्के
10	36%	18	64%	7	25%	2	7%	2	7%

निरीक्षण: ई-लर्निंग वापराबाबत अधिक प्रशिक्षणाची आवश्यकता असून 64 % शिक्षकांनी दिग्दर्शन व सराव असे एकत्रित प्रशिक्षणाची मागणी केलेली आहे.

निष्कर्ष: ई-लर्निंग वापराचे ज्ञान पुरेसे जमिळाले,परंतु दिग्दर्शन व सराव असे एकत्रित कार्यशाळा- प्रशिक्षणाची आवश्यकता आहे.

कोष्टक क्र .13 प्रश्न 16 ई-लर्निंग साहित्याचा वापर कोणत्या पद्धतीने प्रभावी वाटतो?

interactive	non-interactive	दोन्हीही
संख्या टक्के	संख्या टक्के	संख्या टक्के
1554%	4 14%	12 43%

निरीक्षण: ई -लर्निंग साहित्याचा वापर 54%शिक्षकinteractive कृतियुक्त सहभाग पद्धतीने परिणामकारक वाटतो.तर 43 % शिक्षकांनाinteractive/non interactive असा दोन्हीही पद्धतीने प्रभावी वाटतो.

निष्कर्ष: interactive /कृतियुक्त सहभाग पद्धतीने परिणामकारक वाटतो.

कोष्टक क्र .14 प्रश्न 17 ई-लर्निंग वापराने काय-काय बदल होत आहे?

आकलन वाढले		गुणवत्ता वाढत आहे		शालेय वातावरण बदलले		अन्य	
संख्याटक्के		संख्या	टक्के	संख्या	टक्के	संख्या	टक्के
23	82%	2486%		1968%		8	29%

निरीक्षण: अध्ययन-अध्यापन परिणामकारक होऊन आकलनात वाढ झाल्याचे 82%शिक्षकांचे मत आहे.86 %शिक्षकांना गुणवत्तेत वाढ झाल्याचे तर शालेय वातावरण बदलले असे 68 % शिक्षकांनावाटते.

निष्कर्ष: ई-लर्निंग अध्ययन –अध्यापनात प्रभावी,पर्नाम्कारक वापर दिसून येते .आकलन,गुणवत्ता,शालेय वातावरणात गुणात्मक वाढ झाल्याचे दिसून येते.

कोष्टक क्र .15 प्रश्न ई-लर्निंगच्या साह्याने घटक अध्यापनात कोणकोणत्या बाबी वापरतात?

घटकासंबंधी चे ई-साहित्य		वेब साईट		power-point चा वापर		इतर	
संख्या	टक्के	संख्या	टक्के	संख्या	टक्के	संख्या	टक्के
17	61%	11	39%	19	68%	5	18%

निरीक्षण:ई-लर्निंगचा वापर करतांना 61%शिक्षक घटका संबधीचे ई- साहित्य,39%शिक्षक संकेत स्थळे ,68% शिक्षक POWAR –POINT चा वापर करत असल्याचे आढळले .

निष्कर्ष: ई- साहित्य, संकेत स्थळे , POWAR –POINTव अन्य मार्गांचा वापर करून अध्ययन-अध्यापन प्रक्रिया प्रभावीपणे करत असल्याचे दिसते.

सारांश:

जिल्हा परिषदेच्या शाळांमधील प्राथमिक शिक्षकांमध्ये तंत्रस्नेही शिक्षक घडविण्यासाठी घेतलेल्या प्रशिक्षणाची परिणामकारकता अजमावून पाहणे आवश्यक होते. तांत्रिक साहाय्य मि ळवणेपासून डिजिटल-ई-लर्निंगचा वापर शिक्ष काकडून कशाप्रकारे केला जातआहे? कार्यशाळा-प्रशिक्षण अधिक हवे आहे काय? कोणत्या स्वरूपाचे प्रशिक्षण हवे?ई-लर्निंगचा कसा परिणाम झाला आहे? एकूण तंत्रस्नेही कार्यशाळांचा उपयोग होऊन प्रगत शैक्षणिक महाराष्ट्र कार्यक्रमात संशोधकाला तंत्रस्नेही शिक्षकाची भूमिका अंत्यंत महत्त्वाची दिसून आली आहे.

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5) दैनिक वर्तमानपत्रक,लोकसत्ता,सकाळ मधील ई-लर्निंग शाळांचे वृत्त

BLENDED LEARNING संमिश्र अध्ययन

श्रीमती पाटील मनि"ा भिमसिंग
सहा. प्राध्यापिकाए पुणे विद्यार्थी गृहाचे शिक्षणशास्त्र व संशोधन महाविद्यालय,
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सारांश

अध्ययनात मानव आणि तंत्रज्ञान या दोन्ही अध्ययन प्रक्रियांचे उपयोजन हे संमिश्र अध्ययनात येते. प्रत्यक्ष वर्गआंतरक्रिया आणि ई-लर्निंग यांचा सुरेख मिलाफ साधून त्याला मानवी स्पर्श, असलेले ज्ञानरचनावादी 'ाश्वत अध्ययन अनुभव देण्याचा अनुदेशन उपागम म्हणजे ब्लेंडेड लर्निंग होय. ज्ञानाचे विस्तारीत स्वरुप पाहता अध्ययनासाठी दोन्हीही पध्दती महत्वपूर्ण ठरतात. विद्यार्थी केंद्रित शिक्षण प्रणालींचा विचार करता आजचा विद्यार्थी सक्रिय, सक्षम, कौशल्यपूर्ण घडविण्यासाठी संमिश्र अध्ययन ही आजच्या घडीला महत्वपूर्ण अध्ययन पध्दती आहे. संमिश्र अध्ययनात तंत्रज्ञान व ऑनलाईन पध्दती यांचे फायदे तर विद्यार्थ्याला मिळतातच तसेच पारंपारिक अध्ययन अध्यापन प्रक्रियेचा देखील समावेश असल्याने त्याचे फायदे सुध्दा विद्यार्थ्यांना तसेच शिक्षकांना होतात.

प्रास्ताविकः- आधुनिक काळात संगणकाचा उदय होऊन त्याचा शिक्षणक्षेत्रात वापर अनिवार्य झाला आहे. गेल्या दशकात इंटरनेटचा अवि"कार होऊन त्याने सर्व विश्वाला मोहिनी घातली आहे. आजच्या तंत्रज्ञान व माहितीच्या सागरात ज्ञानाचा प्रस्फोट झालेला आहे. अध्यापन 'ाास्त्रात नव-प्रवाहांचा समावेश होत आहे. आजची शिक्षण पध्दती ही विद्यार्थी केंद्रित शिक्षण पध्दती आहे. त्यात नव-नवीन अध्ययन, अध्यापन पध्दतीचा समावेश होत आहे. तंत्रज्ञानाच्या वाढत्या प्रगतिमुळे शिक्षणात तंत्रज्ञानाधारित अध्ययन पध्दतीचा मोठया प्रमाणावर समावेश होत आहे. आधुनिक काळात अध्यापन 'ाास्त्रात अलीकडे संमिश्र अध्ययन, फ्लिप्ड वर्ग, मोबाईल अध्ययन अनुभवावर आधारित अध्ययन, समस्या आधारित अध्ययन सारांश/योजना आधारित अध्ययन व अध्यापनात प्रणाली दृ"टीकोणाचा वापर इ. नवप्रवाहांचा समावेश होत आहे. भारतासारख्या महाकाय लोकसंख्येच्या देशात आर्थिक समस्या ही सर्वात मोठी अडचण आहे. तसेच सामाजिक संपर्काचा अभाव, जबाबदार जाणीवेचा अभाव, भौतिकवादाला चालना आणि human touch चा अभाव हे आक्षेप ऑनलाईन अध्ययनासंदर्भात घेतले जातात. त्यामुळेच पूर्णतः पारंपारिक वर्गअध्यापन असो किंवा ऑनलाईन याद्वारे भारताच्या उच्च शिक्षणात विधायक परिवर्तन 'ाक्य नाही. यास्तव या दोन्ही मार्गांचा योग्य समन्वय आणि एकात्मिकरण अध्ययन अध्यापनात गरजेचे आहे.

संकल्पनाः-

१९९७ च्या सुमारास इंग्लंडमध्ये प्रथमतः ही संज्ञा वापरात आली.

ग्रॅहम स्वेनिअर यांनी महटल्याप्रमाणे ब्लेंडेड लर्निंग हा आज उच्च शिक्षणातील अज्ञात व सर्वात मोठा नवविचार प्रवाह आहे.

वर्गआंतरक्रियांना अध्ययनाच्या विविध 'ैलींची जोड देणे ब्लेंडेड लर्निंगमध्ये अभिप्रेत आहे.

मिश्रित अध्ययन ही संज्ञा ई-अध्ययनाचे वर्णन करण्यासाठी वापरली जाते. मिश्रित अध्ययनात वर्गात एकापेक्षा अधिक संगणक जोडून मूलभूत तंत्रात बदल दर्शविला जातो. तसेच शिक्षक आणि विद्यार्थ्यांना अध्ययन अनुभव देण्यासाठी मूलभूत बदल केले जातात.

पारंपारिक अध्ययनः-अध्यापन प्रक्रियेत शिक्षक व विद्यार्थी समोरासमोर बसलेले असतात. माहिती तंत्रज्ञानाचा उदय झाल्यानंतर पारंपारिक अध्ययन अध्यापन प्रक्रियेबरोबरच तंत्रज्ञानाचा म्हणजेच संगणकाचा व इंटरनेटचा मोठया प्रमाणावर वापर होताना दिसतोय. या

दोन्हींचे अर्थपुर्ण व नियोजनपूर्वक एकत्रीकरण यातून संमीश्र अध्ययन ही संकल्पना पुढे आली.

संमिश्र अध्ययन ही संकल्पना पारंपारिक वर्गअध्यापनाबरोबरच ऑनलाईन इ-संदर्भ घेऊन विद्यार्थ्यांना समोरा-समोर मिश्र पध्दतीचा वापर करुन अध्ययन अनुभूतींद्वारे अध्ययन करण्यासाठी करतात.

Blended Learning is the integration of classroom learning with e-learning.

म्हणजेच विद्यार्थी पारंपारिक पध्दतीने वर्गात अध्ययन करुन काही उर्वरित अध्ययनाचा घटक वर्गाबाहेरही ई-संदर्भाचा वापर करुन पुर्ण करु ‘ाकतात.

व्याख्याः-

‘‘मानव आणि तंत्रज्ञान या दोन्हींचे अध्ययन प्रक्रियेत उपयोजन करणे म्हणजे मिश्रिम अध्ययन होय. मिश्रिम अध्ययन यात औपचारिक शिक्षण कार्यक्रम अंतर्भूत आहे.’’

Blended Learning is defined as a integration of online learning with traditional face to face class activities in a planned, pedagogically valuable manner.

ऑनलाईन अध्ययनाचे पारंपारिक अध्ययन अध्यापन प्रक्रियेच्या वर्गातील कृतींसाठी नियोजनबध्द व अध्यापनशास्त्राच्या दृ”टीने महत्वपूर्ण असे केलेले एकात्मीकरण म्हणजे संमिश्र अध्ययन होय.

Blended Learning is a student centred approach that integrator learning experiences of online and face to face environment thoughtfully.

ऑनलाईन आणि समोरासमोरच्या अध्ययन परिस्थितीसाठीचा अध्ययन अनुभवांचे विचारपूर्वक एकात्मीकरण करणारा विद्यार्थी केंद्री दृ”टीकोन म्हणजे संमिश्र अध्ययन होय.

Blended Learning is the combination of multiple approaches to pedagogy or teaching eg. Self paced, collaborative or inquiry based study –Wikipedia

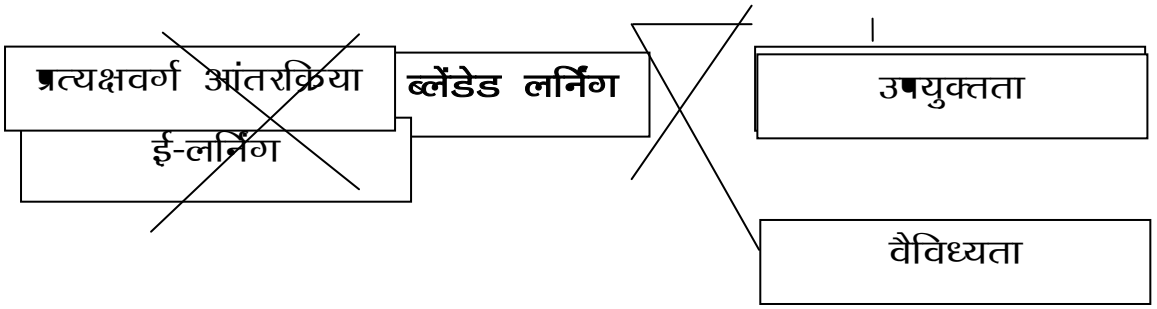
संमिश्र अध्ययन हे एक बहुविध अध्यापनशास्त्राचे/ अध्यापनाच्या दृ”टीकोनाचे एकत्रीकरण आहे.

उदा. स्वयं केंद्रित, सहभागात्मक किंवा यृच्छाआधारित अभ्यास-विकिपिडिया.

वरील व्याख्यांचा विचार करता संमिश्र अध्ययनात शिक्षक विद्यार्थी व माहिती तंत्रज्ञानाच्या एकत्रित समावेश आहे, दोन्ही पध्दती नियोजनबध्दरीतीने एकत्र करणे अपेक्षित आहे. पूर्वी शिक्षक वर्गअध्यापनाबरोबरच कार्यपुस्तिका, स्वाध्याय, चाचणी प्रपाठ यांचा वापर अध्ययन अनुभव वाढविण्यासाठी करीत होता. त्याऐवजी आता नवनवीन सोशल नेटवर्किंगचे ॲप्लिकेशनचा समावेश करण्यावर संमिश्र अध्ययनात भर दिलेला आहे. यात प्रामुख्याने व्हिडीओ कॉन्फरन्स, चॅटरुम, न्यूज फोरम,E – mail, Whatsapp, Facebook, blog, wiki इ. विचार करणे अपेक्षित आहे.

ज्ञानरचनावाद (Constructivism) आणि जॉर्ज सिमन्सच्याConnectivism अधि”ठानावर हे ब्लेंडेड लर्निंग उभारलेले आहे.

वर्गवातावरण	⟷	वेब वातावरण
ज्ञानरचनावादी अध्ययन	⟷	बोधात्मक अध्ययन
संरचित अध्ययन प्रक्रिया	⟷	असंरचित अध्ययन प्रक्रिया
ज्ञानरचनावादी वातावरण	⟷	अनुदेशात्मक वातावरण



उपयुक्तता	**वैविध्यता**
१) अध्ययन परिणामकारकता	विविध अध्ययन स्त्रोत
२) मूल्य परिणामकारकता	विविध अध्ययन कृती
३) सहजता	विविध अध्ययन 'ैली
४) स्वातंत्र, संधी	विविध अध्ययन साहित्य
५) शिक्षक उत्तरदायित्व	विविध अध्ययन कौशल्ये
६) सातत्यपूर्ण प्रलाभरण	विविध अध्ययन वस्तू
७) विद्यार्थी समाधान	आंतरक्रियांचे विविध मार्ग यांचे एकत्मिकरण

संमिश्र अध्ययनाचे वैशि"ट्येः-(Characteristics of blended learning) :-

१) शिक्षक विद्यार्थी व आधुनिक तंत्रज्ञान पध्दतीचा समावेश होतो.
२) शिक्षक विद्यार्थी पारंपारिक पध्दती सोबत तंत्रज्ञानाचा वापर करतात.
३) शिक्षक विद्यार्थी समोरासमोर असतांनाही व नसतांनाही अध्ययन घडून येते.
४) अध्ययनासाठी विद्यार्थी गट करुन स्वयं अध्ययनाने किंवा विद्यार्थी फिरता गट पध्दतीने(cycling) अध्ययन करतात.
५) डिजीटल बोर्ड, e-labs चा संमिश्र अध्ययनासाठी समावेश आवश्यक असतो.
६) विद्यार्थी सतत कार्यशील (सक्रिय) असतो.
७) संमिश्र अध्ययनात बहुविध (मिश्र) पध्दतींचा वापर केला जातो.
८) संमिश्र अध्ययनात ऑनलाईन इ-संदर्भाचा (e-references) वापर करतांना google, earth, blog, web, wiki, discussion forum इ. चा वापर केला जातो.

संमिश्र अध्ययनात 'ैक्षणिक तंत्रज्ञानांतर्गत इनोसाइट संस्था सहा विविध मॉडेल (प्रतिमाने) सूचीत करतात.

१) समोरासमोर अध्ययन(face to face driver):- शिक्षक वर्गाध्यापनात पारंपारिक मिश्रित ऑनलाईन अध्ययन उपलब्ध करुन देतात.

२) ऑनलाईन लॅब(Online lab):-या प्रतिमानात संगणक प्रयोगशाळेत ऑनलाईन स्वरुपाचे अभ्यासक्रम उपलब्ध करुन दिले जातात.

३) विद्यार्थी गट फिरविणे (Rotation) :- या प्रतिमानात विद्यार्थी एकावेळी एकच online किंवा वर्गाध्यापन घेतात व गटाने फिरतात.

४) विद्यार्थी स्व-निवड (Self–blend):-या प्रतिमानात विद्यार्थी स्वतःच 'ाळेने दिलेले अभ्यासक्रम ऑनलाईन निवडून घेतात.

५) डिजिटल प्लॅटफॉर्म फ्लेक्स (Digital platform flex):- या प्रतिमानात अभ्यासक्रम हा अगोदरच online platform ने सादर केलेला असतो तसेच शिक्षक ऑनलाईन आधार पुरवितात.

संमीश्र अध्ययनासाठी शिक्षक / 'ाळेला पुढील बाबींचा विचार करावा लागतोः-

१) वर्गात शिकवायचा आशय व त्याला अनुरुप ऑनलाईन अध्ययनाच्या आशयाची निश्चिती.

२) विद्यार्थी वयोगटाचा विचार करुन कोणत्या साधनांचा वापर करावा लागेल याची निश्चिती.

३) संस्थेत/'ाळेत ऑनलाईन अध्ययनासाठी आवश्यक सामग्रीची जमवाजमव व त्यावर नियंत्रण ठेवण्यासाठी पर्यवेक्षकाची निश्चिती.

४) 'ालेय वातावरणात ऑनलाईन संस्कृतीची फसवणूक.

५) शिक्षक तसेच विद्यार्थ्यांना ऑनलाईन अध्ययन साधने वापरण्याचे प्रशिक्षण.

संमीश्र अध्ययनाचे फायदेः-

- नवीन अध्यापन 'ास्त्रीय दृ"टीकोन
- अध्यापनातील प्रगती
- संप्रे"ाण कौशल्य वाढ
- विद्यार्थ्यांना सक्षम बनविण्यासाठी
- तंत्रज्ञान वापरण्याने कौशल्यात वाढ
- अध्ययन अनुभवातील लवचिकता
- वर्गअध्यापनाच्या कालावधीची बचत
- विविध कौशल्यांचा विकास
- विद्यार्थी व्यस्तता
- अध्यापनांच्या नवीन संधी
- लाजाळू विद्यार्थ्यांना प्रोत्साहन
- अध्ययनात अभिरुची वाढते
- परिणामकारकपणे अभ्यासक्रमाची पूर्तता
- ज्ञानसंरचनावादाला पूरक अशी अध्ययन पध्दती आहे

संमिश्र अध्ययनाच्या मर्यादाः-

१) विद्यार्थ्यांना अध्ययनासाठी प्रोत्साहन करण्यास निश्चित अशी वर्गअध्यापन व ऑनलाईन अध्यापनासाठी संरचना नाही.

२) उच्चप्रतीची स्वयंशिस्त व स्वनिर्देशनाची आवश्यकता असते. ज्या विद्यार्थ्यांकडे ती नसते ते अध्ययनात मागे पडण्याची 'ाक्यता असते.

३) E – learning मध्ये अध्ययनासाठी शां"ाक वातावरण प्रत्येकाकडे उपलब्ध असेलच अशी 'ाश्वती नाही.

४) तंत्रज्ञान वापरात तसेच उपलब्धतेसंबंधी अडचणी येण्याचा संभव अधिक असतो.

५) संमिश्र अध्ययन हे मोठया प्रमाणावर तांत्रिक स्त्रोतांवर/ साधनांवर अवलंबून असल्याने त्यांची उपलब्धता ही खर्चिक बाब आहे.

६) ही सर्व साधने अद्ययावत(up to date)हाताळणी कौशल्ये, त्यांची काळजी (maintenance) घेणे हे सर्व कठिण आहे.

७) संगणक असाक्षरता(IT ill-literacy) ही शिक्षक व विद्यार्थ्यांची संमिश्र अध्ययनातील महत्वाचा अडथळा ठरु ‘ाकतो.

८) अभ्यासक्रम, वेळापत्रक इ. ची सांगड घालणे, वि”ायानुरुप techno lab वापरणे हे आव्हानाचे ठरेल.

आजच्या शिक्षणप्रणालीचा विचार करता Blended learning महत्वाची भूमिका साकारेल. कारण गुणवत्तापूर्ण विद्यार्थी केंद्रीत उच्च शिक्षणहे आपणास Blended learning सहाय्याने पूर्ण करता येईल यात ‘ांका नाही. कारण ब्लेंडेड लर्निंग म्हणजे प्रत्यक्ष वर्ग आंतरक्रिया आणि ई - लर्निंगच्या अभिनव तंत्राचा सुरेख मिलाफ साधला जाऊन त्यातून समाजिक आधार असलेले ज्ञानरचनावादी ‘ाश्वत अध्ययन अनुभव देण्याचा सर्वसमावेशक अनुदेशन उमागम म्हणजे ब्लेंडेड लर्निंग होय. याद्वारे आपणास अध्ययन प्रक्रिया, अधिक कार्यक्षम, सुलभ, समाजिकमुख्य, सुसंघटीत, व व्यावसायिक बनविता येईल. यातून नवीन E-learning ची द्वारे खुली होण्यासही सहाय्य होते, म्हणजेच जागतिक महासत्ता होण्याच्या दृ”टीने निश्चितच Blended Learning महत्वपूर्ण आहे.

संदर्भः-

१) *प्रगत अध्यापनशास्त्र आणि माहिती संप्रे”ाण तंत्रज्ञानाचे उपयोजनः-*
Success Publications
प्रा. डॉ. हनुमंत शिवभक्त
प्रा. ‘ुभांगी कुंभार
प्रा. ‘ांती मिसे

२) *प्रगत अध्यापनशास्त्र*
लेखक
प्रा. कपूर मोरे
प्रा. सोनाली पाटील
विकास प्रकाशन, नाशिक

३) *प्रगत अध्यापनशास्त्र*
प्रा. पंकज नागमोती, प्रा. सुनिल देसले
सात्विक प्रकाशन, नाशिक

४) *http: www. E.learningguru.com/ wpapers/blended.bersin.doc*
http:llen.wikipedia.org/wiki/blended.learning

५) *शिक्षणातील मर्मदृ”टी*
अंक २ रा एप्रिल २००९
संपादक : डॉ. किशोर चव्हाण

शालेय स्तरावर **ICT** समवाय **:** काही आव्हाने

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०.१ प्रास्ता वक

राष्ट्रीयआंतरराष्ट्रीय स्तरावर ज्ञान आ ण तंत्रज्ञान ह्यांचा शक्षणात वापर ह्या धोरणात्मक निर्णयाची व अंबलबजवणी मोठ्या प्रमाणात दिसून येत आहे. त्यात ज्ञानाचा स्तर वाढ वणे, ते एकमेकांना पोहच वणे, नवनि र्मती करणे आ ण नवीन तंत्रज्ञानाचा वेगाने प्रसार करणे ह्या बाबींचा समावेशआहे. त्यामुळे उत्पादकता, कार्यक्षमता व वकास होण्यास मदत होते. त्यामुळेच माहिती संप्रेषण तंत्र वज्ञान (Inforamtion Communication Tec hnology) ICT च्या सगळीकडे वापर सुरु झालेला आहे. ICT शक्षणात उपयुक्त आहे. सध्या शाळांमध्ये ICT हे अनिवार्य करण्यात आले आहे.

१.१ शक्षणातील **ICT** ची गरज

संगणक, संप्रेषण आ ण आशय तंत्र वज्ञान ह्यांचा समावेश ICT मध्ये होतो. ICT हे औपचारिक व अनौपचारिक शक्षणातील एक उत्तम दर्जेदार साधन आहे. सर्वच ठिकाणी व वध त्यात शेती, वज्ञान, संशोधन, ई-गव्हर्नर, वशेष शक्षण, उद्योग, ग्रंथालये ह्यासारख्या व वध क्षेत्रात उपयोग दिसून येतो. जागतिक स्पर्धेच्या वातावरणात ICT परिणामकारक ठरते.

वशेष शक्षणात ICT चा उत्तमप्रकारे उपयोग होतो. सकारात्मक शैक्ष णक वातावरणात निर्माण होण्यास मदत झालेली आहे. शालेय स्तरावरील शक्षण, शक्षणतज्ज्ञांनी देखील शालेय वातावरणात ICT चा समावेश व्हायला हवा ह्यास दुजोरा दिलेला आहे. तांत्रिक शक्षणातही व वध कौशल्ये ही सहजपणे शकता येतात. त्यामुळे तांत्रिक व्यवसायाला मदत झालेली आहे. पूर्वी ज्या वद्यार्थ्यांना सहजपणे शक्षण घेता येत नव्हते. ते वद्यार्थी सर्व शक्षण घेऊ शकतात. वर्गव्यवस्थेत अजून आशय अध्यपनासाठी मदत होऊ शकते. शक्षणाची गूणवत्ता सुधारणेसाठी उपयोग होतो. शक्षक, वद्यार्थी शैक्ष णक क्षेत्रातील कार्य करणारे आ ण समाज ह्यांना मार्गदर्शक ठरणारे आहे. वद्यार्थी आ ण शक्षक ह्यांना अध्यापनात आ ण अध्ययनात प्रगती करण्यासाठीचे नवीन साधन (Tool) आहे. व त्यात कौशल्यप्राप्तीही होऊ शकते. वद्यार्थी स्वयं अध्ययनात शकू शकतो, अध्ययनात लव चकता येते. शालेय व्यवस्थापनात प्रशास कय कामकाजात ICT चा खूपच उपयोग होतो. कमी वेळात, कमी श्रमात, बहुसंख्य लोक समुदायापर्यंत पोहचता येते.

ICT च्या शालेय शक्षणात समवाय केला. तर संपुर्ण शालेय शक्षणपद्धतीच बदलावी लागेल. कारण पारंपारिक साचेबंद शक्षणपद्धतीला छेद जाणार आहे. नवीन प्रणाली आत्मसात करताना व वध बाबींचा वचार करावा लागेल. नव्हे तर शक्षक, शाळेतील प्रशास कय वातावरण, अध्ययन आ ण अध्यापनात ही खूप फरक पडणार आहे. परिणामी व वध प्रकारच्या आव्हानांना तोंड द्यावे लागेल.

१.२ शालेय स्तरावरील **ICT** च्या समवाय **:** काही आव्हाने

राष्ट्रीय स्तरावर ICT हे शक्षणातील एक वकसनाच्या दृष्टीने महत्वपूर्ण कार्य करते. परंतू शाळेय स्तरावर ICT च्या समवाय (Integration) केल्यावर काही आव्हानांना तोंड द्यावे लागणार आहे. कारण भारतासारख्या वकसनशील देशात ग्रामीण भागातील शाळांमध्ये तर एक मोठे आव्हानच ठरणार आहे. ग्रामीण भागांमध्ये ICT मधील शक्षणाचे ज्ञान आ ण कौशल्ये असणाऱ्या मनुष्यबळाची उणीव आहे. त्या प्रकारचे मनुष्यबळाचे प्र शक्षणे ही अल्प आहे. त्याचप्रमाणे इतर ही काही आव्हाने आहेत. त्या वषयीची चर्चा पुढे दिलेली आहे.

१.२.१ संस्थांची **ICT** वषयी शैक्ष णक अनास्था

शालेय संस्थामध्ये अनेक अनुभवी शक्षक असतात. त्यांना ICT चे शक्षण घेणे फारसे रुचत नाही. त्यांचा पारंपारिक पद्धतीनेच अध्यापन करण्यात जास्त काळ आहेत. जुने शक्षक बदल करण्यास धजावत नाही. शालेय संस्थांची ICT च्या दृष्टीने शाळेत योग्य ती साधने आणणे त्यांना आ थक अपव्यय असे वाटल्याने ICT वषयी अनास्था वाटते. त्यामुळे संस्थेशी संब धत सर्व मानवी घटकांचे ICT वषयी पूरक वचार व अंबलबजावणी करणे हे आव्हान आहे.

१.२.२ इंटरनेट

इंटरनेट वापर हा पारंपारिक ग्रंथालय पद्धतीत फारच अग्रेसर आहे. इंटरनेट व्दारे व वध माहितीचे स्रोतस् सहज उपलब्ध होतात. कोणत्याही वषयाचे ज्ञान उपलब्ध होते. परंतु ह्या माहितीच्या जाळ्यात नेमके स्रोत कसे शोधायचे ? ह्याचे मूल्यमापन ज्ञान शक्षकांना नसते. त्या ज्ञानाचा आपला अध्यापनात कसा उपयोग करावा ? योग्य माध्यमांचा वापर करून अ धक परिणामकारक पाठ कसा घ्यावा ? ह्या वषयीचे योग्य प्र शक्षण शक्षकांना नसते. तसेच शाळांमधील इंटरनेटची उपलब्धता हा प्रश्न असतोच.

१.२.३ अपुरे आ थक बळ

परिणामकारक आ ण कार्यक्षम तंत्र वज्ञान वापरायचे तर त्यास आवश्यक सॉफ्टवेअर व हार्डवेअर उपलब्ध असावे लागतात. शाळांमध्ये शासकीय अनुदाने, स्व-आ थक बळावर, कंवा सामाजिक औदार्याने संगणक खरेदी होतात. परंतु पुरेसे ICT ची साधने घेण्यासाठी शाळांमध्ये आ थक व्यवस्था कमी असते. त्यामुळे शाळेतील ICT च्या वापरावर मर्यादा येतात.

१.२.४ भाषा आ ण आशयाची आव्हाने

ICT च्या संदर्भातील सर्व माहिती ही मुल इंग्रजी भाषेतील आहे. सर्व सॉफ्टवेअर्स ही इंग्रजीतून आहे. ऑन लाईन माहिती देखील ' इंग्रजी ' भाषेतील आहे. अलीकडे काही वेबसाईटस , Blogs हे मराठी भाषेत येऊ घातली आहेत. इंग्रजी भाषेच्या मराठी शाळांमध्ये फारसा उपयोग केला जात नाही. ग्रामीण भागातील शाळांमध्ये तर प्रश्नच आहे. त्यामुळे ICT चा वापर करून ' आशय ' माहिती असून चालणार नाही तर शक्षकाला त्याला समजेल अशा भाषेत दिला तरच उपयोग करू शकेल.

१.२.५ तांत्रिक आधाराचा अभाव

ICTची साधने व त्यासंबंधीची तांत्रिक माहिती ती सेवा देणारी केंद्रे कंवा संस्था ह्या शाळेला जोडलेल्या नसतात. त्यासाठी पुन्हा ख र्चक बाब येते प्रत्येक ठिकाणी पुरेसा तांत्रिक, प्र श क्षत मनुष्यबळ असेलच असे नाही. व शाळांमध्ये दिल्या गेलेल्या ICT च्या साधनांची उपयुक्तता कोण पाहणार ? त्यामुळे शाळेमध्ये संगणकाचा वापर कमी होऊ शकतो.

१.२.६ **ICT** कौशल्ये आ ण ज्ञानाचा अभाव

शक्षणामध्ये ICT चा वापर करताना शक्षकांमधील ICT वषयीचे ज्ञान आ ण कौशल्ये ह्यांचा अभाव आहे. त्यामुळे तो एक मोठा अडसर ठरणार आहे. मुळात अध्यापनात ICT चा उपयोग करण्याचे कौशल्य शक्षकांमध्ये नसल्याने वापर खूप कमी प्रमाणात होताना दिसतो.

१.२.७साधनांची कमतरता

ग्रामीण भागातील बहुसंख्य शाळांच्या वचार केला तर आजही इलेक्ट्रिक सटीची समस्या ही भारतात आहेच. त्याचप्रमाणे संगणक, स्कॅनर, इंटरनेट, प्रंटर, बहुमाध्यमे प्रोजेक्टर, सारख्या साधने पुरेशी प्रमाणात शाळांमध्ये उपलब्ध नसतात. बऱ्याच शाळांमध्ये संगणक व प्रंटर ह्या व्यतिरिक्त फारश्या साधने नसतात. अद्ययावत सॉफ्टवेअर व हार्डवेअर ह्यांचे ज्ञान नसल्याने तंत्रज्ञानाच्या मुख्य वापरात अडसर येतात. शाळांमध्ये ICT च्या साधनांयुक्त वर्गखोल्या करणे त्याप्रमाणे व्यवस्थापन करणे हे सर्व शैक्ष णक संस्थांमध्ये मोठे आव्हान आहे.

१.२.८ वेळेचा अभाव

शाळेमध्ये वर्तमानकाळातील शक्षकांची स्थिती पहिली तर त्यांना अनेक प्रकारची कामे करावी लागतात. त्यात प्राथ मक शक्षकांची अवस्था फारच वाईट आहे. तरीही त्यांना ICT चा उपयोग करून व वध वषय अध्यापन करावयाचे तर शक्षकांसाठी त्या अध्यापनाचे नियोजन करण्यासाठी व अध्यापनात व अध्ययनात ICT चा वापर करण्यासाठी वेळ नाही. शक्षकांना संगणकातील हार्डवेअर व सॉफ्टवेअरचे पुरेसे ज्ञान नाही. आ ण ज्या शक्षकांकडे तन्ज्ञांकडे आहे. त्यांच्याकडे जाऊन शकण्यासाठी वेळ नाही. त्यामुळे तंत्रज्ञानाची अद्ययावत माहिती ठेऊ शकणार नाही.

१.२.९ **ICT** च्या साधनांची जतन व निगा :

शाळेमध्ये ICT शी संब धत संगणक, एलसीडी, प्रोजेक्टर, दृक - श्राव्य साधने वगैरे सारख्या सारख्या साधनांची माहिती शक्षकांना कंवा इतर कर्मचाऱ्यांना पुरेसे ज्ञान नसल्याने साधनांची निगा ठेवली जाणार नाही. त्यामुळे जतन सध्या शासनांकडून संगणक खरेदीस अनुदान दिले जाते. शाळांमध्ये संगणक लॅब्रोटरी ही आहेत. परंतु त्यांच्या जतन व निगा ह्यांचे आव्हान शाळांपुढे असणार आहे.

ही सर्व आव्हाने पाहिल्यानंतर भारत सरकारने काही पाऊले उचललेली आहेत २०१०-२०२० हे दशक ICT वर केंद्रित केले होते.

१) वद्यार्थी आ ण शक्षक त्यांच्यासाठी संगणक साक्षरता प्रकल्प.

२) IT बसेसच्या व्दारे मोबाईल क्लासरूम

३) ई-लर्निंग सेंटर्स आ ण ऑन लाईन शक्षण

४) ICT चा वापर करून अध्यापन करण्याला शक्षकाला " राष्ट्रीय पुरस्कार "

५) अभ्यासक्रमात ICT

६) ई-ज्ञानकोश, ज्ञान-दर्शन, ज्ञान-वाणी आ ण व वध दूर शक्षणाच्या माध्यमातून कार्यक्रम.

१.३ समारोप आ ण शफारसी

शक्षणातील ICT च्या आव्हानांना आता सामोरे जावेच लागणार आहे. तरच जागतिक स्पर्धेत भारताला टिकून राहता येईल. प्रत्येक आव्हानांवर उपाय शोधण्याचे प्रयत्नही सुरु आहे. शासनाच्या स्तरावर ऑन-लाईन माहिती, प्र शक्षणे सुरु झालेली आहे. शाळेतील पटनोंदणी, परीक्षांची रेकॉर्डस प्रवेश शासनक ऑनलाईन जरा होत आहे. परंतु तरीही काही असे ठोस प्रयत्नपूर्वक कार्यक्रम राबवावी लागतील त्याच प्रमाणे कार्यवाही करावी लागेल.

१) ग्रामीण भागातील ICT च्या वापराबाबत काही खाजगी संस्थासोबत करार करूनकामे करवून घ्यावीत.

२) शक्षण प्र शक्षण कार्यक्रमात अमुलाग्र बदल करणे आवश्यक आहे. त्यात शक्षक-प्र शक्षकांचे ही प्र शक्षण होणे गरजेचे आहे. त्या त्या महा वद्यालयात आवश्यक साधन-सामुग्री देणे आवश्यक आहे.

३) राज्य शासनाने शालेय स्तरावरील राबवायच्या ICT च्या अभ्यास क्रमात वअंबलबजावणीच्या कार्यक्रमात शक्षक-प्र शक्षकांचा समावेश करायला हवा.

४) शक्षकांना ICT ची कौशल्ये व ज्ञानाच्या कार्यशाळा, प्र शक्षणे सातत्यपूर्ण घ्यायला हवीत.

५) शक्षकांना ICT ची सेवांतर्गत प्र शक्षणे आयोजित केली जावीत.

६) ICT च्या चळवळीत पालकांचा सहभाग वाढवावा.

७) ठिकठिकाणी ICT च्या सेवा देणारी केंद्रे स्थापन करायला हवीत.

संदर्भ

१) http://www.ijhssi.org/papers/v2(9)/Version-3/A02930104.pdf

वैशाली सिताराम सुर्यवंशी
ॲड.विठ्ठलरावहांडे कॉलेज ऑफ एज्युकेशन, नाशिक

1) **प्रस्तावना** : शिक्षण म्हणजे ज्ञान, शिक्षणांत प्रामुख्याने दोन व्यक्तींचा सहभाग असतो. पहिला शिकणारा दुसराशिकवणारा त्यालाच आपण शिक्षककिंवागुरू असे म्हणतो.शिक्षणाची प्रक्रीया ही अनादी काळापासून चालत आली आहे. आपण जरइतिहासाचा मागोवा घेतला तर आपल्याला असेदिसून येईल की, पुर्वीच्या काळातगुरूकुलशिक्षण पद्धत होती''.गुरूकुल पद्धतीत पुर्वीचे ऋषीमुनी जंगलात तपश्चर्या करत असत. तेथेच तेराज घराण्यांतील राजपुत्राला किंवाइतर तत्सम व्यक्तींना शिक्षण घेण्यासाठी त्या त्या गुरूकूलांत पाठवले जात असेसदरगुरूकुल पद्धतीत ऋषीमुनी अशा राजपुत्रांना काही कालावधीपर्यंत आश्रमात ठेऊन घेत असतव त्यांना तेथे अश्वरोहन, धर्नुविद्या, तलवारबाजी इत्यादीचे ज्ञान देत असत. तसेच यांना व्यवहार चातुर्य, राजधर्माचे पालन, आदर्शराजाव प्रज्ञा रा□याचेप्रशासनअशाप्रकारेचालवावेइत्यादीचेशिक्षणदेतअसत. तसेचत्यांना तेथे व्यवहार चातुर्य, राजधर्माचे पालन, आदर्शराजाव प्रजा रा□याचे प्रशासन इत्यादीचे शिक्षण देत असत ठरावी ककालावधीनंतर त्यांना त्यात पारंगत करून चपरत पाठवले जात होते. उदा.राम व लक्ष्मण यांना राजा रशरथाने त्यांचे गुरू द्रोणाचार्य यांचेकडे धर्नुविद्येत पारंगत होण्याासठी पाठवले होते.असे दाखले आपणास इतिहासाचे अध्ययन केले असता मिळतात.

2) आधुनीकयुग :

आधुनीक युगात शिक्षण पद्धतीत अमुलाग्र बदलहोऊन शिक्षणाचे महत्त्व इतकेवाढले की, विज्ञानाच्या क्षेत्रात मानवाने उल्लेखनीय प्रगती करून आता तोगगनालागवसनी घालण्याचा प्रयत्न करत आहे.अवकाशातवेगवेगळे उपग्रह पाठवून तसेच चंद्र व मंगळावरील संशोधन करूनवेगवेगळे मिसाईल सोडून तेथीलवातावरण, हवा, पाणी आणि जैवीकसंशोधन करून त्याचा मानवाला कसा उपायोग होईल याचा अभ्यास करण्यात येत आहे.भुकंप, महापुर, □ालामुखी, त्सुनामीयानैसर्गिकआपत्तीपासूनहोणारेनुकसानटाळण्यासाठीवेगवेगळ्याअंतराळसंशोधनमोहीमावेगवेगळेदेशराबवतआहे.हेसर्वकाशव ाच्यझाले?त्याचेउत्तरएकचआहेतेम्हणजेशिक्षण. त्यामुळेच प्रसिद्ध आफ्रीकन नेते नेल्सन मंडेला यांनी म्हटले आहे की, Education is most powerful weapon which you can use to change the world.

तसेच प्रसिद्ध शिक्षण तज्ञ अलबर्ट फ्रिनस्टीन यांनीसुद्धा शिक्षणाबद्दल असेलिहूनठेवले आहे की, Education is not only learning of the facts, but it is a training of mind.

३) शिक्षण पद्धतीतीलवेगवेगळेस्तर :

पुर्वी शिक्षण पद्धतीत खालीलप्रमाणेस्तर नेमण्यात आलेहोते.

१) प्राथमिक स्तर - इ. १ ली ते ७ वी
२) माध्यमीक स्तर - इ. ८ वी ते ११ वी
३) उच्चशिक्षण - प्री डीग्री तेडिग्री पर्यंत (४ वर्ष)

सन १९७५ पासून भारताने शिक्षण पद्धतीत १०+२+३ हा पॅटर्न स्विकृत केला आहे.त्यामुळे शिक्षणाचे नवीनस्तर निर्माण करण्यात आले आहेत.

१. प्राथमिक स्तर - इ. १ ली ते ४ थी
२. माध्यमिक स्तर - इ. ५ वी ते ८ वी
३. उच्च मध्यमिक स्तर - इ. ११ वी ते १२ वी
४. उच्चशिक्षण - डीग्रीव त्यापुढील शिक्षण (तीनवर्ष)

अशा प्रकारे शासनानेशिक्षणाचेस्तरनिश्चीत करूनशैक्षणिक धोरण आखलेले आहे.

आता आपण वरीलसर्वस्तरावर अध्ययन व अध्यापन याचे कार्य कसेचालतेव अध्ययन व अध्यापन यात कोणकोणतेशैक्षणिक साहित्य वापरात होते त्याचा आढावा संक्षिप्त स्वरूपात घेऊ.

१. प्राथमिक स्तर इ. १ ली ते इ. ४ थी :

या स्तरावर अध्यापनासाठी खालील साहित्य वापरण्यात येत असे.

उदा. पाटी, पेन्सील, खडु, फळा आणि मातीचे अथवालाकडाचेगोळे इत्यादीचा वापर करण्यात येत असे.

उदा. १ ली ते ४ थी पर्यंतचे विद्यार्थ्यांना अंकगणीत शिकवण्यासाठी मातीचे गोळे अथवालाकडाचेठोकळे एकाचौकटीत बसवून त्याप्रमाणेलाकडाचेगोळे क्रमाने फिरवून संख्या ज्ञानशिकवले जाते असे. त्याचप्रमाणेविविध प्राणी व पक्षी आणि भाजीपाला इत्यादीचे ज्ञान प्राप्त होण्यासाठी विविध चित्रफीतीचा वापर करण्यात येत असे. त्यामुळे वरीलसाधनांचा वापर करून प्राथमिक स्तरावरीलशिक्षणाचे ज्ञानशिक्षक विद्यार्थ्यांना देतहोते.ग्रामीण भागात अजूनहीहेच साहित्य वापरून ज्ञानार्जनांचे कामकाज करण्यात येते.

शहरी भागात शैक्षणिक साहित्य वापरण्यात अमुलाग्र बदल झाला असून, खाजगीशैक्षणिक संस्थेमध्ये या स्तरावर आधुनिकव आकर्षक असे साहित्य वापरून ज्ञानार्जनाचे काम यास्तरावर करण्यात येते.मात्र शहरी भागात आजसुद्धा नगरपालिकांच्या शाळेत असेशैक्षणिक साहित्य वापरण्यास येत नाही.त्यामुळे नगरपालिकेच्या शाळेत पालक आपल्या पाल्यांना शिक्षणासाठी पाठवत नाहीत.

2. माध्यमिक स्तर :

यात इयत्ता ५ वी ते ८ वीचा समावेश असून, या स्तरावरील अध्ययन व अध्यापनासाठी जीसाधने वापरण्यात येते ते म्हजणे ब्लॅक बोर्ड, वही, पेन इत्यादी या स्तरावरशिक्षणसंबंधीत विषयाचे ज्ञान फळ्यावर लिहून देत असतव त्याप्रमाणे विद्यार्थी सदरचे मुद्दे अथवा त्यातील आकृती इत्यादी त्यांच्या नोटबुकमध्येलिहूनघेत.

3. उच्च माध्यमिक आणि उच्चशिक्षणस्तर :

माहिती व तंत्रज्ञानक्षेत्रात अमुलाग्र बदल झाल्याने आता याच स्तरावरीलशिक्षणात मोबाईल ॲपचा वापर शैक्षणिकक्षेत्रांत अध्ययन व अध्यापनांसाठी करण्यात येतो त्यामुळे आताचेशिक्षणसरळ सोपे झाले असून विद्यार्थ्यांना ज्ञानर्जनासाठी कोणताहीशारीरीक त्रासहोत नाही. उदा. पुर्वी शिक्षकांनी एखादे प्रकरण लिहून अणण्यासाठी विद्यार्थ्यांना तेहाताने लिहिण्याशिवाय दुसरा पर्याय उपलब्ध नसल्याने विद्यार्थी हातानेहेलिहूनशिक्षकांना दाखवावेलागत असे.त्यामुळे विद्यार्थ्यांचा वेळ वाया जातहोता.तद्नंतर टाइपरायटरचा वापर सुरू झाल्यामुळे विद्यार्थ्यांना सदरची माहिती टाईप करून द्यावी लागत असे.त्यामुळे हाताच्या लिहीण्याच्या प्रक्रियेत त्यांना थोडादिलासा मिळत होताव त्यामुळे त्यांना लिखाणाच्या कामकाजात थोडीफार मदत होत असे.परंतु आता माहिती तंत्रज्ञामध्ये (आयसीटीसी) मध्ये प्रचंड बदलामुळे व मोबाईल ॲपच्या वापरामुळे त्याला हव्या तेवढ्या प्रति क्षणार्धात उपलबध होतातववेळेची बचतहोते.विद्यार्थी संबंधितशाखेतील ज्ञानाच्या वेगवेगळ्या सी.डी.बनवून त्याचा उपयोग तो त्याला नेमून दिलेल्या प्रोजेक्ट व त्याचे प्रेझेंटेशनसाठी करूशकतो त्यामुळे त्याचा वेळवाचतोव त्याचे प्रेझेंटेशन प्रभावी होते.

सध्याचे युग हे माहिती तंत्रज्ञानाचे युग असून, ज्ञानाचा विस्फोट झालेला आहे. प्रत्येक क्षणी माहितीत भर पडत आहे.त्यामुळे जगहेखेडे बनलेले आहे असेदिसून येते.माहिती तंत्रज्ञानामुळे कोणतीही माहिती एकाक्षणात मिळू शकते.अशा या माहिती तंत्रज्ञानाचा उपयोग अध्ययन अध्यापन पद्धतीत देखील अतिशय महत्त्वचा ठरला आहे. सध्याच्या युगात माहिती तंत्रज्ञान (आय.सी.टी.) प्राप्त करूनघेणेहे अपरिहार्य आहे. पुर्वी □आला लिहीता वाचता येत नसे त्याला अज्ञानी म्हटले जात असे परंतु आजच्या युगात□आलामाहितीतंत्रज्ञानाचाउपयोगकरतायेतनाहीअशाव्यक्तींनाअज्ञानीम्हणण्याचीवेळआलेली आहे.अशा या माहिती तंत्रज्ञानाचा (आय.सी.टी.)उपयोग शिक्षणक्षेत्रात आवर्जुन केला पाहिजे.

सध्या मोबाईलचा वापर सर्रासहोतांनादिसून येतो.मोबाईल ही मानवाचीगरज बनलेली आहे.म्हणूनच या मोबाईलद्वारे किंवा त्यातील उपलब्ध असलेल्या ॲपद्वारे आपण विविध प्रकारची माहिती प्राप्त करूशकतो. तसेच या ॲपचा उपयोग अध्ययन अध्यापन पद्धतीत देखील केला जाऊ शकतो. त्यामुळे कमीतकमी वेळात जास्तीत जासत माहिती प्राप्त करता येऊ शकते. अध्ययन अध्यापन प्रक्रिया अधिक परिणामकारक व यशस्वी करता येऊ शकते.

मोबाईल ॲपचा वापर अध्ययन अध्यापन क्षेत्रात केल्याने शैक्षणिकक्षेत्रात क्रांतीघडवली जाऊ शकते.पण तत्पुर्वी मोबाईल ॲप म्हणजे काय? त्याचे प्रकार, तसेच त्याचा शिक्षणक्षेत्रातहोणारा उपयोग जाणूनघेणे महत्त्वाचे ठरते.

मोबाईल ॲप म्हणजे काय?

मोबाईल ॲप हा सॉफ्टवेअर प्रेग्राम असून तो आपला मोबाईलवर किंवाइतर मोबाईल डिव्हाईस उदा. टॅबलेट अथवा म्युझीक प्लेयरवर डाऊनलोड करता येतो.

यासाठी तुम्हाला एका स्मार्ट फोनची अथवाइतर मोबाईल डिव्हाईस आणिइंटरनेट सुविधा यांची आवश्यकता असते. एकदा तुम्ही एखादा मोबाईल डिव्हाईसखरेदी केले की त्याचा वापर करण्यासाठी तुम्ही स्वतःला प्रवृत्त करतातच.

त्यासाठी तुम्हाला ॲप स्टोअर करणेगरजेचे असून, ते तुमच्या मोबाईल ॲप डिव्हाईसला जोडणे क्रमप्राप्त आहे. तरचसदर सिस्टीमचा उपयोग करणे शक्य होतेव तुम्हाला एखाद्या विषयावर माहीती उपलबध होऊन ती माहीती तुम्ही डाऊनलोड करूशकतात अशा प्रकारे मोबाईल ॲपचे काम आजचालत असते.

मोबाईल ॲपचे प्रकार :

मोबाईल ॲपचे असंख्य प्रकार सध्या अस्तीत्वात असून त्यापैकी आपण खालील मोबाईल ॲप प्रकार की जेलर्नींगवटिचींगसाठी उपयुक्त आहेत. त्याची आता आपण माहिती घेऊ.

1. ग्रिफ्स युनीव्हरसिटी मेन ॲप :

हा ॲप आपणास कोर्समटेरीयल इनलर्नींग शोधण्यासाठी उपयुक्त असून, त्यानंतर हा ॲप लायब्ररी रिसर्च ब्राऊज टाईम टेबल, इमारतींचे लोकेशननिश्चीती करणे इतयादीसाठी आणिइतर तत्सम गोष्टीसाठी उपयोगी पडतो.

हा ॲप आय.ओ.एस. आणि ॲण्ड्रॉईड व्हर्जन यांना लिंक करणारा मोबाईल ॲप असतो. तसेचवेल ॲप व्हर्जनव मोबाईल लेस ब्राऊजर येथे पोहचण्याचा विजीबल (दृश्य स्वरूपात) शॉर्टकट आहे.

2. डिसीप्लीन स्पेसीफीक ग्रीफथ ॲप :

सदरचा ॲप हा औषधी द्रव्ये तसेच न्यायवैद्यक (फोरेन्सीक) आणि रसायन शास्त्रातीलविश्लेषन करणेकामी उपयुक्त असून, त्याचा गंभीर गुन्ह्यांचे उकल करून त्याचा शोध घेण्याकरीता सुद्धा उपयोग होतो.

3. एच.2 जी.यु. ॲप :

सदर मोबाईल ॲपचा उपयोग डाटा कलेक्शनव पाण्याचे श्रोत इत्यादी कोठे आहेत ते तपासण्यासाठी तसेच पाण्याचे सँपल घेऊन त्याचे रेकॉर्डींग मोबाईलवर करण्यासाठी उपयुक्त असून तेथून पुढील संशोधनाची समरेषा करणेकामी उपयुक्त मोबाईल ॲप आहे.

4. सी.आर.सी.एस. ॲप :

हा मोबाईल ॲप वातावरणांतहोणारे बदल याची कारणे इत्यादी शोधण्यासाठी आपणास मार्गदर्शन करत असतो. तसेचहा ॲप ऑस्ट्रेलीयाच्या किनारपट्टीचा अभ्यास करण्यासाठी उपयुक्त ठरतो.

मोबाईल ॲपचे फायदे :

मोबाईल ॲपचा वापर सुरू केल्यामुळे लर्नींगवटिचींग यामध्ये खालील फायदे होतात.

अ) मोबाईल ॲपचा वापर केल्यामुळे वेळेची बचतहोते.शारीरीक श्रम (लिखाणासाठी) वेळ वाया जात नाही.तसेच एकाचवेळी आपण लिखाणाच्या हव्या तेवढ्या प्रति काढूशकतो अथवासी.डी. तयार करूनसंबंधीतशाखेतील ज्ञानाचीसाठवणूक करून तेगरज असेल तेव्हा पाहू शकतोव त्याचा प्रेजेक्ट रिपोर्ट बनवून त्याचे प्रेझेंटेशन प्रभावीरित्या करता येऊ शकतो.

ब) हॉस्पीटल मधील उपयुक्तता :

मोबाईल ॲपमुळे मुलांना हॉस्पीटल कामकाज बाबत तसेच ते कसेचालते याच्या विषयी अवगत करता येते.

क) गोल्ड कोस्टक हेरीटेजमुळे आपणास वेगवेगळ्या हेरीस्टेजसाईटस् पहातायेतात.

ड) आय.ओ.एस. व्हर्जनव अँड्राईड व्हर्जनचा वापर करून आपण अनेक दुर्धर आजर जसे कॅन्सर, मधुमेह, हार्ट ॲटॅक, हाय ब्लड प्रेशर, सांधेरोपन, किडनी इत्यादीचे आजारांचेरेकॉर्डठेवून त्याचा पुढील हॉस्पीटल मॅनेजमेंट करण्याकरीता सदर ॲपचा खुपच फायदा होतो.

एज्युकेशन ॲपच्या वापरामुळे शिक्षकांनाहोणारे फायदे :

१. मोबाईल ॲपचा वापर केल्यामुळे शिक्षकांना त्यांच्या स्वतःच्या अभ्यासक्रमाची माहिती मोबाईलमध्ये भरता येते व त्या माहितीचा वापर विद्यार्थ्यांना अध्यापन करतांना करता येतो.
२. एज्युकेशन ॲपमध्ये भरलेली माहिती आणि कार्यपध्दती [फन्क्शन ॲण्ड कंटेट] हेलॉक करुनठेवता येते. तसेच माहिती गोपनीय ठेवता येते.
३. एज्युकेशन ॲपमध्ये शिक्षकांना डाटा आउटपुट प्राप्त करुन तो विद्यार्थ्यांसमोर ठेवून अध्यापनाचे कामकाज करता येऊ शकते.
४. एज्युकेशन ॲपमुळे शिक्षकांना त्यांच्या वर्गातील विद्यार्थ्यांची प्रगती कशी काय आहे याची माहिती मिळु शकतेव त्याप्रमाणेशिक्षण पध्दतीत आवश्यक ते फेरबदल करता येतात.
५. एज्युकेशन ॲपमध्ये शिक्षकांना विद्यार्थ्यांमध्ये क्रिएटीव्हीटी निर्माण करुन विद्यार्थ्यांचे ज्ञान अद्यावत ठेवणेकामी उपयोगी पडते. तसेच विद्यार्थ्यांची सर्जनशीलतावाढवता येते.

निष्कर्ष :

चांगले ज्ञानव उत्तम शिक्षण मिळण्यासाठी आता माहिती व तंत्रज्ञान आय.सी.टी.चा जास्तीत जास्त वापर केला पाहिजे.□यामुळे अध्ययन व अध्यापन पद्धतीत, सुलभता, स्पष्टता परिणामकारता आणि अद्यायावत माहीती शिक्षणव विद्यार्थी यांना मिळू शकतेववरील आय.सी.टी.टूलचा वापर करून विद्यार्थी त्याचे विविधशाखेतील ज्ञान अद्ययावत ठेवून सध्याच्या स्पर्धात्मक युगांत यशस्वी होता येईल.

संदर्भ :

१) सोशल मेडीया युज बाय हायर एजयुकेशन फॅकल्टी २०१३.
२) युजींग ऑनलाईनव्हीडीओ टू सपोर्ट स्टूडंट लर्नींग, एंगेजमेंट कॉलेजटिचींग ५९ (२), ५६-५९ जाम शेरर पी व ५४२९७.
३) शेल ऑफ सोशल मिडीया इन कॉलेज ॲडमिशन, हाऊ स्टूडंटस् कॅन बी स्मार्टर ऑनलाईनडिसेंबर ४, २०१३.

आधुनिक तंत्रज्ञान वापराबाबत मुक्त वद्यापीठातील संमंत्रकांच्या अ भवृतीचा अभ्यास

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प्रस्तावना**:-** सर्वांगीण शक्षणाचा वचार करून अनौप्चारिक शक्षण देण्याचे महत्वाचे काम करणारी संस्था म्हणजे मुक्त वद्यापीठ .मुक्त वद्यापीठाचा हेतू म्हणजे ज्यांना परिस्थितीमुळे उच्च शक्षण घेण्यात अडचणी आल्यामुळेज्यांचे शक्षण थांबले , अशा शक्षणेछूक अध्यायनार्थ्यांना जेजेथे राहत असतील कंवा काम करीत असतील ,अशा ठिकाणी शक्षणाची आ ण योग्य संमंत्रणा ची व्यवस्था उपलब्द करून देणे . मुक्त वद्या पठ्म्ध्ये अध्यापन पद्धतीत आधुनिक तांत्रिक साधनांचा उपयोग करण्यात येतो उदा. रे डयो, टीव्ही, टेप-रेकॉर्डर , मोबाईल, संगणक. यासाधनानमुळे अत्याधुनिक तंत्रज्ञानाचा वापरदूर शक्षणात हा वाढतांना दिसून येत आहे.

मुक्त व दूर शक्षणात अध्यायनार्थी व संमंत्रकसंपर्कसत्रात एकत्रयेवून संमंत्रणाचे कार्य पार पडले जाते . अश्या संपर्क सत्रामुळे अध्य यनार्थी व संमंत्र क यांच्यामध्ये एक प्रकारची आत्मीयता निर्माण होते, जी दोघांनाही आपले कार्य प्रभावी रीतीने पार पडायला मदत करते . संपर्कसत्रापुर्वी अध्याय नार्थीना छापील अध्ययन साहित्य पुर वले ले असतेच. काही वेळा दृक - श्राव्य माध्यमाच्या आधारे देखील अध्ययन साहित्य पुर वण्यात येते . या सामग्रीच्या आधारे वद्यार्थी अध्ययन करतो . दूर शक्षणात शक्षण घेणारा वद्यार्थ्यांचे वय, लंग, परिस्थिती, पूर्वतयारी व इतर व्यक्तीभेदलक्षात घेता हा गट बहुआयामी असतो. त्यामुळे संपर्क सत्रातूनया बहुजिनसी गटातील प्रत्येक घटकाला वेगेवगळे व गरजेनुसार मार्गदर्शन करणे महत्वाचे ठरते . म्हणून दूर शक्षण पद्धतीत संमंत्र काची भू मका ही अतिशय महत्वाची असते . बदलत्या काळानुसार वद्यार्थ्यांच्या गरजा तसेच अभ्यासक्रम देखीलबदललेलाआपल्याला दिसतो . त्यामुळेच संमंत्र कला स्वत :ला अध्यायावत ठेवणे अत्यंत गरजेचे आहे . अध्याच्या माहिती संप्रेषण तंत्रज्ञानाच्या युगात संगणकाचा , मोबाईलवर आधारित वेगवेगळ्या अँपचा अ धका धक वापर होतांना दिसतो . तसेच संगणकावर आधारी त नवनवीन अभ्यासक्रमांची नि र्मती होतांना दिसून येते . भ वष्यकाळातील गरजेनुसार आधुनिक तंत्रज्ञा नाच्या वापराबाबत संमंत्रकाची अ भवृत्ती चांगली असणे आवश्यक आहे . याचाच वचार करून ICT बाबत मुक्त व दूर शक्षणात काम करणाऱ्या संमंत्रकाची भू मका महत्वाची राहणार आहे.

प्रस्तूतअभ्यासामध्ये संशोधकाने आधुनिक तंत्रज्ञान वापराबाबत मुक्त व दूर शक्षणातील संमंत्रकांची अ भवृत्ती जाणून घेतली आहे.

महत्वाच्या संकल्पना:-संमंत्रक, अ भवृत्ती

समस्या वधान:-आधुनिक तंत्रज्ञान वापराबाबत संमंत्रकांच्याअ भवृत्तीचाअभ्यास करणे.

कार्यात्मक व्याख्या:-

संमंत्रक:- मुक्त व दूर शक्षण पद्धतीमध्ये अध्यापन,मार्गदर्शन व समुपदेशन करणारा शक्षक म्हणजेसंमंत्रक होय.

अ भवृत्ती:- आधुनिक तंत्रज्ञान वापराबाबत मुक्त व दूर शक्षणातील संमंत्र कांचे असलेले निश्चित मत म्हणजे अ भवृत्ती होय.

अभ्यासाची उद्दिष्टे:-

१. आधुनिक तंत्रज्ञान वापराबाबत मुक्त व दूर शक्षणातील संमंत्रकांच्याअडचणींचाशोध घेणे.
२. आधुनिक तंत्रज्ञान वापराबाबत मुक्त व दूर शक्षणातील संमंत्र कांची अ भवृत्ती शो धका वक सत करणे.
३. आधुनिक तंत्रज्ञान वापराबाबत मुक्त व दूर शक्षणातील संमंत्र कांच्या अ भवृत्तीचा शोध घेणे.

गृहीतके:-

१. मुक्त व दूर शक्षणात अत्याधुनिक तंत्रज्ञान वापरले जाते.
२. वद्यार्थी, संमंत्रक हे व वधतंत्रज्ञानात्मक साधने वापरतात.

व्याप्ती:-

१. प्रस्तुत संशोधन अभ्यास ना शक शहरातील मुक्त वद्यापीठाशी संबं धत आहे.
२. प्रस्तुत संशोधन हे शक्षण शास्त्र वद्याशाखेंतर्गत येणाऱ्यासर्व अभ्यासकेंद्रांशी संबं धत आहे.

मर्यादा:-

१. प्रस्तुत संशोधन हे मुक्त वद्यापीठामधील शक्षण शास्त्र वद्याशाखेंतर्गत येणाऱ्याएकूण शक्षणक्रमापैकी फक्त बी.एड अभ्यासक्रमापुरते मर्यादित आहे.
२. प्रस्तुत संशोधन हे बीएड. अभ्यासक्रमाचे संमं त्रण करणाऱ्या संमंत्रकांपुरते मर्यादित आहे.

संशोधन पद्धती :-

प्रस्तुत संशोधन अभ्यासामध्ये मुक्त वद्यापीठातील शक्षण शास्त्र वद्याशाखेंतर्गत येणाऱ्याबी.एड अभ्यासक्रमा मध्ये संमंत्रण करणाऱ्या सं मंत्रकांच्याअत्याधुनिक तंत्रज्ञा न वापराबाबत असलेल्या अ भवृत्तीचा अभ्यास केला आहे. यामध्ये अ भवृतीच्या सद्यस्थितीचा अभ्यास करण्यासठी सर्वेक्षण पद्धतीचा वापर करण्यात आला.

जनसंख्या:-

प्रस्तुत संशोधन हे मुक्त वद्यापीठामधील शक्षणशास्त्र वद्याशाखेंतर्गत येणाऱ्याएकूण शक्षणक्रमापैकी फक्त बी.एड अभ्यासक्रमामध्ये संमंत्रण करणारे एकूण २४५ संमंत्रक ही सदर अभ्यासाची जनसंख्या आहे.

नमुना:-

प्रस्तुत संशो धनाचा नमुना निवडतांना मुक्त वद्यापीठ मध्ये आयोजित बी.एड उद्बोधन सत्रामध्ये सहभागी जालेल्या एकूण संमंत्रकांच्या जनसंखेंपैकी २०% या प्रमाणे लॉटरी पद्धतीचा उपयोग करून ४९ संमंत्रकांची नमुना म्हणून निवड करण्यात आली.

माहिती संकलनाचे साधन:-

सदर अभ्यासासाठी संशोधकाने एका प्रमा णत अ भवृत्ती शोधीकेचावापर केला. आ ण ही प्रमा णत अ भवृत्ती शो धका माहिती संकलनाचे साधन म्हणून वापरण्यात आली . शो धकेमध्ये एकूण ५० वधानांचा समावेश होता या वधानांसाठी पूर्णसहमत, सहमत, तटस्थ, असहमतआ ण पूर्ण असहमत अश्या पद्धतीची पदनीश्चयनश्रेणीचा वापर करण्यात आला.

माहिती वश्लेषणाचीसाधने:-

प्रस्तुतअभ्यासामध्ये प्रमा णतअ भवृत्ती शो ध केद्वारा संक लत माहितीचे शेकडेवारी या संख्याशास्त्रीय साधनाचा वापर करून अंतिम वश्लेषण काढण्यात आले.

संशोधनाची कार्यवाही:-

१. प्रस्तुत अभ्यासकरतांना सर्व प्रथम बी .एड उद्बोधन सत्रासाठी उपस्थित असलेल्या संमंत्रकाना या अ भवृत्ती शो धके बाबत संपूर्ण माहिती देण्यात आली.
२. त्यानंतर या सर्व संमंत्रकांची रीतसर परवानगी घेवून , आवश्यक त्या सूचना करून , एकूण जनसंखेपैकी २०% या प्रमाणे ४९ संमंत्रकाची लॉटरी पद्धतीचा वापर करून अंतिम नमुना म्हणून निवड करण्यात आली.
३. त्यानंतर प्रमाणीत अ भवृत्ती शो धका संमंत्रकांकडून भरून घेण्यात आली .
४. अ भवृत्ती शोधीकेमध्ये सं मंत्रकानीदिलेल्या प्रतिसादावरून शेकडेवारी या संख्याशा स्त्रीय साधनाच्या सहाय्याने अ भवृत्ती शो धके मध्ये अंतर्भूत असलेल्या प्रत्येक वधानाचे वश्लेषण करण्यात आले.
५. प्राप्त माहितीच्या वश्लेषनाद्वारे सदर अभ्यासाची अंतिम निष्कर्ष मांडण्यात अआले.

निष्कर्ष:-

१. संमंत्रकांना संगणकाचाउपयोग हा गरजेनुसार करता येतो.
२. संमंत्रकांना संगणकाशी संबं धत प्रंटर , प्रोजेक्टर , PPT, MS- Word, Excel चा संमंत्रनासाठी उपयोग करता येतो.
३. संमंत्रकानामोबाईल मधील व वध आप्लीके शचा वापर संमंत्रणासाठी , गटचर्चा करण्यासाठी अध्ययनासाठी करता येतो.
४. परंतु संमंत्रकाना उच्च प्रतीचे संक्रोनस व अ संक्रोनस साधने कशी तयार करायची याचे प्र शक्षण घ्यावे लागेल.
५. संमंत्रकाना व्हिडीओस्ट्री मंग, व्हिडीओ कॉन्फरं संग ची प्र क्रया कशी असतेते शकण्याचे प्र शक्षण घ्यावे लागेल.

६. संमंत्रकाना वेबबोर्ड डस्कशन कसे करायचे याचे प्र शक्षण घ्यावे लागेल.

७. संमंत्रकाना व्हिडीओ, CD, कॅसेट तयार करण्याचेप्र शक्षण घ्यावेलागेल.

८. online coursewere डीझाईन तयार करण्याचे प्र शक्षण घ्यावे लागेल.

९. संमंत्रकाना LMS, LCMS, MOODLE, व वध MOOC इत्यादी घटकांची शास्त्र शुद्ध माहिती व योग्य प्र शक्षण घेण्याची आवश्यकता आहे.

समारोप:-

अभ्यासाच्यानिष्कर्षांवरून असे लक्षात येते की , संमंत्रकाना अत्याधुनिक तंत्रज्ञाना बाबत सकारात्मक दृष्टीकोन आहे . सं मंत्रक हेआवश्यक तेनुसार बे सक तंत्र ज्ञानाचा वापर देखील करतात. तसेच भ वष्याची गरज समजून घेता त्यांना या सर्व बाबी महत्वाच्या वाटतात . परंतु प्रगत तंत्रज्ञानी त्यांना पुरेशी माहिती व योग्य प्र शक्षण नाही तसेच वद्यार्थ्यांना संमंत्रण करण्यासाठी या अत्याधुनिक तंत्रज्ञानानाचे शास्त्रीय प्र शक्षणघेणेमहत्वाचे वाटते.

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२. चौधरी, बा. आ., कदम,चा. प.(२००४),शैक्ष णक मूल्यमापन: पुणे, नित्यनूतन प्रकाशन.

३. जोशी, शोभना ., शेटकर, ग. (२००४) शैक्ष णक व मान सक मापन : औरंगाबाद, वश्व प्रकाशन.

४. जोशी, शोभना., शेटकर, ग. (२००६) शैक्ष णक मूल्यमापन: औरंगाबाद, वश्व प्रकाशन.

५. दांडेकर, वा. ना. (१९९८) शैक्ष णक मूल्यमापन: नागपूर, श्री वद्या प्रकाशन.

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७. पं डत, ब.बी(२०१०) शक्षणातील संशोधन: पुणे, नित्यनूतन प्रकाशन.

८. पं डत, ब.बी(२००९) शक्षणातील संशोधन अ भकल्प: पुणे, नित्यनूतन प्रकाशन.

९. पाटील,अ. (२००८) मानसशास्त्रीयचाचण्या: पुणे,डायमंड पब्लिकेशन.

१०. बोरुडे, रा.र. (२०१०) संशोधन पद्धतीशास्त्र: पुणे, पुणे वद्यार्थीगृह प्रकाशन.

११. भंताडे, व. रा. (१९९९) शैक्ष णकसंख्याशास्र: पुणे, नित्यनूतन प्रकाशन.

१२. मुळे, रा. सं., ठमाठे, व. स.(१९८७) शैक्ष णक संशोधनाची मुलतत्वे : नागपूर, महाराष्ट्र वद्यापीठ ग्रंथ नि र्मती मंडळ.

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सारांश :-
२१ व्या शतकातील विविध आव्हाने मनुष्याला पेलवण्यासाठी त्याला शालेय जीवनातूनच तयारी करावी लागेल. म्हणून जागतिक आरोग्य संघटनेने विदयार्थी दशेमध्येचं १० जीवनकौशल्यांचा विकास करायला सांगितला आहे. व ती कौशल्ये म्हणजे स्व-जाणीव, समानुभूती, समस्या निराकरण, निर्णय घेणे, प्रभावी संप्रेषण, आंतरव्यक्ती संबंध, चिकित्सक विचार प्रक्रिया, भावनांचे समायोजन, ताण-तणावाचे समायोजन. ही दहा जीवनकौशल्ये विदयार्थ्यांमध्ये विकसित करण्यासाठी आपण माहिती संप्रेषण तंत्रज्ञानाचा प्रभावी वापर करु शकतो. या प्रत्येक कौशल्यांचा विकास करण्यासाठी आपण इंटरनेट, मोबाईल, संगणक, टि.व्ही., टेपरेकॉर्ड, रेडिओ यांचा प्रभावी वापर करु शकतो. तसेच व्हॉटस् अप, वुई चाट, फेसबुक, व्टिटर, ई-सोशल मिडियाचा सुध्दा चांगला उपयोग करुन विदयार्थ्यामध्ये जीवनकौशल्यांचा विकास करु शकतो.

प्रस्तावना :-विदयार्थ्यांचा सर्वांगीण विकास करण्यासाठी जागतिक आरोग्य संघटनेने सांगितलेल्या दहा जीवनकौशल्यांच्या विकासासाठी आपण माहिती संप्रेषण तंत्रज्ञानाचा प्रभावीपणे पुढील प्रमाणे उपयोग करु शकतो -

१. स्व-जाणीव

स्वत:चे वर्तन, बलस्थाने, कमतरता, इच्छा, अभिरुची, दोष, त्रुटी, आकांक्षा, क्षमता इत्यादी ओळखणे म्हणजे स्व-जाणीव होय.

ICT चा वापर करुन आपण स्व-जाणीव विकसित करु शकतो. स्वत: मधील क्षमता, कौशल्ये तपासण्याबाबतच्या अनेक चाचण्या इंटरनेटवर उपलब्ध आहेत. त्यांचा अभ्यास करुन स्वत: मध्ये प्रगती करता येईल. तसेच स्वत: च्या मर्यादावर कशा प्रकारे मात करावी यासंबंधीचे अनेक ऑडिओ-व्हिडिओ क्लिप इंटरनेटवर उपलब्ध आहेत. तसेच आपण करत असलेल्या कामांच्या नोंदी संगणक किंवा मोबाईल वर ठेवता येतील व त्यातून आपल्यामध्ये प्रगती किंवा अधोगती झाली आहे याची नोंद घेता येईल.

स्वत: मधील गुण-दोष कसे शोधावेत यासंबंधीचे मार्गदर्शन आपल्याला इंटरनेटद्वारे घेता येईल. विविध प्रकारच्या मोबाईल ॲपद्वारे स्वत: मधील क्षमता विकसित करता येतील.

२. **समानुभूती** - दुस-या व्यक्तीच्या भूमिकेत शिरुन त्यांच्या गरजा, भावना, विचार, कल्पना, मते यांचा अनुभव घेणे, त्याबाबतीतील जाणीव होणे, इतरांच्या भिन्नतेची जाणीव ठेवणे, इतरांबददल सहचरण, प्रेम, आपुलकी, आस्था, ठेवून सुसंवाद साधणे या क्षमतांचा समानुभूतीत समावेश होतो.

ICT चा उपयोग करुन आपण इंटरनेटवर उपलब्ध असणा-या व्हिडिओ क्लिपद्वारे नाटयाभिनयाचे प्रात्यक्षिक पाहून विविध भूमिकांमध्ये स्वतःला ठेवून विचार करुन स्वतःमध्ये समानुभूती कौशल्य विकसित करु शकतो. टी.व्ही. वरील इंटरनेटवर उपलब्ध असणारे मोबाईलवर इंटरनेटच्या सहायाने डाऊनलोड करुन सेव करुन ठेवलेले विविध एकपात्री नाटकांच्या माध्यमांतून व त्यांच्या पुर्नसादरीकरणातून आपल्यामध्ये समानुभूती जीवनकौशल्य विकसित करु शकतो. टी.व्ही. वरील विविध सामाजिक माहितीपटांतून जसे कुष्ठरोग्यांसाठी डॉ. आमटेंचे कार्य, स्नेहालय - अहमदनगर यांची यू-टूब वरील क्लिप पाहून समानुभूती कौशल्य विकसित करता येईल.

३. **समस्या निराकरण कौशल्य** - समस्या म्हणजे एक नवा स्थिती विशेष आणि त्याचे आकलन करण्यासाठी पूर्वी शिकलेल्या अनुभवांचा आणि तत्त्वांचा उपयोग करावा लागतो.

जेव्हा आपल्या समोर समस्या येते तेव्हा उपलब्ध असणा-या उपयापैकी योग्य उपाय निवडणे, कृती करणे, संपूर्ण समस्या सोडवण्यासाठी सकारात्मक यश प्राप्त करण्यासाठी समर्थ बनवण्याची प्रक्रिया म्हणजे समस्या निराकरण कौशल्य होय.

ICT चा फार मोठया प्रमाणावर समस्या निराकरण कौशल्य विकसित करण्यासाठी उपयोग होऊ शकतो. वेगवेगळया प्रकारचे कूट प्रश्न असणारे मोबाईल ॲप तयार करुन त्याचा उपयोग करता येईल. इंटरनेटवर विविध प्रकारच्या टास्क ओरिएण्टेड गेम्स असतात त्याचा उपयोग करता येईल. विदयार्थ्यांना विविध प्रकारच्या समस्या देऊन त्या सोडवण्यासाठी विविध पर्याय तयार करायला सांगता येतील हे पर्याय तयार करण्यासाठी त्यांना इंटरनेटचा उपयोग करता येईल. माहिती गोळा करण्यासाठी मोबाईल ॲपचा उपयोग करता येईल. विविध समस्यांवर आधारीत लघुपट इंटरनेटवर उपलब्ध आहे. त्यांचा वापर करता येतील.

४. ताण - तणावांचे समायोजन -

ताण - तणावांच्या कारणांचा शोध घेणे, तसेच ताण - तणावांचा शारीरिक व मानसिक आरोग्यावर होणारा परिणाम लक्षात घेऊन त्यांचे व्यवस्थापन करणे म्हणजे ताण - तणावांचे समायोजन कौशल्य होय.

आपल्याला कामामुळे ताण – तणाव आलेला आहे. किंवा नाही याची तपासणी करणारे अनेक ऑनलाईन टेस्ट आज उपलब्ध आहे, त्यांचा वापर करता येईल. व्हिडिओ कॉन्फरन्सद्वारे आपल्याला आलेल्या तणावाचे व्यवस्थापन करण्यासाठी मार्गदर्शन मिळता येईल.मोबाईल, टेप रेकॉर्डर, रेडिओ, टी.व्ही. यावर मनोरंजनाचे कार्यक्रम, संगीताचे कार्यक्रम पाहून आपण आपल्याला आलेला ताण दूर करता येईल.इयत्ता १० वीच्या बोर्डाची परीक्षा देण्या आगोदर प्रमाणापेक्षा जास्त ताण येऊ नये म्हणून टी.व्ही वर "परीक्षेला सामोरे जाताना" यासारखे कार्यक्रम पहावेत. अभ्यासाचा ताण – तणाव कमी करण्या संदर्भात विविध ल्कुप्त्या इंटरनेटवर उपलब्ध असतात. त्यांचा वापर करावा.

५. **भावनांचे समायोजन** –स्वताःच्या तसेच दुस-याच्या भावना जाणून घेण, त्या भावनांचा स्वतः च्या वर्तनावर होणारा परिणाम लक्षात घेऊन आवश्यकतेनुसार भावनांचे नियंत्रण किंवा व्यवस्थापन करणे म्हणजे समायोजन कौशल्य होय.मला राग केव्हा येतो, क्रोधाची कारणे कशा प्रकारे शोधली पाहिजेत याची माहिती इंटरनेटवर उपलब्ध आहे. या माहितीचा वापर करुन आपल्या भावनांचे समायोजन केले पाहिजे. माध्यमिक स्तरावरील विदयार्थ्यांना घरातील वडीलधारी मंडळी किंवा शिक्षकांच्या मार्गदर्शनाखाली व नियंत्रणा खाली इंटरनेटचा वापर करुन लैंगिक शिक्षण दयावे.

उत्कट भावना जसे क्रोध, दुःख, निराशा, हाताश, अपयश याव्यक्त करण्यासाठी अतिरेकीपणा न करता व्हाटस् अप, व्टिटर, वुई चाट यांचा उपयोग केला गेला पाहिजे.

६. **निर्णय क्षमता :–** समस्येतून बाहेर पडण्यासाठी अनेक पर्यायांचा विचार करुन समस्येचे पूर्णपणे निराकरण करण्यासाठी त्यातून योग्य पर्यायाची निवड करता येणे म्हणजेच निर्णय क्षमता कौशल्य होय.

इंटरनेटवर विविध प्रकारच्या गेम्स असतात. त्यामध्ये विविध पर्याय दिलेले असतात. त्यातून योग्य पर्याय निवडून पुढील पायरीवर जायचे असते. यामधून खेळातून निर्णय क्षमता विकसित करता येते. दहावीनंतर कोणत्या अभ्यासक्रमास प्रवेश घ्यावा व का ? त्याचे फायदे, तुलना या सर्व गोष्टी इंटरनेटवर उपलब्ध आहेत. त्यातून त्यांना योग्य निर्णय घेण्यास मदत होईल. स्वत:ला करावयाच्या कामासंबंधी प्राधान्यक्रमानुसार सुची तयार करायला सांगून संगणकाद्वारे त्याची नोंद घेता येईल. सप्ताहिक वेळापत्रक संगणकावर, मोबाईलवर तयार करता येईल.

७. **प्रभावी संप्रेषण** :—स्वत:च्या विचारांची शाब्दीक अथवा अशाब्दीक पध्दतीने प्रभावीपणे अभिव्यक्त करता येणे म्हणजेच परिणामकारक संप्रेषण होय.ICT चा अतिशय प्रभावी उपयोग प्रभावी संप्रेषण कौशल्य विकसित करण्यासाठी होऊ शकतो. विदयार्थ्यांना एखादा मुक्त प्रश्न विदयार्थ्यांसाठी तयार केलेल्या व्हॉटस् अप ग्रुपवर देऊन त्यांचे त्याबाबतचे मत अजमाविता येईल. विदयार्थ्यांना एखादया प्रश्नावर व्हि.डी.ओ. कॉन्फरन्सद्वारे तज्ज्ञ व्यक्तींबरोबर चर्चा करता येईल. विदयार्थी एखादया प्रश्नाचे अथवा चर्चेतील मुद्दयांसाठी चित्र व्हॉटस् अप ग्रुप, व्टिटर किंवा वुई चाट वर टाकू शकतो. शिक्षक विविध कार्यक्रमांचे वेळापत्रक, कार्यक्रमातील प्रसंगाचे रेकॉडींग, फेसबुक, ई—मेल, व्हॉटस् अप वर टाकू शकतात. व त्या संबंधीच्या प्रतिक्रिया, प्रतिसाद अजमावू शकतात.

८. **सर्जनशील विचार** :—रुढ पध्दतीपेक्षा वेगळया रितीने एखादया समस्येचा अथवा स्थितीचा विचार करण्यास प्रवृत्त होणे म्हणजे सर्जनशील विचार कौशल्य होय. आयसीटी च्या माध्यमातून ई—सोशल मिडियाचा वापर केल्यास फार मोठया प्रमाणावर सर्जनशील विचार वाढण्यास मदत होईल. संगणकाच्या सहायाने अपूर्ण आकृती, कृती, चित्र पूर्ण करणे यासारख्या गोष्टींचा उपयोग करता येईल. विदयार्थ्यांनी लिहिलेले लेख, कविता, गाणे यांचे ऑनलाईन प्रकाशन करता येईल. विदयार्थ्यांनी सादर केलेली नाटयछटा, कलाकृती यांचे व्हिडीओ क्लीप तयार करुन इंटरनेटवर डाऊन लोड करता येईल.विविध कलासंबंधीचे मार्गदर्शन ऑनलाईन मिळविता येईल. विशिष्ट कलांसाठी त्या क्षेत्रातील नामवंत कलाकाराबरोबर व्हिडीओ कॉलींग, व्हिडीओ कॉन्फरन्सद्वारे, प्रत्यक्ष मार्गदर्शन मिळविता येईल.विविध मोबाईल ॲपचा उपयोग करुन चित्रकला, संगीत, नाटयलेखन, कथालेखन आदि संदर्भातील मार्गदर्शन मिळविता येईल. स्वतःचा अभिनय उत्तम प्रकारे होण्यासाठी ऑडीओ व्हिडीओ रेकॉर्डींग करता येते.

९. **चिकित्सक विचार** :–माहितीचे किंवा अनुभवाचे स्वतःच्या क्षमतेनुसार वस्तुनिष्ठ स्वरुपात सुक्ष्मपणे विश्लेषण आणि परिक्षण करण्याची क्षमता म्हणजे चिकित्सक विचार कौशल्य होय.आयसीटीच्या साहायाने चिकित्सक विचार प्रक्रिया विकसित करण्यासाठी व्हिडीओ रेकॉर्डींगच्या साहायाने निरीक्षण करणे, संगणकाच्या सहायाने विश्लेषण करणे, संगणकाच्या सहायाने मुल्यमापन करणे व अंतिम निर्णय घेणे यागोष्टी करता येऊ शकतात. आपल्याला एखादया गोष्टीत अपयश का आले ? हे शोधून काढण्यासाठी इंटरनेटवर उपलब्ध माहितीचा आधार घेऊ शकतो, ऑनलाईन मार्गदर्शन मिळवू शकतो, इंटरनेटवर विविध प्रसंगाची चिकित्सक कारणे दिलेली असतात. त्यातून चिकित्सक विचार प्रक्रिया विकसित होऊ शकते.

१०. **आंतरव्यक्ती संबंध** :–आंतरव्यक्ती संबंध कौशल्य विकसित करण्यासाठी आयसीटी चा उपयोग फार मोठया प्रमाणावर होऊ शकतो. व्हॉटस् अप, व्टिटर, वुई चाट, फेसबुक यासारख्या ई-सोशल मिडियाचा वापर करण्याचे योग्य नियंत्रणा खाली मार्गदर्शन केल्यास विदयार्थ्यांमध्ये आंतरव्यक्ती संबंध जीवनकौशल्य चांगल्या प्रकारे विकसित होऊ शकते.

विदयार्थ्यांचे व शिक्षकांचे एखादया समस्ये संदर्भातील ब्लॉगवरील चर्चा सुध्दा आंतरव्यक्ती संबंध योग्य प्रकारे सुधारु शकते. एखादया कार्यक्रमांच्या आयोजना संदर्भात ई-सोशल मिडिया वरुन प्रतिक्रिया मागितल्यास त्यातून आंतरव्यक्ती संबंध उत्तम प्रकारे विकसित होतील.

अशाप्रकारे आयसीटीचा उपयोग करुन विदयार्थ्यांमध्ये जीवनकौशल्ये विकसित करता येऊ शकतात.

संदर्भ :-

१. *डॉ.करंदीकर सुरेश (२००६) : शैक्षणिक मानसशास्त्र, फडके प्रकाशन, कोल्हापूर*

२. *कुलकर्णी डी.आर.(२००९) : प्रगत शैक्षणिक मानसशास्त्र, विदया प्रकाशन, नागपूर*

३. *डॉ.चव्हाण किशोर (२०१०) : माहिती संप्रेषण तंत्रज्ञान, इनसाई प्रकाशन, नाशिक*

४. *शिवखेरा (२०११) : यश तुमच्या हातात, मॅकमिलन इंडिया लिमिटेड*

५. *Burns R.B. (2012) % The self concept theory, measurment, Development and behaviour, Longmen group limited, London and New York.*

6. *www.use/ICT/Education/life skill*

OER चा पदव्युत्तर पातळीवरील मुलांकडून होणाऱ्या वापराचा अभ्यास

डॉ क वता साळुंके, सहयोगी प्राध्यापक य च म मुक्त वद्यापीठ ,ना शक

प्रास्ता वक: मत्रहो OER ही संकल्पना अलीकडची १९९८ च्या आसपास डेव्हिड वल्ये यांनी प्रथमत:मांडली. OER ही चळवळ मुक्त आ ण दूर शक्षणाच्या वकासातून पुढे आली . दूर शक्षणात मुक्त ज्ञान , मुक्त स्रोत , फ्री शेअरिंग आ ण सहाध्यायी सहकार्य या संकल्पना २० व्या शतकात पुढे आल्या- आपल्या महाराष्ट्रात म्हटले तर साधारणत: २००१, २००२ मध्ये MIT मार्फत मुक्त अभ्यासक्रम प्रोजेक्ट यातून पुढे आणले . युनिस्कोनेदेखील साधारणत : त्याच सुमारास म्हणजेच २००२ मध्ये ही संकल्पना स्वीकारली . वकसनशील देशात उच्च शक्षणासंदर्भात मुक्त अभ्यासक्रमांचा प्रभाव पडताळण्यात आला.

OER अर्थ व स्वरूप हा एक अध्ययनाचा मुक्त स्रोत आहे . जो Collaboration आ ण co-operation या तत्वावर उभारलेला दिसतो. व कपी डया या OER च्या बाबतीत सांगायचे म्हटले तर असंख्य व्यक्तींच्या आवाक्यात नसणारी गोष्ट यातून निर्माण झाली . अब्जावधी म लअनचे ज्ञान यातून एकत्रितपणे साठवले गेले आ ण एक अतिप्रचंड असा ज्ञानाचा साठा निर्माण झाला. माणसाला शक्य नसणारी गोष्ट नकळत शक्य झाली . याला जगातील एक आश्चर्यच म्हटले पाहिजे . याचे आणखी एक बे सक आहे ते म्हणजे प्रत्येक व्यक्ती ज्ञानी असते. अनेक कारणांनी आपले ज्ञान ती इतरांपर्यंत पोहचू शकत नाही . सेवानिवृत्तीनंतर मात्र मळणाऱ्या वेळेच सदुपयोगी व तंत्रज्ञानातील क्रांती या दोहोंच्या मठास एकत्मिकरणातून कमान खर्चात आपले ज्ञान ते इतरांपर्यंत पोहचवू शकले . आपल्या मनात प्रश्न येईल त्याच्या ऑथेंटीसीटीचा पण मत्रहो 'इ – साहित्याबाबत' हा प्रश्न सार्वत्रिक आहे . वापरणाऱ्यालाच क्रॉस व्हेरी फकेशनद्वारा ही ऑथेंटीसीटी एस्टॅब्लीश करावी लागते . व कपी डयात प्रत्येक जन माहिती टाकतो. असलेल्या माहितीचे संपादनही करतो . ते पान लगेच सर्वांपर्यंत पोहचत नाही

तर त्यांचे एडीटोरीअल बोर्ड ती माहिती व वध साधनांनी व्हेरीफाय करून मगच ती एडीट व्हर्शन सर्वांना Open होते.

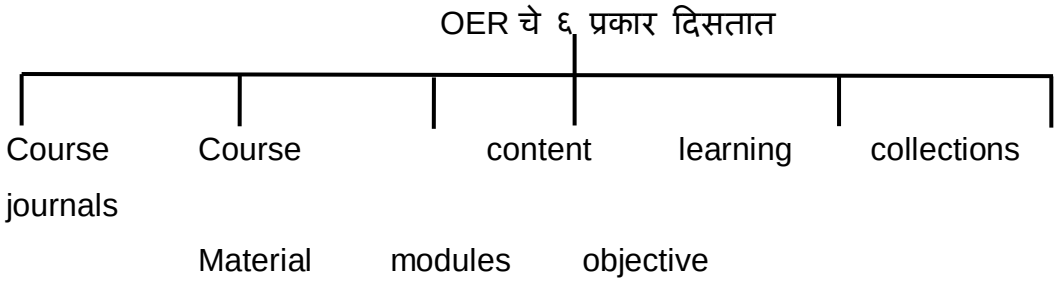
OER व्याख्या **–**

William फाउंडेशनच्या मते OER म्हणजे ज्ञानाला सहाय्य करणारी सहाय्यभूत प्रणाली होय . ज्यात संपूर्ण शक्षणक्रम , अध्ययन साहित्य , पुस्तके, स्वयंपुर्णांग, व्हिडीओ, टेस्ट्स सॉफ्टवेअर आ ण इतर कोणतीही साधने, तंत्र यांचा समावेश असतो.

युनेस्कोच्या मते – कोणत्याही माध्यमातील डजिटल कंवा इतर अध्ययन कंवा संशोधन साहित्य जे सर्वांना अध्ययनासाठी कमान शर्ती कंवा एकही शर्त न ठेवता , कमान शुल्क कंवा वनाशुल्क उपलब्ध असते.

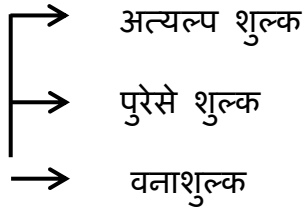
व कपी डया म्हणतो , OER म्हणजे अध्ययनात संशोधनात कंवा इतरत्र पुन्हा वापर करण्यासारखे डजिटल साहित्य होय . जे पूर्णत: फ्री आ ण वनामुल्य सर्वांना उपलब्ध होते . ज्यात कॉपीराईटचा प्रश्नही फारसा भेडसावत नसतो . थोडक्यात OER हे अध्ययनात कंवा ज्ञानसंपादनासाठी उपयुक्त पडणारे एक मुक्त साधन आहे . जे अल्प कमत कंवा शून्य कमतीवर सर्वांना मळू शकते. त्याचे अनेक प्रकार आहेत.

१) OER चे प्रकार **–**

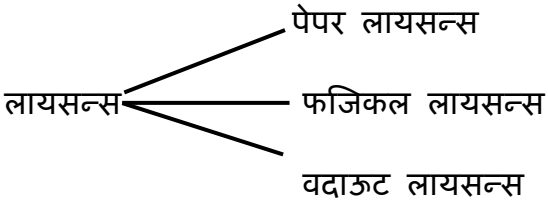


OER मध्ये आशय वतरणासाठी multimedia चा वापर करण्यात येतो.

२) OER मध्ये लायसनिंग हा एक महत्वाचा भाग असतो**.** लायसन्स म्हणजे **OER** वापरण्याचा परवाना हा परवाना तीन प्रकारचा असतो**.**



बऱ्याचदा OER तयार करतांना Introductory & Advance असे दोन प्रकार केले जातात . Introductory OER free ठेवून Advance साठी मात्र काही प्रमाणात शुल्क आकारण्यात येते . Introductory OER मधून त्या OER ची उपयुक्तता, महत्व वापरणाऱ्याच्या लक्षात येते व ती व्यक्ती मग Advance OER च्या खर्चाला तयार होते.



असा त्याचा वापर केला जातो.

३) संशोधन शीर्ष **: OER** चा पदव्युत्तर पातळीवरील मुलांकडून होणाऱ्या वापराचा अभ्यास**.**

उद्दिष्टे **–**

१) पदव्युत्तर पातळीवरील मुलांना OER ची कतपत माहिती आहे याचा शोध घेणे.

२) पदव्युत्तर पातळीवर OER चा वापर वद्यार्थी कती प्रमाणात करतात याचा शोध घेणे.

३) पदव्युत्तर पातळीवरील मुलांनी OER वापरावा म्हणून उपाययोजना सुच वणे.

संशोधन कार्यपद्धती **–**सदर संशोधनासाठी सर्व्हे पद्धतीचा वापर करण्यात आला. य. च. म. मुक्त वद्यापीठातील एम . एड. शक्षणक्रमाच्या २५ वद्यार्थ्यांवर (सेवांतर्गत शक्षक / शक्षक प्र शक्षक) हा अभ्यास करण्यात आला . यासाठी य . च. म. मुक्त वद्यापीठातील अभ्यासकेंद्रावरील प्रवे शत १०० % वद्यार्थी नमुना म्हणून वचारात घेण्यात आले . यासाठी प्रश्नावली व मुलाखत या दोन साधनांचा वापर करण्यात आला या संशोधनातून प्राप्त निष्कर्ष पुढील प्रमाणे होते.

निष्कर्ष –

उद्दिष्टे क्र. १ – पदव्युत्तर पातळीवरील मुलांना **OER** ची कतपत माहिती आहे **?** ६५% वद्यार्थ्यांना OER ची माहिती संकल्पना स्तरावर होती. ५% वद्यार्थी OER चा प्रत्यक्ष वापर करत होते. २५% वद्यार्थ्यांनी केवळ OER शब्द ऐकलेला होता तर ५ % वद्यार्थी या संकल्पनेपासून पूर्णत: अन भज्ञ होते.

उद्दिष्टे क्र. २ – पदव्युत्तर पातळीवरील वद्यार्थ्यांचा **OER** चा वापर नमुन्यातील ५ % वद्यार्थी OER चा वापर करत होते. परंतु त्यांचा तो वापर केवळ सैद्धांतिक माहिती मळवणे ऐवढ्यापुरताच मर्यादित होता.

उद्दिष्टे क्र. ३ **– OER** वापरासाठी उपाययोजना सुच वणे

१) OER संदर्भात पदव्युत्तर पातळीवरील वद्यार्थ्यांचे सुरुवातीलाच कमान चार दिवसांचे प्र शक्षण कार्यक्रम घेण्यात यावे.

२) OER वरून काही मुद्यांचे अध्ययन वद्यार्थ्यांना अनिवार्य करावे. व त्यावर परीक्षा घेण्यात यावी.

३) प्रत्यक्ष अभ्यासकेंद्रावर वद्यार्थ्यांना OER चे प्रत्यक्ष अनुभव द्यावेत.

४) वद्यार्थ्यांच्या मनात असणाऱ्या प्रश्नांचे पुढीलप्रमाणे निराकरण करावे म्हणजे ते OER चा वापर करतील. ते प्रश्न व उत्तरे पुढीलप्रमाणे –

१) E – Learning & OER एकच का**?**

→ ई – कोर्सेस OER स्वरुपात आहेत पान OER म्हणजे E – learning नाह. OER हे पेपर बेस्डटेक्स, ऑडीओ - व्हिडीओ कंवा ई – लर्निंग अशा प्रकारचे असू शकतात.

२) OER आ ण **open learning / open education** समान आहे का**?**

→open education हा अध्ययनातील अडचणी दूर करणारा दृष्टीकोन , प्रणाली आहे.(वद्यार्थी केंद्री, लव चक, स्वयंअध्ययनाला प्रेरणा देणारी , च कत्सक वचारला चालनादेणारी असते .) तर OER हे शक्षणाचे साधन आहे.

३) **OER Related to the concept of resource – based material direct** संबंध नाही पण कन्व्हर्ट करता येतात**.**

→अनेक वद्यार्थ्यांपर्यंत गुणवत्तापूर्ण शक्षण पोहचवण्यासाठी Resource – Besed Material तयार केले जाते. त्याला cost a copy right असतात. ते सर्वांना open नसते. सर्वांना खुले केले की OER होतात. YCMOU संगणक कोर्सेस साहित्य त्या प्रकारचे आहे . वद्यापीठात हे OER सर्वांना खुले असतात. resourses based material हे ऑथेटीक असते.

४) **is OER really free?**

→ YES → प्रोग्राम चालवण्याचे स्वातंत्र्य.

→ प्रोग्राम कसा चालतो हे पाहण्याचे व गरजेनुसार स्वीकारण्याचे स्वातंत्र्य.

→ शेजारच्यांना आवश्यकतेनुसार त्याचा बहुप्रती करून वतरीत करण्याचे स्वातंत्र्य.

→ सामाजिक फायद्याचा वचार.

अशा काही प्रश्नांचे निराकरण झाल्यानंतर प्रश्न येतो.

४) हे **OER** शोधायचे कसे **?** तर मत्रहो गुगल वर जाऊन आपल्याला ज्या वषयात ते शोधायचे तो शब्द, वषय, संकल्पना टाकून सर्च म्हणा. प्राप्त झालेल्या वेबसाईट बघा त्यात काही वेबसाईट क्लिक केल्यावर आशय येत नाही . तेथे OER ला शुल्क असते . काही पुस्तके, आशय येतो तो वनामुल्य असते . काही भाग फ्री असतो व उर्वरित आशयासाठी शुल्क असतो.

५) आला मला **OER** वेबवर द्यायचा झाला तर कसे**.**

→ देऊ शकता OER तयार करून त्याचे शुल्क व वापराची पद्धत ठरवावी नंतर ते स्वत:ची वेबसाईट तयार करून कंवा व कपी डयावर अपलोड करावे मत्रहो OER हे अध्ययनात सहकार्याने व सहकाराने शकवण्यासाठी अत्यंत उपयुक्त साधन आहे.

सारांश **–** OER हे आजच्या काळातील अत्यंत महत्त्वपूर्ण साधन आहे . आपण सर्वांनी त्याचा उपयोग शक्षणात करायला हवा. मुलांना त्याद्वारे शक्षण घेण्यास प्रवृत्त करावे . एवढेच नव्हे तर आपणही काही OER तयार करून ते वेबवर प्र सद्ध करावे ही आजची गरज आहे.

संदर्भ **–**

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प्रा.डॉ कविता साळुंके सहयोगी प्राध्यापक & कु.ज्योती लष्करी पीएच.डी संशोधक विद्यार्थी
शिक्षणशास्त्र विद्याशाखा य.च.म.मु विद्यापीठ नाशिक

प्रस्तावना मानवाच्या मूलभूत गरजा अन्न,वस्त्र,निवारा व पाणी आहे.यावैतरिक्त आजच्या काळात मानवाची तंत्रविज्ञान ही मूलभूत गरज झाली आहे.तंत्रविज्ञाना शिवाय मानव हा जीवन जगूच शकत नाही.पावलो पावली आता मानव तंत्रज्ञानाचा आधारे कार्य करू लागला आहे.अगदी दैंनंदिन जीवनातील कुठलेही कार्य हे तंत्रज्ञानाचा आधारे करु शकतो मानवाशी संबंधित असे कोणते ही क्षेत्र नाही ज्यात मानव तंत्रविज्ञानाचा अवलंब करीत नाही . शिक्षण क्षेत्र त्या पासून वंचित नाही.सद्यपरिस्थिती डिजीटल इंडिया ही संकल्पना सर्वदुर प्रसारित होवून शाळांना आता डिजीटल स्वरूप देण्याचा मोठया प्रमाणात प्रयत्न सुरु आहे.शिक्षणाचा प्रक्रियेत आधुनिकता प्रदान करण्याचे काम तंत्रविज्ञानाचे आहे.अध्ययन -अध्यापन,शिक्षक -विद्यार्थी आंतरक्रिया यांच्यातील प्रभावी संप्रेषण करण्याचे कार्य नवीन तंत्रज्ञान विषयक साधने व त्यांच्या दृष्टीकोना तून होतांना दिसत आहे.हा नवीन तंत्रज्ञान विषयक दृष्टीकोन माध्यमिक स्तरावरील शिक्षणात रुज पाहत आहे.ज्यातून माध्यमिक स्तरावरील किशोरवयीन मूलांना तंत्रज्ञानाचा आधारे अध्यापन केल्याने ग्रामीण भागातील विद्यार्थी देखील जगाचा पाठीवर कुठेही प्रगती करु शकतो.यात शंका नाही. आपण म्हणतो इंटरनेट मूळे जग एक लहान खेडयांच्या सारखे झाले आहे.पण मित्रहो आपल्या भारतात शहरांपेक्षा खेडयांची संख्या आज ही जास्त आहे.तसेच गांधीचा मते देशाचा विकास करावयाचा असेल तर खेडयाचा विकास करा.देशा विकास आपोआप होईल.खरी परिस्थितीचे वणेन केले तर खेडयातील लोकांना संगणक काय आहे ते पाहिजे तवढे माहित नाही आज लोकांना कडे मोबाईल आहे.पण त्याचा वापर करण्याचे कौशल्य नाही तसेच महाराष्ट्रात आजही ग्रामीण भागातील शाळेत संगणक पोहचला नाही.मग प्रश्न पडतो त्याशाळेतील शिक्षकांना संगणक वापराचे कौशल्य तरी अवगत आहे का ? ज्या प्रमाणे अध्यापन करण्याचे कौशल्य शिक्षकांचा अंगी असते त्याचप्रमाणे तंत्रज्ञान वापरण्याचे कौशल्य शिक्षकांचा अंगी भिनले पाहिजे.ICT च्या अध्यापनात वापरकेल्यामूळे होणारे फायदे लक्षात घेता ग्रामिण भागातील शिक्षकांना ICT माहित आहे का? संगणकाचा वापर अध्यापनात करता का? ज्याप्रमाणे अध्यापनाची कौशल्य आहे त्याप्रमाणे ICT संदर्भात देखील कौशल्य असू शकतात म्हणून ICT वापरा संदर्भात माध्यमिक स्तरावरील शिक्षकांमध्ये किती प्रमाणात ही कौशल्य समाविष्ट आहेत व शाळेत ICTचा वापर कूठे-कूठे केला जातो याचा शोध घेण्यासाठी सदर संशोधन हाती घेतले आहे.

समस्या विधान ग्रामीण भागातील माध्यमिक शाळेतील शिक्षकांमध्ये ICT संदर्भात असलेल्या कौशल्यांचा शोध व उपाययोजना सुचविणे

ICT म्हणजे काय? Information Communication Technologies(ICT)

"ICT is a mixture of computer technology and communication technology."

"संगणकाव्दारे केलेले माहितीचे आदानप्रदान म्हणजे माहिती आणि संप्रेषण तंत्रज्ञान होय."

विविध तंत्रे,पध्दती किंवा प्रणालीचा वापर करून माहितीची निर्मिती करणे,गोळा करणे,तसेच माहितीवर प्रक्रिया करून साठविणे आणि योग्य वेळी सादरीकरण करून प्रेषक व ग्राहक यांमध्ये संप्रेषण घडवून आणणारे शास्त्र म्हणजे माहिती आणि संप्रेषण तंत्रज्ञान होय. वरील व्याख्यावरून आपणास असे म्हणता येईल की,आयसीटी मध्ये नवीन डिजिटल तंत्रज्ञानाचा विचार केला गेला आहे.संगणक आणि संगणकाच्या जालाव्दारे माहितीचे आदानप्रदान होते,म्हणून इंटरनेट हे सुध्दा आयसीटी आहे इंटरनेटवर वर्ल्ड वाईड वेब(WWW) ही सेवा उपलब्ध आहे.माहिती संप्रेषण तंत्रज्ञानात प्रमुख्यात सहा घटक सांगता येतात.१ व्यक्ती २ प्रक्रिया ३ माहिती ४ हार्डवेअर ५ सॉफ्टवेअर ६ संप्रेषण आयसीटी मूळे माहितीवर प्रक्रिया होऊन तिचे आदान प्रदान प्रेषक व ग्राहक यांच्यामध्ये होते.ही माहिती हव्या त्या वेळेस वापरता येते.त्यामूळे माहितीचे चक्र सतत चालू असते.

ICT वापरा संदर्भात असलेली कौशल्ये

१) **संगणक हाताळणीचे कौशल्य:** संगणकामध्ये विविध प्रकारचे प्रोग्राम असतात एम.एस.वर्ल्ड,एम.एस ऐक्सेल,पॉवर पॉईंट,पेंन्टिग,आऊट लुक यांचा वापरा बद्दल शिक्षकाला ज्ञान हवे. तसेच हार्डवेअर सॉफ्टवेअर बद्दल माहिती हवी

२) **माहिती वर प्रक्रिया करण्याचे कौशल्य:** जी माहिती एकत्रित केली आहे तिचावर योग्य त्या पध्दतीने प्रक्रिया करण्याचे कौशल्य असणे आवश्यक आहे माहिती ही नवीन डिजीटल स्वरूपात सादर करता आली पाहिजे.

३) **इंटरनेट वापरण्याचे कौशल्य :** एज्युसेट नावाच्या उपग्रहामूळे संगणक अथवा लॅबटॉप,मोबाईल यात इंटरनेटचा माध्यमातनू शिक्षकाला अनेक शैक्षणिक माहिती विद्यार्थ्याला वर्गात बसल्या बसल्या देते व दाखविता येऊ शकते टेलिकॉन्फरसिंग,व्हिडीओकॉन्फरसिंन्ग अशा विविध अध्यापनाचे मार्ग शिक्षणक्षेत्रात वापरता येऊ शकतात.

४) **पॉवर पॉईट प्रेझेंटेशनच्या साहयाने अध्यापन करण्याचे कौशल्ये:** अध्यापनात केवळ आता फळा चार्ट किंवा तक्तेच नाही तर विविध आधूनिक सॉफ्टवेअर उपलब्ध आहेत PPT आधारे शिक्षक विद्यार्थ्याला आशया संबंधि व्हिडीओ,चित्रे,दाखवून अध्यापनात जिवंतपणा आणू शकतो मात्र याचे ज्ञान त्याला असायला हवे.

५) **Interactive Smart Bord वापराचे कौशल्य:** संगणकाच्या साह्याने चालणारा हा बोर्ड शिक्षकास व विद्यार्थ्यास वापरण्यास सोपा आहे.यात हवे ते व्हिडिओ चालविता येतात.आकृति सहज तयार करता येते मग ती पृथ्वीची असो त्रिकोणाची एखादया वेबसाईटला भेट दयायची असेल तर ते सहजशक्य होते.मात्र हे तंत्र वापण्याचे कौशल्य हवे.

६)सोशल नेटवर्किंग वापर करण्याचे कौशल्य: आज आपण फेसबुक,ब्लॉग,Tutor,We Chat,hike,e-dictionary,viber या संकल्पना सहज आपल्या कानावर येतात.आज सामाजिक बुध्दीमत्ता विकसीत करण्यासाठी उपयोगी मानल्या जाणाऱ्या शैक्षणिक साहित्य म्हणून माध्यमिक स्तरावर सहज वावरल्या जात आहे.माध्यमिक स्तरावरील शिक्षक यांनी केलेले कृतिसंशोधन,नीवन प्रकल्प,नोटस एखादी अपडेट बातमी सेकंदात इतरांपर्यत पोहचविली जात आहे.एखादया घटनेवर सामाजिक दृष्टीकोनातून चर्चा या ग्रुप वर सुरू होत आहेया सारख्या संवाद साधणाऱ्या सोशल साईटच्या माध्यमातून विचारांची देवाण घेवाण झाली पाहिजे. आपल्या शाळेची माहिती अपडोल करता आली पाहिजे.

६) **सादरीकरणात आशय निवडीचे कौशल्य :** एखादया विषयातील विशिष्ट आशय ज्यासाठी संगणकाची आवश्यकता आहे त्या आशयाची निवड सादरीकरणासाठी करता आली पाहिजे उदा.भूंकप,जलप्रदुषण,वादळे,यांची व्हिडोओ दाखविणे.आशयानुसार चित्रांचा वापर,त्याच PPTतयार करता आल्या पाहिजे.

इतर माहिती :प्रश्नपत्रिका तयार करणे संगणकावर टायपिंग करणे, विद्यार्थी प्रवेशा पासून ते विद्यार्थ्याचे online मूल्यमापन करणे पर्यंत सर्व प्रक्रियेत शिक्षकला ICT वापर करता आला पाहिजे.

संशोधनाची उद्दिष्ट

१ शाळेमध्ये ICT चा वापर कूठे - कूठे केला जातो याचा शोध घेणे.

२ शिक्षकामध्ये असणाऱ्या ICT च्या कौशल्यांचा शोध घेणे

३ ICT च्या वापरा संदर्भात शिक्षकांचा अडचणीचा शोध घेणे

४ ICT चा वापरासंदर्भात उपाययोजना सूचविणे.

संशोधनाची कार्यपध्दती: सदर संशोधनासाठी ICT च्या संदर्भात असलेल्या कौशल्यांचा शोध घेण्यासाठी सर्वेक्षण पध्दतीचा वापर केला आहे.

न्यादर्श: सदर संशोधनासाठी माध्यमिक स्तरावरील ५ शाळेतील ३० शिक्षकांची प्रत्येक शाळेतील ६ शिक्षक याप्रमाणे संभाव्याता नमूना निवड प्रकारातील लॉटरी पध्दतीनेनिवड करण्यात आली आहे.

साधने: सदर संशोधनासाठी ICT चा वापर शाळेतील कोण -कोणत्या कार्यात केला जातो यासाठी मूख्यध्यापकांची मूलाखत,शिक्षकांमध्ये ICT च्या कौशल्यांचा शोध घेण्यासाठी प्रश्नावली या साधनाचा वापर केला आहे.

निष्कर्ष

१) उद्दिष्ट क्रं.१ नुसार आलेले निष्कर्ष

१)शाळेतील विद्यार्थी प्रवेश प्रक्रियेसाठी ICT चा वापर केला जातो.

२)शाळेतील विद्यार्थी शिष्यवृत्ती फोम,नवोदय विद्यालय फोम पायाभूत चाचणी घेण्यासाठी व वार्षिक परिक्षा फोर्म भरण्यासाठी ICT वापर केला जातो

३)विद्यार्थी माहिती सरलप्रणालीत भरण्यासाठी ICT चा वापर केला जातो

४)दैनंदिन हजेरी भरण्यासाठी ICTचा वापर केला जातो.

मात्र हे वरील सर्व कार्य हे शाळेत जे विद्यार्थ्यांना संगणक शिकविणारे शिक्षक आहे ते करतात.

२) उद्दिष्ट क्रं.२ नुसार आलेले निष्कर्ष

१)७०% शिक्षकांना ICT संदर्भात पाहिजे तेवढे ज्ञान नाही.

२)७२% शिक्षकांना एक्ससेल मध्ये काम करता येत नाही.

३)७९% शिक्षकांना पॉवर पॉईट व्दारे पाठाचे अध्यापन करता येत नाही अथवा PPT स्वत:तयार करता येत नाही.

४)५०% शिक्षकांना सोशल नेटवर्किंगचा वापर करता येत नाही.फक्त

फेसबुक,व्हॉटसॲप याची माहिती आहे हे दिसून आले.

५)८०% शिक्षकांना संगणकावर मराठी टायपिंग करता येत नाही.

६)७५% शिक्षकांना Interactive Smart Board माहित नाही.

७)७८% शिक्षकांना इंटरनेटाचा वापर अध्यापनासाठी करता येत नाही.

८)७३%शिक्षकांना PPT सादरीकरणासाठी आशयाची निवड करता येत नाही

९)७८% शिक्षकांना विद्यार्थ्यांची सरल प्रणालाची माहिती स्वत:भरता येत नाही.

१०)७०% शिक्षकांना संगकाण बददल पुरेसे ज्ञान नाही.

३) उद्दिष्ट क्रं.३ नुसार आलेले निष्कर्ष

१)८०% शिक्षकांचा मते शाळेत संगणक सुविधा नाही. संगणक चांगल्या कंडिशनमध्ये नाहीत

२)२०%शिक्षकांचा मते शाळेत संगणक आहे पण ते वापरासाठी पाहिजे तेवढा वेळ मिळत नाही.तासिका कमी पडता,पुरेसे वर्ग मोठे नाही.

३)७०% शिक्षकांचा मते ICT चा वापरा बददल प्रशिक्षण मिळत नाही.जास्त कालावधीचे प्रशिक्षण मिळणे आवश्यक आहे.

४) ८०% शिक्षकांचा मते शाळेत ग्रामिण भागात विजाचा पुरवठा खंडित होतो.म्हणून संगणक,इंटरनेट पाहिजे त्यावेळी उपयोग करता येत नाही.

५)७५% शिक्षकांचा मते अशैक्षणिक कामे असल्याने स्वत:आम्हाला संगणकावर सराव करता येत नाही

६)७६% शिक्षकांचा मते आम्ही MSCIT चा जरी कोर्स पूर्ण केला असला तरी MKCL जाऊन सराव करायला वेळ मिळाला नाही.

७)७५% शिक्षकांचा मते ग्रामीण भागात इंटरनेट कनेक्शन पाहिजे तेवढे प्रभावी नाही कारण रेंज राहत नाही.

८)७२%शिक्षकांचा मते शासनाचे ग्रामीण भागाकडे दुर्लेक्ष असल्याने अडचणी येतात.

उपाययोजना

१) मुख्यध्यापकांने शाळेत जो ICT शिक्षक असतो त्याशिक्षका कडून शाळेतील शिक्षकांसाठी संगणकाच्या प्रशिक्षणाची सोय करावी.

२) शाळेतील मुख्यध्यापकाने सर्व शिक्षकांना अध्यापनात संगणकाचा वापर करावा याची सक्ती करावी.

३) शाळेतील पर्यवेक्षकाने देखील शिक्षकांनी संगणक,इंटरनेट चा वापर अध्यापन करावा यासाठी त्यांना प्रेरणा दयावी.एखादया शिक्षक अध्यापनात ICT वापर करत असेल तर त्याची विशेष दखल घेऊन त्याला शालेय स्तरावर पुरस्काराने सन्मानित करावे.

४) शिक्षकास SCERT व डायट मार्फत होणाऱ्या ICT चा प्रशिक्षणास पाठवावेत.

५) ग्रामीण भागात वीजपुरवठा शालेय कामकाजाच्या वेळी खंडीत होऊ नये म्हणून MSCB ला परिपत्रक दयावे.

६) शाळेत प्रभावी इंन्व्हेटर ची सोय करावी.

७) गावातील केंद्रप्रमुखांनी शाळेला दोन दिवसाआड भेट दयावी.

संदर्भग्रंथ सूची

१) *नानकर,शिरोडे.,(२००९).'वर्तमान शिक्षणातील विचार प्रवाह' नित्य नूतन प्रकाशन पुणे*

२) *चव्हाण किशोर,महाले संजीवनी, पाटील सुरेश..(२००३),'माहिती संप्रेषण तंत्रज्ञान आणि शैक्षणिक मूल्यमापन',प्रज्ञा प्रकाशन नाशिक.*

३) *'शैक्षणिक तंत्रविज्ञान',यशवंतराव चव्हाण महाराष्ट्र मुक्त विद्यापीठ नाशिक.(२००६)*

४) *'शिक्षकाच्या बदलत्या भूमिका आणि कृतिशिलता भाग १ यशवंतराव चव्हाण महाराष्ट्र मुक्त विद्यापीठ नाशिक.(२००६)*

5) *'शिक्षण अमृत मासिक लेख' प्रा.गणेश अजबसिंग पाटील (२०१६)*

भूगोलाच्या अध्यापनात मल्टिमिडियाची भूमिका

प्रा. प्रताप आत्रे
सहाय्यक प्राध्यापक
शिक्षणशास्त्र महाविद्यालय, नाशिक

आजच्या शिक्षण पद्धतीत अभ्यासक्रम महत्वाचा दुवा आहे. आजची शिक्षण पद्धती सदोष असून त्यातून शिक्षणाचे ध्येय साध्य होऊ शकत नाही. विद्यार्थ्यांचा सर्वांगीण विकास होऊ शकत नाही. असे आपण नेहमीच म्हणतो. याबाबत आपण ज्यावेळी शिक्षकांना जबाबदार धरतो त्या वेळी शिक्षक आपला बचाव करण्यासाठी अभ्यासक्रमाची ढाल पुढे करीत असतात. शिक्षणाची अमूर्त ध्येये ही अभ्यासक्रमातूनच मुर्त रुप धारण करीत असतात म्हणून शिक्षणाच्या ध्येयाची पुर्तता शैक्षणिक उद्दिष्टांची साध्यता ही अभ्यासक्रमावर अवलंबून असते. राष्ट्रीय अभ्यासक्रम आराखड्यात माहिती संप्रेषण तंत्रज्ञानाला महत्त्वाचे स्थान मिळाले. कारण २१व्या शतकात शिक्षणक्षेत्राला माहिती संप्रेषण तंत्रज्ञान ही मिळालेली अमूल्य देणगी आहे.

भूगोल हे एक शास्त्र आहे. क्रमबद्ध व सुनियोजित रुपात कार्यकारणभाव प्रस्थापित करुन व्यवस्थित रुपात सादर केलेले ज्ञान हे विज्ञान असते. मानवाने निरंतर निरीक्षणातून व परिक्षणातून हे ज्ञान सिद्ध केलेले असते. हे ज्ञान कित्येकांनी अनुभवांच्या कसोट्यावर पुराव्यासहित तपासून पाहिलेले असते. भूगोलातील उपयुक्त नियम, सिद्धात, तत्वे, तंत्रे, पद्धती यांचे शिक्षणात उपयोजन करणे तसेच मुबलक उपलब्ध माहितीच्या अध्ययनासाठी सुयोग्य पार्श्वभूमीची निर्मिती, प्राविण्य संपादन आणि कार्यक्षमतेच्या निर्मिती बरोबरच स्वतःच्या मुलभूत प्रेरणेला प्रतिसाद देऊन परिणामकारक अध्ययनास विद्यार्थ्याला तयार करणे हे माहिती संप्रेषण तंत्रज्ञानाचे उद्दिष्ट आहे.

भूगोल अध्ययन अध्यापनात माहिती संप्रेषण तंत्रज्ञान विद्यार्थ्यांची अभिरुची मोठ्या प्रमाणात वाढवित आहे. संगणक तंत्रज्ञान व इंटरनेट तंत्रज्ञानामध्ये अध्ययन अध्यापनात परिणामकारक बदल घडवून आणण्याची क्षमता आहे. विद्यार्थ्यांना भूगोल अभ्यासक्रमातील संकल्पना अर्थपूर्णरित्या समजण्यासाठी शिक्षकांनी नवनवीन तंत्रज्ञानाचा वापर करावा ही समाजाची अपेक्षा आहे.

संगणकाचे भूगोल अध्यापनाच्या संदर्भातील कार्य

१) **संग्रह-** संगणकाद्वारे कार्ड, टेप, किंवा चुंबकीय टेपवर, भूगोल विषयाच्या मूलभूत संकल्पना व महत्त्वपूर्ण सूचना संग्रहित केल्या जातील.

२) **व्यक्तिगत मार्गदर्शन-** संगणकाद्वारे भौगोलिक संकल्पनेशी संबंधित साहित्य संग्रहीत केले जाते. व एकाच वेळी अनेकांना व्यक्तिगत व मार्गदर्शनाची सोय उपलब्ध करुन दिली जाते.

३) **योग्य पर्यायाची निवड-** संग्रहीत सूचनामधील योग्य माहितीची निवड केली जाते.

४) **संप्रेषण-** विद्युत टंकलेखन मशीनद्वारे सूचना संप्रेषित केल्या जातात.

मल्टिमिडीया ही माहिती तंत्रज्ञानातील महत्त्वाची शाखा म्हणून उदयास आलेली आहे. मल्टिमिडिया म्हणजे टेक्स्ट, ग्राफिक्स, फोटोग्राफ, ॲनीमेशन, व्हिडीओ यांचा वापर करुन विविध प्रकारच्या कलाकृती तयार करणे. मल्टिमिडीयात तांत्रिक सृजनशीलतेबरोबरच कलात्मक, कल्पनाशक्तीलाही भरपूर वाव आहे. मोठमोठे चित्रकोश, माहितीकोश, शब्दकोश, भौगोलिक नकाशे, भौगौलिक संकल्पना तंत्रज्ञानाच्या माध्यमातून एका छोट्या सी.डी.मध्ये रुपांतरीत केल्या जातात. मल्टिमिडीया शिक्षण क्षेत्राला एक वरदान ठरलेले आहे. भूगोल अध्यापन परिणामकारक होण्यासाठी पुढीलप्रमाणे मल्टिमिडीयाचा वापर करता येईल.

उदाहरणे देण्यासाठी : भूगोल विषयाचे अध्यापन करीत असताना एखादी संकल्पना स्पष्ट करण्यासाठी विविध प्रकारची उदाहरणे द्यावी लागतात. भूगोल विषयाच्या पाठ्यपुस्तकात त्यामानाने उदाहरणे ही कमीच असतात. म्हणून भूगोल शिक्षकांनी संकल्पना आधारीत उदाहरण दाखल्याच्या स्लाईड बनवून सी.डी.मध्ये साठवून ठेवून अध्यापन करीत सादर करून अध्यापन प्रभावी करता येईल.

दुर्बल घटनांचे सादरीकरण करण्यासाठी : भूगोल विषयाचे अध्यापन करीत असताना काही दुर्मिळ घटना (उदा. जीवंत ज्वालामुखी, ग्रहमाला किंवा उल्कापात) घडून गेलेल्या असतात. अशा गोष्टीचे प्रत्यक्ष अनुभव विद्यार्थ्यांना देणे शक्य नाही अशा वेळी इंटरनेटवरुन चित्र, आवाज व स्वत:ची कल्पकता यांची एकत्रित गुंफण करुन प्रभावी ॲनिमेशन स्लाईड अध्यापन करताना वापरल्यास भूगोल अध्यापन प्रभावी होईल व अध्ययनात रूची वाढेल.

तज्ज्ञ शिक्षकांच्या अध्यापनाचा लाभ : सर्वच शिक्षक एखाद्या घटकाचे प्रभावीपणे अध्यापन करू शकत नाही. कारण यासाठी विषयज्ञान, कला, अनुभव, क्षमता इत्यादी बाबी महत्वाच्या असतात. व्हिडीओ कॉन्फरन्सींग व्दारे इतर ठिकाणाच्या भूगोल शिक्षकांच्या मार्गदर्शनाचा फायदा करून घेता येऊ शकतो. तसेच अशा शिक्षकांच्या अध्यापनाची दृकश्राव्य मुद्रण करून

रिकाम्या वेळात अशा कार्यक्रमाचे प्रसारण करुन विद्यार्थ्यांची भूगोल विषयात रुची निर्माण करता येऊ शकते.

मोड्युलचा भूगोल अध्यापनात वापर : भूगोल विषयाला आवश्यक मुक्त कोर्स, ई-टिटोरियल, ई-कन्टेट, यु ट्युब, व्हिडीओ, पीपीटी स्लाईड याचा वापर करून प्रभावी मोड्युलव्दारे आशयाचे संप्रेषण करणे शक्य आहे. तसेच जगातील कोणत्याही भूगोल अभ्यासकाला या मोड्युलचा उपयोग करता येऊ शकतो. व शिक्षकाने दिलेले टिटोरियल तो अभ्यासक पूर्ण करतो. तसेच भौगोलिक समस्येशी प्रकल्प ही मोड्युलचा साहाय्याने देता येतात. तंत्रविज्ञानामध्ये मोड्यूल हे अतिशय आधुनिक तंत्रज्ञान आहे.

कार्टून टेक्नॉलॉजीचा अध्यापनात वापर : विद्यार्थ्यांना कार्टून खूप आवडतात. विद्यार्थ्यांच्या आव्डीचा विचार करून भूगोल अध्यापनात विविध प्रदेश शिकवतांना त्यातील मानवी जीवन, प्राणी जीवन, वनस्पती जीवन, लोकसंख्या यामध्ये विविध कार्टुनचा वापर केला तर ते अध्यापन प्रभावी होईल. तसेच वाहतूक, दळणवळण अशा गोष्टीचे अध्यापन करतांना ही कार्टूनचा वापर करता येऊ शकतो.

थ्री डी स्टुडीओ मॅक्सचा अध्यापनात वापर : भूगोालातील काही संकल्पना या कृतीशी, आवाजाशी निगडीत असतात. उदा. पर्जन्य, पर्जन्याचे प्रकार, सुर्यमाला, प्रदूषण, पृथ्वीच्या गती व परिणाम, महापूराचे परिणाम या संकल्पना स्पष्ट करताना चलचित्र व आवाज प्रत्यक्ष बघायला व ऐकायला मिळाले तर अध्ययन हे प्रभावी होते. थ्री डी स्टुडीओचा वापर करुन विद्यार्थ्यांना आभासी अनुभव देता येतात. त्यामुळे भौगोलिक संकल्पना विद्यार्थ्यांना सहज समजण्यास मदत होते.

मोबाईल टेक्नालॉजीचा अध्यापनात वापर : आज बाजारात विविध प्रकारचे ॲप असलेले मोबाईल उपलब्ध आहे. मोबाईलमध्ये रेकॉर्डींग, फोटोग्राफी, एस.एम.एस., व्हीडीओ सुविधा उपलब्ध आहे. भूगोल शिक्षकांनी परिसरातील विविध भौगोलिक घटना, प्रसंग, भुरूपे, आकार यांचे रेकॉर्डींग करुन अध्यापनाच्या वेळी त्याचा उपयोग करावा. विद्यार्थ्यांना परिसरातील घटना व प्रसंगाची भूगोल विषयाशी सांगड घातल्यामुळे अध्ययन करणे सुलभ जाते. विद्यार्थ्यांची निरीक्षण क्षमता वाढते.

इंटरनेटचा भूगोल अध्यापनात वापर : इंटरनेट म्हणजे जागतिक माहितीचे जाळे भूगोलातील कोणत्याही संकल्पना माहिती करुन घेण्यासाठी किंवा संदर्भ घेण्यासाठी इंटरनेटचा

उपयोग होतो. फक्त भूगोलाचा अभ्यास करण्यासाठी गुगल जॉग्राफी व गुगल या महत्वाच्या साईड आहे. यातून अनेक भौगोलिक संकल्पना शिक्षकांना समजू शकतात तसेच लोकसंख्येच प्रमाण, स्त्री-पुरुष प्रमाण, लोकसख्या घनता, दरडोई उत्पन्न, बाजाराची स्थिती अशा घटकांचा अद्ययावत माहिती मिळविण्यासाठी इंटरनेटचा उपयोग होतो. तसेच भूगोल विषयाची डिक्शनरी म्हणून इंटरनेटचा उपयोग करता येऊ शकतो.

संगणकाचा भूगोल अध्यापनात वापर : भूगोल विषयाशी संबंधित माहितीवर आधारित मल्टिमिडीयाचा वापर करुन शैक्षणिक गेम्स तयार केल्यास विद्यार्थ्यांचे अध्ययन प्रभावी होईल. उदा. कौन बनेगा करोडपती या खेळाची पार्श्वभूमी घेऊन भूगोल विषयावर आधारीत प्रश्नसंच तयार करून शैक्षणिक खेळ तयार केल्यास विद्यार्थ्यांचे मनोरंजन तर होईलच परंतू अध्ययन ही प्रभावी होईल. तसेच संगणकावर आधारीत स्वयं अध्ययन साहित्याची निर्मिती शिक्षकाने केली तर विद्यार्थी त्याच्या उपलब्ध वेळेनूसार, आवडीनूसार, गतीनूसार, अध्ययन करू शकतो. विद्यार्थ्यांच्या ज्ञानाचे दृढीकरण करण्यासाठी, संगणक महत्त्वाचा आहे. संगणकाच्या वापरामुळे विद्यार्थ्यांना भौगोलिक संदर्भ लवकर उपलब्ध होतील. त्यामुळे भूगोल शिक्षकाला आपले अध्यापन हे प्रभावी व गतीमान करता येऊ शकते.

ई-मेलचा भूगोल अध्यापनात वापर : इलेक्ट्रॉनिक माध्यमाद्वारे केलेली संदेशाची देवाण घेवाण म्हणजे ई-मेल होय. ई-मेलद्वारे परस्परांशी विचार, भावना व कल्पनाचे यशस्वी आदान-प्रदान करता येते. भूगोल अध्यापकाला अध्यापनासाठी आवश्यक असणारे चित्र, व्हिडीओ, क्लीप, आकृती, ध्वनी, ज्याकडे उपलब्ध आहे त्याकडून आपण स्वीकारू शकतो. तसेच आपल्या विद्यार्थ्यांना भौगोलिक माहिती पाठविण्यासाठी ई-मेलचा उपयोग केला जातो.

ब्लॉगच्या भुगोल अध्यापनात वापर : ब्लॉग हे माहिती प्रसारणाचे समूह माध्यम आहे. भूगोल शिक्षकाला आपल्या विषयाची माहिती ब्लॉग व टाकून विद्यार्थ्यांपर्यत सहज पोहचविता येऊ शकते. व त्यातून प्रभावी अध्ययन घडवून आणता येऊ शकते. तसेच ब्लॉगवर विविध ट्युटोरियल ही घेता येऊ शकतात.

आज २१व्या शतकात ई-कॉमर्स प्रमाणेच ई-एज्यूकेशन देखील तेवढेच लोकप्रिय झाले आहे. दुरस्थ शिक्षणांमध्ये तर मल्टिमिडीयाचा वापर केल्याने प्रभावी संप्रेषणाचा एक स्त्रोत उपलब्ध झालेला आहे. इंटरनेटच्या माध्यमातून ज्ञानाचे प्रचंड कोठारच आपल्यापुढे आलेले आहेत. जणू भूगोल

विषयातील अद्ययावत माहितीचा जणू खनिजाच आपल्याला मिळालेला आहे. म्हणून प्रत्येक भूगोल शिक्षकाने आपले अध्यापन प्रभावी करण्यासाठी मल्टिमिडीयाचा वापर केलाच पाहिजे.

संदर्भ

१) येवले सीमा (२००६) **शैक्षणिक तंत्रविज्ञान आणि माहिती तंत्रविज्ञान.**
पुणे : नित्यनूतन प्रकाशन, २००६

२) रोवतेकर शारदा (२००५) **शैक्षणिक तंत्रविज्ञान आणि व्यवस्थापन.**
नागपूर : विद्या प्रकाशन

३) शिखराम येवलेकर (२००१) **शैक्षणिक तंत्रविज्ञान व मूल्यमापनाची मूलतत्त्वे.**
नागपूर : विद्या प्रकाशन

४) किशोर चव्हाण (२००६) **माहिती संप्रेषण व तंत्रज्ञान.**
नाशिक : इनसाईट पब्लिकेशन

५) के.के.जाधव (२००६) **भूगोल शिक्षण.**
नाशिक : इनसाईट पब्लिकेशन

नवीन माहिती तंत्रज्ञान : डिजीटल शाळेबाबतचा शिक्षकांचा दृष्टीकोन

अनिता देशमुख (रिसर्च स्कॉलर)

प्रास्ताविक

या स्पर्धेच्या आधुनिक जगात स्वत:ची स्वबळावर ओळख निर्माण करावयाची असेल तर माहिती तंत्रज्ञानाशिवाय पर्याय नाही. माणसाच्या अंगी असणाऱ्या क्षमता आणि संगणकाच्या सर्व प्रकारच्या क्षमता विचारात घेऊन कच्च्या सामुग्रीवर संगणकाव्दारे प्रक्रिया करुन अर्थपूर्ण माहिती तयार करता येते. अशा प्रकारे तयार केलेल्या माहितीचे आदानप्रदान करुन अचूक निर्णय घेतले जातात. जमिनीत भेडसावणाऱ्या अथवा येणाऱ्या समस्यांना तोंड देता येते. अत्यंत परिणामकारक माहिती प्राप्त झाल्याने वेळेची बचत होते. निघणारे निष्कर्ष अचूक ठरतात. त्यायोगे महत्त्वपूर्ण निर्णय घेण्याची व्यक्तीची कार्यक्षमता सिध्द होते.

अर्थपूर्ण माहितीमुळे विद्यार्थ्यांचा विकास होण्यास हातभार लागतो. सभोवतालच्य जगात घडणाऱ्या गोष्टींवर नियंत्रण ठेवता येते. अनेक क्षेत्रांमध्ये या माहितीचे उपयोजन साधता येते. यामधून मिळणारी माहिती विश्वसनीय, अर्थपूर्ण असते. त्यामध्ये दुरुस्ती करता यते. काळानुरुप माहितीत बदल घडत जातो. संशोधनामुळे माहितीच्या विकासात भर पडते., नवीन गोष्टी जन्माला येतात. किंबहूना ज्ञान होतात.

संशोधन वृत्तीमुळे व्यक्तीच्या दृष्टीकोनात सकारात्मक बदल होतो. एक नवी दृष्टी, आव्हाने जगासमोर सिध्द करण्यासाठी दिशा सापडते.

प्रगत शैक्षणिक महाराष्ट्र या कार्यक्रमांतर्गत सध्या डिजिटल शाळा ही संकल्पना उदयास आली आहे. त्याचा स्वीकार करुन त्याचा लाभ विद्यार्थ्यांना शिक्षकांनी मिळवून द्यावा.

व्याख्या

माहिती (Information)

संदेशवहन, संशोधन, सुचना इत्यादींचा माध्यमातून प्राप्त केलेले ज्ञान म्हणजे माहिती होय.

नवीन तंत्रज्ञान

Video, Video tex, Digital Resources, चुंबकीय प्रयोगशाळा, Multi media computer, Email. इत्यादी वापर व उपयोग करणे म्हणजे नवीन तंत्रज्ञान

दृष्टीकोन

शिक्षकाने नवीन तंत्रज्ञानाविषयक सकारात्मक दृष्टीने विचार करुन त्याचा लाभ विद्यार्थ्यांना मिळवून देणे.

थोडक्यात तंत्रज्ञान म्हणजे उपयोजित ज्ञान होय. त्याचा जीवनात व शिक्षणात कसा उपयोग करता येईल हे पाहणे म्हणजे शिक्षणाबाबतचा दृष्टीकोन तयार होतो.

डिजीटल शाळा

जून २०१५ पासून महाराष्ट्रात प्रगत शैक्षणिक महाराष्ट्र हा कार्यक्रम शासन निर्णयानूसार राबविला जात आहे. त्यानुसार डिजीटल शाळा संकल्पना उदयास आली. आजकाल शाळांचे पारंपरिक स्वरुप बदलत आहे. पुर्वी खडू, फळा, डस्टर, शैक्षणिक तक्ते, पृथ्वीचा गोल, मातीच्या मण्यांच्या माळा, नकाशे एवढे साहित्य वर्गात असले की पुरेसे व्हायचे. परंतू बदलत्या काळानूसार बदलले पाहिजे हा निसर्गाचा नियम आहे. सध्या तंत्रज्ञानाचे युग आहे. त्याप्रमाणे आपणही हा बदल स्वीकारणे गरजेचे आहे. आता जिल्हा परिषदेच्या शाळाही कात टाकत आहेत. बहुतांशी शिक्षकांनी कष्टाने व तंत्रज्ञानाच्या साहाय्याने शाळा ISO केल्यात, स्वखर्चाने, लोकसहभागातून, आदिवासी तालुक्यातील गावासाठी मिळणाऱ्या निधीतून शाळा डिजिटल केल्या आहेत. शिक्षकांनी स्वत: वेबसाईटची निर्मिती केली हे सर्व काही निश्चितच आशादायक चित्र आहे. आजच शिक्षक या आधुनिक तंत्रज्ञानाच्या मदतीमुळे कोठेही कमी पडत नाही. थोडक्यात शिक्षकांमधील संशोधक वृत्ती वाढीस लागली आहे.

उद्दिष्ट्ये

१) डिजिटल शाळांची सद्यस्थिती जाणून घेणे.

२) डिजीटल साधनांची माहिती व उपयोग जाणून घेणे.

कार्यपध्दती

संशोधकाने सदर संशोधनासाठी सर्वेक्षण पद्धतीचा वापर केला. संशोधकाने सहेतूक नमुना निवड पद्धतीचा अवलंब करुन आदिवासी भागातील डिजिटल झालेल्या शाळेतील ४० शिक्षकांची निवड केली. त्यांचेसाठी एक मोबाईलवर Link तयार करुन प्रश्नावली देण्यात आली त्यामध्ये २२ प्रश्न शिक्षकांना दिले गेले. त्यातून डिजिटल शाळेने संगणक हाताळणीसाठी येणाऱ्या समस्या आलेख, शेकडेवारी या साधनांच्या सहाय्याने जाणून घेतल्या.

माहितीचे विश्लेषण

१. १००% शिक्षकांनी आपली स्वत:ची शाळा डिजिटल आहे असे सांगितले.

२. १००% शिक्षकांनी डिजिटल शाळेची संकल्पना त्यांना आवडल्याचे सांगितले.

३. १००% शिक्षकांनी डिजिटल शाळेमुळे उपस्थितांची समस्या सुटल्याचे सांगितले. विद्यार्थ्यांना अध्ययन करण्यात गोडी निर्माण झाली.

४. १००% शिक्षक विद्यार्थ्यांना संगणक हाताळू देतात. त्यामुळे विद्यार्थ्यामध्ये आत्मविश्वास वाढीस लागला आहे.

५. डिजिटल शाळांची निर्मिती करण्यास ३७.५% लोकसहभाग मिळाला तर ६२.५% ठिकाणी ग्रामपंचायतीच्या माध्यमातून, पैसा निधीतून व स्वखर्चाने डिजिटल शाळांची निर्मिती करण्यात आली.

६. ७५% शिक्षकांच्या मते विद्यार्थ्यांमध्ये ज्ञान रचनानुसार अध्यापन करण्यासाठी शिक्षकांना डिजिटल बदल फायदेशीर ठरला आहे.

७. ७५% शिक्षकांना वाटते की, घोकमपट्टीतून विद्यार्थ्यांची सुटका होऊन शिक्षकांनी केलेले अध्यापन चिरकाल स्मरणात राहते. त्यामुळे विद्यार्थ्यांना आनंद मिळतो.

८. ६२.५% शिक्षकांच्या मते विद्यार्थ्यांच्या स्वयंअध्ययनाला चालना मिळाली. त्यामुळे अध्ययनाचा वेग वाढला.

९. १००% शिक्षकांच्या मते विद्यार्थ्यांमध्ये शाळेविषयी आवड निर्माण झाली आहे.

१०. ५०% शिक्षकांच्या मते साहित्य हाताळण्यास सोपे आहे तर ५०% शिक्षकांना ते अवघड वाटते.

११. शाळेला डिजिटल साधने म्हणून मोबाईलचा ८७.५%, सी.डी. प्रोजेक्टर ३७.५%, इंटर ॲक्टीव बोर्डचा १२.५%, LED TV ६२.५% तर इतर ३७.५% वापर केला जातो

१२. उच्च प्राथमिक स्तरावरील वर्गांना विविध विषय आहेत. त्यामुळे पुरेसा वेळ मिळत नाही ही मर्यादा जाणवते असे ४०% शिक्षकांचे मत आहे.

निष्कर्ष

१) डिजिटल साधनांचा वापर करुन अध्यापन केले असता विद्यार्थ्यांच्या चिर:काल स्मरणात राहते.

२) डिजिटल साधनांचा वापर करताना विद्यार्थी आनंदाने अध्ययन करतात. तसेच अध्यापनाचा वेग वाढल्याचे दिसून येते.

३) पारंपरिक पद्धतीपेक्षा डिजिटल साधनांच्या माध्यमाव्दारे केलेले अध्यापन परिणामकारक ठरते.

४) डिजिटल शाळेमुळे विद्यार्थी स्वयंगतीने, स्वयंअध्ययन करतात.

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संमिश्र अध्ययन (Blended Learning)

श्री. खैरनार के.एस.
सहयोगी प्राध्यापक
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प्रास्ताविक :

शिक्षण ही संकल्पना काळानुरूप बदलत जाते. भारतातील शिक्षण प्रणालीमध्ये विज्ञान व तंत्रज्ञानाच्या प्रगतीमुळे बदल घडून आला. पारंपरिक अध्यापन पध्दतीतील उणिवा दूर करण्याच्या हेतूने संगणकाचा वापर करावा हा विचार पुढे येऊन आज संगणकाधिष्ठित अध्यापनास खूप महत्त्व प्राप्त झाले. मात्र या स्वरुपातील शिक्षण प्रक्रियेत अनेक मर्यादा, दोष व अडथळे आहेत. उदा. शिक्षक-विद्यार्थी आंतरक्रिया, शिक्षकांची बांधीलकी यासाठी पारंपरिक वर्ग अध्यापन व ऑनलाईन अध्यापन यामध्ये योग्य समन्वय आणि एकात्मिकरण साधणे आवश्यक आहे. ब्लेंडेड लर्निग संरचित व असंरचित अध्यापनाचा सुरेख मिलाफ आहे. ब्लेंडेड लर्निग ही पध्दत आशयाची काठिण्य पातळी कमी करण्यास व समजण्यास उपयुक्त ठरते. १९९७ मध्ये ग्रॅहम स्पेनिअर यांनी इंग्लडमध्ये या पध्दतीचा वापर केला. ब्लेंडेड लर्निग मध्ये फेस टु फेस (F2F) शिक्षण पध्दती व ऑनलाईन शिक्षण पध्दतीचे मिश्रण दिसून येते. आजच्या शिक्षण पध्दतीमध्ये या शिक्षण पध्दतीचा वापर केल्यास अध्ययन अध्यापनाची क्रिया आनंददायी होईल यात शंका नाही.

ब्लेंडेड लर्निग :

१. Blended Learning- as new pedagogical model, which combines the best parts of face to face and online learning.

२. Blended Learning- Mixed mode or hybrid-learning is the integration of face to face (F2F) learning with online learning activities.

३. Blended Learning- combines online with face-to-face learning. The goal of blended learning is to provide the most efficient and effective instruction experience by combining delivery modalties.

४. ई-अध्ययनासाठी वापरल्या जाणाऱ्या विविध माध्यमाचे संमिश्रण करून वर्ग आंतरक्रिया घडवून आणणे होय.

५. विविध अध्ययन अध्यापन पध्दती, तंत्रे अध्यापनाची विविध माध्यमे यांचा अर्थपूर्ण अध्ययन वातावरणात आंतरक्रियात्मक वापर करणे होय.

ब्लेंडेंड लर्निग उद्दिष्टे :

१. अध्ययनासाठी पारंपरिक व आधुनिक तंत्राच्या वापरासाठी शिक्षक व विद्यार्थी यांना तयार करणे.

२. अध्ययनात नाविण्यतेचा ध्यास निर्माण करणे.

३. अध्ययन अनुभूतीची पातळी उंचावणे व त्यामध्ये परिवर्तन घडवून आणणे.

४. एकमार्गी संप्रेषणाऐवजी वर्ग आंतरक्रियेत विविधता आणणे.

५. प्रभावी वर्ग आंतरक्रिया घडविणे व आंतरक्रियेत विविधता आणणे.

६. अध्ययन अध्यापन प्रक्रिया आनंददायी व मनोरंजक बनविणे.

ब्लेंडेड लर्निग गरज :

आज जीवनाच्या प्रत्येक क्षेत्रामध्ये संगणक महत्त्वाची भूमिका बजावत आहे. संगणकाचा वापर ही काळाची गरज बनली आहे. व्यापारामध्ये, उद्योगधंद्यामध्ये, बँक व्यवहारामध्ये, कार्यालयीन कामकाजामध्ये, रेल्वेखात्यामध्ये तसेच शिक्षण क्षेत्रामध्ये संगणकाचा वापर फारच मोठ्या प्रमाणात केला जात आहे. दिवसेंदिवस शिकवण्याची कला समृद्ध व सुलभ होत आहे. त्याचे कारण म्हणजे संगणकाद्वारे मिळणारी पुरेशी दर्जेदार अचूक माहिती होय. त्यामुळे संगणक हे शिकणे व शिकविणे याचे महत्त्वाचे साधन झाले आहे.

संगणकाच्या साहाय्याने विद्यार्थी स्वत:हून शिकू शकतो. अनेक नवनवीन संदर्भ दाखले व उदाहरणे शोधू शकतो. अध्यापन, अनुदेशन या कार्यात संगणक विविध प्रकारे उपयोगी पडतो. संगणकाचा उपयोग विविध स्तरावरील अध्ययनासाठी प्रभावीपणे केला जाऊ शकतो. सामान्य विद्यार्थ्यांपासून तर अपंग, मतिमंद मुले, प्रौढ व्यक्तीपर्यंत सर्वानाच संगणकाव्दारे शिक्षण देता येते.

शिक्षकांनी संगणकाव्दारे शिक्षण देतांना व्याख्यान मार्ग (Lecture Mode), वैयक्तिक शिकवणी मार्ग (Tutorial Mode), स्वयंअध्ययन मार्ग (Self Learning Mode), सराव मार्ग (Practice Drills) स्वयंशोधन मार्ग (Discovery Mode), चाचणी व परीक्षा (Tests and Examination) यांचा वापर करणे आवश्यक आहे. शिक्षकाला संगणकाच्या सवलती मिळाल्या तर परंपरागत पध्दतीपेक्षाही अधिक प्रभावीपणे तो अनुदेशनाचे काम संगणकाद्वारे करु शकेल.

संगणक हा अध्ययन अध्यापनाचा एक प्रभावी मार्ग आहे. पारंपरिक अध्यापनातील उणिवा, दोष दूर करण्यासाठी शिक्षणप्रक्रियेत संगणकाचा वापर मोठ्या प्रमाणात होऊ लागला. विद्यार्थी व शिक्षकांमध्ये ई-मेल, ई-बँकिग, ई-जर्नल, ई-लर्निग, ई-बुक्स, इंटरनेट, टेलिकॉन्फरन्स, एज्युसॅट, डिजीटल व व्हर्च्युअल क्लासरुम यासारखे प्रकार रुढ होत आहे. या प्रकारामध्ये काही दोषही दिसून येतात. म्हणून सर्रासपणे संगणकाव्दारे अध्ययन-अध्यापन पूर्णपणे यशस्वी ठरेल असे नाही. तसेच संगणकाविना अध्यापनही प्रभावी ठरेल असेही म्हणता येणार नाही. पारंपरिक वर्ग अध्यापन व संगणकाच्या साहाय्याने अध्यापन यामध्ये योग्य समन्वय साधणे अत्यावश्यक आहे म्हणूनच संमिश्र अध्ययन हा पारंपरिकता व आधुनिकता यामध्ये दुवा साधणारा मार्ग आहे.

ब्लेंडेड लर्निग वैशिष्ट्ये :

१. ब्लेंडेड लर्निग मध्ये शिक्षकाची भूमिका दिग्दर्शकाची तर कधी सल्लागाराची असते.

२. गरीब, ग्रामीण व दुर्गम शाळेमध्ये शिकविण्यासाठी जेथे शिक्षकांना जाणे शक्य नसते व शाळेलाही परवडत नाही अशा ठिकाणी ऑनलाईन शिक्षण पध्दतीचा वापर करता येतो.

३. एकापेक्षा अधिक स्त्रोतांचा समावेश केल्यामुळे अध्ययनाची पध्दती विविधांगी बनते.

४. विद्यार्थ्यांना तंत्र निवडीचे स्वातंत्र्य मिळते व भिन्न आधुनिक इलेक्ट्रिक माध्यमांचा वापर होतो.

५. अध्ययन अध्यापनात विद्यार्थ्यांना सक्रिय ठेवण्यासाठी उपयुक्त पध्दत आहे.

६. वर्ग आंतरक्रिया ऑनलाईन पध्दतीने घडतात त्यामुळे भौगोलिक अडथळे येत नाहीत.

७. विद्यार्थ्यांना विविध उपक्रमात भाग घेण्यासाठी साहित्य निर्मिती वा उपलब्धतेसाठी या पध्दतीचा वापर उपयुक्त ठरतो.

८. मोठ्या वर्गसमुदायासाठी अत्यंत उपयुक्त ठरते. वर्गात व वर्गाबाहेर अध्ययनाची संधी मिळते तसेच अध्ययनासाठी स्थळ, काळ व वेळेचे बंधन नसते.

९. प्रत्याभरणासाठी वेळेचे बंधन राहत नाही. प्रत्याभरणासाठी पारंपरिक पध्दतीऐवजी आधुनिक पध्दतीचा वापर केला जातो.

ब्लेंडेंड लर्निग उपयुक्तता व विविधता :

१. पारंपरिक अध्ययन अध्यापनापेक्षा कमी वेळामध्ये अध्ययनाची क्रिया घडून येते व अध्ययन अध्यापन प्रक्रिया परिणामकारक होते.

२. अभिनव अभ्यासक्रमाची निर्मिती करण्यासाठी उपयुक्त आहे.

३. आजच्या काळात ई-साधनांची सहज उपलब्धता होते.

४. प्रकल्प व संशोधनासंबंधी निर्णय घेण्याचे स्वातंत्र्य विद्यार्थ्यांना मिळते व तज्ज्ञामार्फत वेळोवेळी प्रत्याभरण देता येते. एका पेक्षा अनेक अध्ययन स्त्रोताचा वापर होतो.

५. अध्ययन कृतीमध्ये साचेबंदपणा होत नाही तर विविधता निर्माण होते.

६. अध्ययनासाठी विविध साहित्याचा वापर करून विविध अध्ययन शैलीचा वापर करता येतो.

ब्लेंडेड लर्निग उपयुक्त माध्यमे :

ब्लेंडेड लर्निगचा अर्थ असा आहे की, यामध्ये एकापेक्षा अधिक माध्यमांचा वापर आशयानुरूप केला जातो ब्लेंडेड लर्निग मध्ये एकापेक्षा जास्त माध्यमे अध्ययनासाठी निवडली जातात. जास्त अध्ययन साधने वापरल्यामुळे अध्ययन पध्दतीत विविधता येते त्यामुळे कंटाळा येत नाही.

१. **पारंपरिक अध्ययन साधने व वर्ग खोली :** संदर्भ साहित्य, पुस्तके, प्रकल्पधारीत अध्ययन, उपयोजित स्वाध्याय, ऑनलाईन कोचिंग, कृतीवर आधारित प्रत्याभरण, चर्चा, गटचर्चा, वादविवाद, बुध्दीमंथन, चाचण्या इत्यादी बाबींचा प्रामुख्याने विचार केला जातो.

२. **स्व-गतीने ई-लर्निग :** विद्यार्थ्यांची आवड वेळेच्या उपलब्धतेचा विचार करून अभिरुपता, ऑनलाईन केस स्टडी, आंतरक्रियात्मक अध्ययन, ऑनलाईन स्वाध्याय, कॉम्प्युटर बेस लर्निंग, वेबसाईट लर्निगचा अध्ययनात वापर केला जातो.

३. **प्रत्यक्ष ई-लर्निग :** प्रत्यक्ष प्रशिक्षण कार्यशाळेचे आयोजन करुन तसेच कोचिंगच्या माध्यमातून विद्यार्थ्यांमध्ये आंतरक्रिया घडवून आणणे त्यासाठी ई-मेल, स्वाध्याय, चॅट, ब्लॉग्ज याचा वापर करणे व प्रत्यक्ष ई-लर्निग पध्दतीने अध्ययन घडवून आणणे.

ब्लेंडेंड लर्निगचे फायदे :

विविध माध्यमांचे एकात्मिकरण केल्याने अध्ययन अर्थपूर्ण बनते. विद्यार्थ्यांच्या संपादणुकीत वाढ दिसून येते तसेच रुची व उत्साह वाढविण्यास ही उपयुक्त ठरते. अध्ययनाबरोबर ज्ञाननिर्मितीची संधी मिळते. विद्यार्थी सतत अध्ययनात सक्रिय राहतात. या पध्दतीकडे जीवन जगण्याची तयारी म्हणून पाहिजे जाते. संप्रेषण पध्दती ही निर्दोष असते त्यामुळे संभ्रम निर्माण होत नाही व अध्ययन अध्यापन परिणामकारक होते. एकापेक्षा अनेक तज्ज्ञांच्या ज्ञानाचा उपयोग अध्ययनकर्त्याला करता येतो त्यामुळे अध्ययनाची पातळी वाढते.

ब्लेंडेंड लर्निगमुळे शिक्षणात होणारे बदल :

अध्ययनामध्ये विद्यार्थी स्वत: पुढाकार घेतात. अभ्याक्रमाबाबतच्या विविध कृती केल्या जातात व संदर्भाचे शोधन करून माहितीचा वापर आपल्या संशोधनासाठी, प्रकल्पासाठी व समस्येसाठी अध्ययनात करतात. संशोधन कार्यासंबंधी निर्णय घेण्याचे स्वातंत्र्य विद्यार्थ्यांना मिळते. अध्ययनकृतीमध्ये साचेबंदपणा होत नाही आधुनिक तंत्रज्ञानाचा अध्यापनात अगदी सहज वापर करण्याची सवय लागते त्यामुळे नवनवीन ज्ञ ाान व नवप्रवाहांची माहिती अध्ययनकर्त्यास मिळते. विविध अध्यापन कौशल्याचा विकास होतो. स्थळ, काळ वा भौगोलिक सीमारेषेचे बंधन राहत नाही. पारंपरिक अध्ययन अध्यापनापेक्षा कमी वेळ लागतो.

संदर्भ सूची

शिक्षणातील मर्मदृष्टी. ब्लेंडेंड लर्निग (२००९)

ह.ना.जगताप, (२०१०) **प्रगत शैक्षणिक तंत्रविज्ञान आणि माहिती तंत्रविज्ञान.**

पुणे : नित्यनूतन प्रकाशन

प्रा. गणेश चव्हाण (२००९) **अध्ययन अध्यापन-पारंपरिक ते आधुनिक**

नानकर प्रभाकर व शिरोडे संगिता (२००९) **वर्तमान शिक्षणातील विचारप्रवाह,**

पुणे नित्यनूतन प्रकाशन

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माहिती संप्रेषण व तंत्रज्ञान वापराची परिणामाकारकता व ICT एकात्मीकरणातील शाळेपुढील आव्हाने

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सारांश :-

२१ व्या शतकात शिक्षण क्षेत्रात माहिती संप्रेषण व तंत्रज्ञानाचा वापर करणे ही काळाची गरज बनली आहे कमी वेळोत जास्त ज्ञान मिळवण्यासाठी विविध तंत्रज्ञानाचा वापर होतो अध्ययन अध्यापनात एल.सी.डी.,प्रोजेक्टरचा वापर पॉवर पॉईटं प्रेझेन्टेशन, ब्लेंन्डेड लर्निंग , फ्लीप्ड क्लासरुम सारख्या विविध अध्यापन नितीचा वापर करुन अध्ययन- अध्यापन प्रक्रिया परिणामकारक होते अध्यापनाव्यतिरीक्त विदयार्थ्यांनी वैयक्तिक माहिती ठेवण्यासाठी,ग्रथांलय , कर्मचायांच्या महत्वपूर्ण नोंदीसाठी शालेय आर्थिक व्यवहार वेळापत्रक, निकाल बनवणे अशा अनेक गोष्टीसाठी माहिती संप्रेषण तंत्रज्ञान हे उपयुक्त ठरते परंतू माहिती संप्रेषण तंत्रज्ञानाच वापर करतांना अनेक अडचणींना सामोरे जावे लागते यामध्ये सुसज्ज शालेय इमारतींचा अभाव, माहिती संप्रेषण तंत्रज्ञान साधनांचा अभाव, योग्य मार्गदर्शनाचा अभाव, शैक्षणिक संस्थाची उदासिनता या सारख्या बाबी माहीती संप्रेषण तंत्रज्ञानाच्या एकात्मिकरणात अडथळा ठरत आहेत यासाठी शालेय स्तरावर तंत्रज्ञान वापरासंदर्भात जाणीव जागृती करणे अत्यावश्यक आहे. यासाठी युवा शिक्षकांनी स्वतः पुढाकार घेवून जुन्या सहका-यांनाही त्याबद्दल मार्गदर्शन करावे. योग्य क्षमता असलेले मनुष्यबळ निर्माण करण्यासाठी माहिती संप्रेषण तंत्रज्ञानाचे एकात्मीकरण अत्यावश्यक आहे आधुनिक युगातील शिक्षकाने अद्ययावत कौशल्ये आत्मसात करुन त्याचा उपयोग विद्यार्थ्याच्या सर्वांगिण विकासासाठी करावा. यासाठी शैक्षणिक संस्थानी पुढाकार घेवून कृती कार्यक्रमाची आखणी करायला हवी माहिती

संप्रेषण तंत्रज्ञान व त्याचबरोबर प्रभावी अध्यापन पद्धतीचा वापर केला तर मिळालेले ज्ञान कायमस्वरुपी टिकेल. त्यातूनच विद्यार्थ्यी व्यक्तिमत्व जडणघडण होणार आहे.

Communication हा शब्दाची व्युत्पत्ती Communis या ग्रीक शब्दापासून झाली आहे. याचा अर्थ असा होतो की 'to make comman' म्हणजेच सर्वसामान्य बनवणे असा होय. यामध्ये संकल्पना , सत्य, कल्पना, तत्त्वे, उपपत्ती हयांचे एका व्यक्तींकडून एक किंवा अनेक व्यक्तीकडे झालेले संप्रेषण होय.

वर्गाध्यापन संप्रेषणात अध्ययन- अध्यापन प्रक्रिया यशस्वी होण्यासाठी विदयार्थी व शिक्षक या दोघांचाही सहभाग आवश्यक आहे . यासाठी तंत्रज्ञान अतिशय महत्वाची भूमिका बजावते. आजच्या जागतिक शिक्षण पदधतीवर माहिती, संप्रेषण व तंत्रज्ञानाच्या एकात्मिकरणाचा प्रभाव दिवसेदिवस वाढतच चाललेला आहे.एकविसाव्या शतकातील विदयार्थ्यांना अदययावत ज्ञानाचे धडे देण्यासाठी त्यांना ICT च्या ज्ञानाचे दरवाजे हे खुले करुन दयायला हवेत.

<u>माहिती संप्रेषण तंत्रज्ञान (ICT) अर्थ</u> :

माहिती संप्रेषण तंत्रज्ञान म्हणजेच वैविध्यपूर्ण तांत्रिक साधनाचा व संसाधनाचा वापर करुन वैशिष्टयपूर्ण माहिती तयार करणे , साठवणे व माहितीचा विनीयोग करणे

"ICT implies the technology which consists of electronic devices and associated human interactive materials that enable the user to employ them for a wide range of teaching learning processes in addition to personal use"

Shaikh & Khoja

माहिती व संप्रेषण तंत्रज्ञानाचे स्वरुप.

१) अध्ययन - अध्यापन प्रक्रियेत बहुविध माध्यम संचाचा वापर.

दृक श्राव्य , दृक-श्राव्य अशा विविध साधनांचा वापर, नियोजन व तयारी करुन अध्ययन - अध्यापन प्रक्रिया परिणामकारक होते. यामध्ये चल-चित्र चित्र फिती, दूरदर्शन संच, ध्वनीफित ,

संगणक, सी.डी.याचा वापर केला जातो एल.सी.डी. , प्रोजेक्टर, ओ.एच.पी. संगणक या तंत्रसाधनांचा वापर केला जातो.

२) माहितीची तत्परता :-

इंटरनेटचा वापर करुन कोणत्याही शैक्षणिक विषयावरील अदययावत माहिती तत्काळ उपलब्ध होवू शकते.

३) वेळ- काळाचे बंधन नाही :-

शैक्षणिक माहिती मिळविण्यासाठी वेळचे बंधन नाही. दिवसातील २४ तासही आपण ज्ञ ानार्जन किंवा ज्ञानग्रहण करु शकतो.

४) वैविध्यपूर्ण अध्ययन संसाधनांचा वापर :- अध्यापन कौशल्ये व अध्ययन क्षमता वाढविण्यासाठी पुष्कळ माहिती तंत्रज्ञान संसाधने उपलब्ध आहेत संगणकाचा वापर करुन इंटरनेट वेबसाईटस विकिपिडीया यांच्या सहाय्याने प्रचंड प्रमाणात अध्ययन साहित्य उपलब्ध आहे.

५) सहभागात्मक अध्ययन : -

इंटरनेटच्या वापर करुन विदयार्थी विविध वेबसाईटसवरुन मुबलक प्रमाणावर माहिती मिळवू शकतात. एकमेकांमध्ये माहितीची देवाण - घेवाण करुन ज्ञानवृद्धी करता येते.

माहिती व संप्रेषण तंत्रज्ञानाची शैक्षणिक क्षेत्रातील परिणामकारकता :-

१) विदयार्थी व्यक्तिमत्व घडुन येण्यास मदत होते- अष्टपैलू व्यक्तिमत्व घडुन येण्यासाठी अभ्यासपुरक कार्यक्रम विविध शैक्षणिक अनूभूती, आनंददायी शिक्षण हे विविध तंत्रज्ञानाच्या आधारे विदयार्थ्यांना दिल्यास परिणामकारक ठरते.संगणकाच्या साहयाने अध्यापन करणारा शिक्षकाचे अनुकरण विदयार्थी करतो ICT प्रगोयशाळा , भाषा प्रयोगशाळ याचा वापर करुन विदयार्थी गुणवत्तापूर्ण स्वयंअध्यन करतात.

२) परिणामकारक अध्ययन - अध्ययन अध्यापन प्रक्रिया वैशिष्टयपूर्ण माहितीचे संकलन, त्याला विविध इफेक्टस् व ॲनिमेशन देवून विदयार्थ्यांसमोर प्रभावीपणे आशय सादर करता येतो.संगणक सहाय्यित अध्यापनामुळे इतर दृक -श्राव्य साधने वापरण्याची आवश्यकता नसते.

३) विद्यार्थी प्रगती आलेख बघण्यासाठी- विद्यार्थ्यांचा सर्वांगिण विकास होण्यासाठी त्यांचे अंतर्गत व बाहय मूल्यमापन करण्यासाठी विविध तंत्रज्ञान उपयोग पडते त्याचा प्रगती आलेख संगणकावर साठवून ठेवल्याने विद्यार्थी शिक्षक, पालक, मुख्याध्यापक वेळोवेळी बघू शकतात.

४) विद्यार्थ्यांची वैयक्तिक माहिती साठवून ठेवण्यासाठी - विद्यार्थ्यांच्या प्रवेशावेळीच त्याची सर्व वैयक्तिक माहिती साठवून ठेवल्याने हवी ती माहिती आपण कधीही बघु शकतो.

५) ग्रंथालय - E-library या संकल्पनेत ग्रंथालयात संगणकाद्वारे विविध पुस्तकांची मागणी करु शकतो. विविध ग्रथांलयाचे सदस्य म्हणून आपण नोंदणी केल्यावर नवनवीन प्रकाशित झालेली पुस्तके घर बसल्या आपण वाचू शकतो.

अशा प्रकारे ICT चा वापर अध्ययन-अध्यापन बरोबरच शैक्षणिक क्षेत्रात विविध बाबींसाठी करु शकतो परंतु त्याच्या एकात्मिकरणात अनेक अडचणी शाळांना जाणवत असतात.

शालेय स्तरावर माहिती, संप्रेषण व तंत्रज्ञानाच्या एकात्मिकरणाची आव्हाने

पारंपरिक पद्धतीने अध्यापनापेक्षा माहिती संप्रेषण व तंत्रज्ञानाच्या साहयाने अध्यापन केल्यास ते निश्चितच परिणामकारक ठरते परंतू भारतात शालेय स्तरावर ICT एकात्मीकरणात अनेक अडचणी जाणवतात.

१) भौतिक सोयी सुविधांबाबत येणा-या अडचणी -

शालेय स्तरावर, अध्ययन-अध्यापनात तंत्रज्ञानाच्या वापरासाठी शासनाने अनुदानित,जि.प.शाळा , म.न.पा. शाळांना संगणक व इतर साहित्य काही प्रमाणात पुरवले आहे. परंतू भौतिक सोयी-सुविधांच्या कमरतेमुळे त्याचा वापर हवा तसा होत नाही.

अ) सर्व प्रथम उद्‌भवतो तो पुरेशा संगणक खोल्यांचा.बरेच वर्षापासून अस्तित्वात असलेलया इमारतील संगणक खोल्या नाहीत. व त्यासाठी खर्च करण्याची उदासिनता दिसून येते.

ब) नवनवीन तंत्रज्ञानाच्या वापरासाठी विद्युत पुरवठा आवश्यक असतो परंतू आवश्यक त्या विद्यूत पुरवण्याअभावी ही साधने वापरले जात नाहीत. खेडोपाडी तर ही समस्या फार मोठया प्रमाणावर दिसून येते.

क) इंटरनेट सुविधा योग्य प्रमाणात न मिळाल्याने तंत्रज्ञान साधनांचा हवा तसा वापर होत नाही. त्यामुळे अध्ययन अध्यापन प्रक्रिया निरस होते.

ड) नवनवीन तंत्रज्ञान महागडे असल्याने संस्थाचालक ते खरेदी करण्यास उत्सुक नसतात.

२) शिक्षकांमध्ये असणाया उणिवा

अ) ICT संदर्भात आवश्यक अशा माहितीचा अभाव शिक्षकांमध्ये असतो, जेणे करुन सर्व सोयीसुविधा असल्या तरी त्याचा योग्य वापर शिक्षकांकडून केला जात नाही.

ब) तंत्रज्ञानाचा वापर कसा करायचा हे माहिती नसणे किंवा ते शिकण्याची इच्छा नसणे यामुळे तंत्रज्ञानाच्या वापराच्या बाबतीत औदासिन्य दिसून येते अशावेळी योग्य क्षमता असलेले मनुष्यबळ निर्माण करण्यासाठी अध्ययन उपपत्ती व तंत्रज्ञान यांचे एकत्रीकरण करणे, विविध सॉफ्टवेअरचे ज्ञान देणे, विविध माध्यमाचा उपयोग करणे त्यात इंटरनेटचा प्रभावी वापर करणे गरजेचे आहे.

३) वेळेची कमतरता -

शिक्षकांना वर्षानुवर्षे पारंपरिक अध्यापन पदधतीचा वापर करण्याची सवय झाली .असल्याकारणाने ICT चा वापर करुन अध्यापन करणे वेळखावू वाटते अध्यापनासाठी विविध अध्यापन साधनांची जुळवाजुळव करणे हे काम किचकट व कंटाळवाणे वाटते.

४) योग्य नेतृत्वाचा अभाव

शैक्षणिक प्रक्रियेत ICT चे एकात्मिकरण हे सोपे नसले तरी अशक्य नाही. त्यासाठी सुयोग्य व्यवस्थापन व शिक्षक आवश्यक आहेत ICT चा वापर योग्य पद्धतीने होण्यासाठ एखादया निष्णांत व्यक्तीकडे कार्यनेतृत्व देणे गरजेचे आहे ती व्यक्ती इतरांना ICT वापराबद्दल योग्य मार्गदर्शन करुन ते वापरण्याबद्दल आग्रह धरुन शकते त्यामुळे उपलब्ध असलेल्या साधनसामग्रीच्या योग्य वापर होवू शकतो.

५) प्रशासनाची निष्क्रियता -

अजुनही आधिच्या पिढीमध्ये संगणक वापराबद्दल एक प्रकारची भिती असते. त्यामुळे शैक्षणिक संस्था प्रशासकांना ही साशंकता असते की हया साधन सामग्रीवर केलेल्या खर्चाचा विनियोग योग्य प्रकारे होईल की नाही तसेच महत्वाची माहिती काही कारणास्तव तर संगणकातून नष्ट झाली तर तोटा होईल त्यामुळे अजुनही लेखी माहिती साठवणुकीवर भर दिसून येता.

६) नवीन बदल न स्विकारण्याची मानसिकता -

माहिती संप्रेषणतंत्रज्ञानाच्या युगात क्षणाक्षणाला नवनवीन बदल घडून येत आहेत. घडुन येणा-या बदलांचे व्यवस्थापन हे खरोखच खुप मोठे आव्हान ठरु पाहत आहे जर पारंपरिक पद्धतीाने अध्यापन करुन ही निकाल उत्कृष्ट लागत असतील तर शिक्षण - क्षेत्रात नवीन तंत्रज्ञान स्विकारण्याची मानसिकता दिसून येत नाही. परंतू माहिती संप्रेषण तंत्रज्ञानाचा वापर करुन केलेले अध्यापन हे चिरकाल टिकण्यास मदत होते तसेच उत्तराची घोकंपट्टी न करता संकल्पना समजतात हे शिक्षकांनी लक्षात घ्यायला हवे.

७) भाषेचा अडथळा -

आंतरजालाची प्रमुख भाषा ही इंग्लिश आहे. इंटरनेटच्या साहयाने मिळवलेली ८०% माहिती ही इंग्लीशमध्ये असते. ग्रामीण भागात जास्तीत जास्त वापर मातृभाषेचा केला जातो अशावेळी इंटरनेटवरुन आशय घेतांना ब-याच मर्यादा येतात भाषांतर करतांना तसेच पॉवर पॉईंट प्रेझेन्टेशन करतांना जास्त वेळ जातो परंतु शिक्षकांनी थोडी मेहनत घेवून PPT जर बनवून ठेवल्या तर त्या दिर्घकाळासाठी वापरला येतील.

वरील बाबींवरुन असे आढळून येते की माहिती संप्रेषण तंत्रज्ञानामुळे आज शिक्षण क्षेत्रात बरेच बदल घडून येत आहेत.शैक्षणिक विकास चिरंतन रहावा यासाठी माहिती संप्रेषण तंत्रज्ञानाची खुप मदत होते परंतू त्याचा वापर करतांना शिक्षक-विद्यार्थी या दोघांनाही ब-याच अडचणींवर मात करुन माहिती संप्रेषण तंत्रज्ञानाचा वापर केल्यास अध्यन-अध्यापन प्रक्रिया परिणामकारक होईल.

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शिक्षक शिक्षण आणि माहिती संप्रेषण तंत्रविज्ञान

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महात्मा गांधी शिक्षण मंडळाचे
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विज्ञानात होत चाललेली प्रचंड प्रगती, ज्ञानाच्या क्षेत्रात होत असलेली वाढ, शिक्षणक्षेत्रात प्रवेश करणारे मानव समूह, लोकसंख्येत होत असलेली बेसुमार वाढ या सर्व घटकांचा शिक्षण क्षेत्रावर मोठ्या प्रमाणात परिणाम होऊ लागला आहे. तंत्रज्ञान हे मानवी जीवनासाठी वरदान असून तंत्रज्ञानाने मानव जातीच्या संबंधित सर्व क्षेत्रावर प्रभाव टाकलेला दिसून येतो.

शिक्षण प्रणाली तंत्रज्ञानाच्या प्रभावापासून अलिप्त राहू शकत नाही. शिक्षण क्षेत्रामध्ये तंत्रज्ञानाच्या उपयोगामुळे, विविध तांत्रिक साधनांच्या वापरामुळे क्रांती घडून येत आहे. तांत्रिक प्रगतीचा परिणाम म्हणून शैक्षणिक विकास, शैक्षणिक रचना, याबरोबरच शिक्षकांच्या अध्ययन-अध्यापन अनुभूती व शिक्षकांची कामगिरी यावर होत आहे.

माहिती तंत्रज्ञानाच्या युगात ICT ची साक्षरता असणे गरजेचे आहे. आज प्रत्येक क्षेत्रामध्ये ICT चा वापर करण्यात येतो. शिक्षणक्षेत्रातील शिक्षकाला ICT ची माहिती असणे गरजेचे आहे. त्यासाठी शिक्षक शिक्षणात ICT चा होणारा उपयोग, ICT चे नाविण्य, ICT चे फायदे महत्त्वपूर्ण ठरेल. ICT चा विचार करता आपल्याला असे म्हणावे लागेल की, अध्यापनात शिक्षकांची भूमिका महत्त्वाची आहे म्हणून शिक्षक शिक्षणात ICT चा समावेश होणे ही काळाची गरज आहे.

बी.एड. च्या अभ्यासक्रमामध्ये शैक्षणिक तंत्रविज्ञान हा विषय केंद्रस्थानी ठेवलेला आहे. महाविद्यालयीन शिक्षणाशी जेव्हा शैक्षणिक तंत्रविज्ञान विषय जोडला गेला तेव्हापासून विविध प्रकारचे प्रश्न निर्माण झालेले दिसून येतात. शिक्षणक्षेत्रात ICT संबंधित संशोधनाचा विचार देखील करण्यात येऊ लागला. जर ICT चा उपयोग अध्ययन-अध्यापन प्रक्रियेत केला तर अध्यापनाचा गुणात्मक दर्जा निश्चितच उंचावेल.

माहिती संप्रेषण तंत्रज्ञानामुळे पांरपरिक शिक्षकांची भूमिका पूर्णपणे बदलत आहे. पूर्वी शिक्षक व पुस्तके हेच विद्यार्थ्यांचे ज्ञान मिळविण्याचे प्रमुख स्त्रोत होते. प्रत्येक विद्यार्थ्यांपर्यत पुस्तक पोहचणे अशक्य होते. ICT च्या माध्यमाद्वारे हवी ती माहिती हव्या तेवढ्या प्रमाणात विद्यार्थी

सहजरीत्या मिळवू शकतात त्यामुळे शिक्षकाला ICT चा अध्यापनात वापर करणे तेवढेच महत्त्वाचे दिसून येते. कारण शिक्षकासमोर येणारा विद्यार्थी शिक्षकांच्या बरोबरीने विशिष्ट विषयाची माहिती घेऊन येऊ शकतो. त्यामुळे शिक्षकाला त्या विषयासंदर्भात सखोल व अद्ययावत माहितीचे ज्ञान असणे गरजेचे आहे. ICT हा माहिती मिळविण्याचा प्रमुख स्त्रोत लक्षात ठेवून शिक्षकांनी आपली भूमिका पार पाडणे आवश्यक आहे. ICT च्या माध्यमातून विद्यार्थ्यांच्या अध्ययन क्षमता वाढू शकतात म्हणून शिक्षकांना माहिती तंत्रज्ञानाचे सेवापूर्व किंवा सेवातर्गंत प्रशिक्षण देणे गरजेचे आहे.

शिक्षकांसाठी ICT ची उद्दिष्टे

१. सर्व शिक्षकांना माहिती संप्रेषण तंत्रज्ञानाचे ज्ञान करून देणे.

२. शिक्षकांना अध्यापन कौशल्याचे प्रभावीपणे सादरीकरण करण्यास सहकार्य करणे.

३. अध्यापनाची उद्दिष्टे साध्य करण्यासाठी विविध साधने तसेच स्त्रोत निर्माण करणे.

४. शिक्षकांना माहिती संप्रेषण तंत्रज्ञानाच्या माध्यमातून अद्ययावत माहिती मिळविण्याचे मार्ग उपलब्ध करुन देणे.

५. शिक्षकाची अध्ययन विषयक उपक्रम विकसित करण्यामागील भूमिका लक्षात आणून देणे.

वरील उद्दिष्टांचा विचार करता असे लक्षात येते की, शिक्षकांनी शिक्षणात गुणात्मक दर्जा उंचाविण्यासाठी ICT चा वापर मोठ्या प्रमाणात सुरु केलेला आहे.

ICT मुळे शिक्षकांच्या अध्यापन कार्याचा दर्जा उंचावून विकास होत राहील यासाठी माहिती संप्रेषण तंत्रज्ञानाचे प्रशिक्षण गरजेचे आहे. आज शिक्षकाला ज्ञानाविषयी, अध्यापन तंत्राविषयी अध्यापन कौशल्याविषयी, अभ्यासक्रमातील बदलाची माहिती असणे गरजेचे आहेच पण जर माहिती नसेल तर ICT च्या माध्यमातून शिक्षक माहिती अद्ययावत ठेवू शकतो हिच आजच्या शिक्षकाची खरी गरज आहे.

ICT शिक्षकाच्या परिणामकारक व्यावसायिक विकासासाठी सहाय्यभूत ठरते. ICT चा शिक्षक शिक्षणात समावेश केल्यामुळे मूलभूत संकल्पनाची ओळख भावी शिक्षकांना होईल. शिक्षक शिक्षणात ICT मुळे विद्यार्थ्यांना वेगवेगळ्या संधी उपलब्ध होतात. भावी शिक्षक माहिती गोळा करण्यासाठी, एखाद्या घटकावर प्रभूत्व प्राप्त करण्यासाठी, संप्रेषण कार्य करण्यासाठी त्याचा वापर करू शकतो म्हणून शिक्षक शिक्षणात ICT ची आवश्यकता भासते.

प्रत्येक शिक्षकाला आपल्या व्यावसायिक विकसनासाठी ICT चे ज्ञान तसेच कौशल्याविषयी पायाभूत घटकांची माहिती असणे गरजेचे आहे. कारण या ज्ञानाच्या आधारे प्रभावीपणे नवीन तंत्रज्ञान हाताळू शकतील त्यासाठी साधने पुरविणे गरजेचे आहे. ICT चा वापर शिक्षक शिक्षणात झाला तर शिक्षक माहितीचे स्त्रोत, माहितीचे संकलन, माहिती प्रक्रियाकरण, समीक्षात्मक वर्गीकरण, संशोधन यासारखी कौशल्य हस्तगत करून या सर्व गोष्टी आपल्या विद्यार्थ्यांमध्ये येण्यासाठी प्रयत्नशील राहतील. शिक्षकाला त्याच्या भूमिकेचा व क्षमतेचा वापर करुन घ्यावयाचा असेल तर ICT युक्त शिक्षक शिक्षणाची आवश्यकता आहे.

शिक्षक शिक्षणात माहिती संप्रेषण तंत्रविज्ञानाची प्रमुख कार्ये

१. अध्ययन व अध्यापन कार्यात सुधारणा करणे.

२. अध्ययन व अध्यापन प्रक्रियेचे विश्लेषण करणे.

३. अध्ययन व अध्यापन प्रक्रियेचे उन्नयन साधणे.

४. अनुदेशन सामुग्रीचा विकास करणे.

५. शिक्षकांसाठी सेवातर्गत प्रशिक्षण कार्यक्रम राबविणे.

शिक्षक शिक्षणात माहिती संप्रेषण तंत्रविज्ञानामुळे होणारे फायदे

१. शिक्षक स्वतःचे अध्यापन साहित्य तयार करून संबंधित विषयाच्या अध्यापन कार्यासाठी त्याचा वापर प्रभावीपणे करु शकतात.

२. शिक्षण क्षेत्रातील नवीन विचार प्रवाहांची ओळख झाल्यामुळे त्याचे उपयोजन अध्यापनात होताना दिसते.

३. शिक्षकांच्या अध्यापन शैलीमध्ये, क्षमतेमध्ये सकारात्मक बदल होत आहे.

४. अध्यापनामध्ये शिक्षक व प्रशिक्षणार्थी यांच्याकडून विविध प्रकारच्या साधनांचा वापर होत आहे.

५. शिक्षक स्वतःच्या विषयाबाबतचे ज्ञान अद्ययावत ठेवण्यासाठी व अध्यापन कार्यात कौशल्यपूर्ण नाविन्य आणण्याकरीता ICT वर अवलंबून आहे.

समारोप

ICT हे प्रभावी अध्यापनाचे साधन म्हणून पुढे येत आहे. शिक्षक शिक्षणामध्ये ICT चा वापर केल्याने कौशल्यपूर्ण शिक्षक तयार करण्याची उद्दिष्टे सफल होत आहे. ICT च्या विविध साधनांचा वापर अध्यापन कार्यात करणे हे शिक्षकांचे प्रभावी कौशल्य ठरणार असल्याने शिक्षण क्षेत्रात कार्य करणाऱ्या प्रत्येक व्यक्तीने सक्रीय राहून त्याचा अध्यापनात समर्पक वापर करणे आवश्यक आहे.

संदर्भ ग्रंथ

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२. सीमा येवले, (२००८), शैक्षणिक तंत्रविज्ञान आणि माहिती तंत्रविज्ञान, नित्यनूतन प्रकाशन

३. किशोर चव्हाण, (२००८), माहिती आणि संप्रेषण तंत्रज्ञान, इनसाईट प्रकाशन

४. भुकन चौधरी, (२००९), माहिती संप्रेषण तंत्रविज्ञान आणि संशोधन, व्यंकटेश प्रकाशन

५. ह.ना. जगताप, (२०१०) प्रगत शैक्षणिक तंत्रविज्ञान आणि माहिती तंत्रविज्ञान, नित्यनूतन प्रकाशन

ई-अध्ययन (E-Learning)

प्रा. वायळ लक्ष्मण सखाराम
सहाय्यक प्राध्यापक
म.वि.प्र.समाजाचे
शिक्षणशास्त्र महाविद्यालय, नाशिक

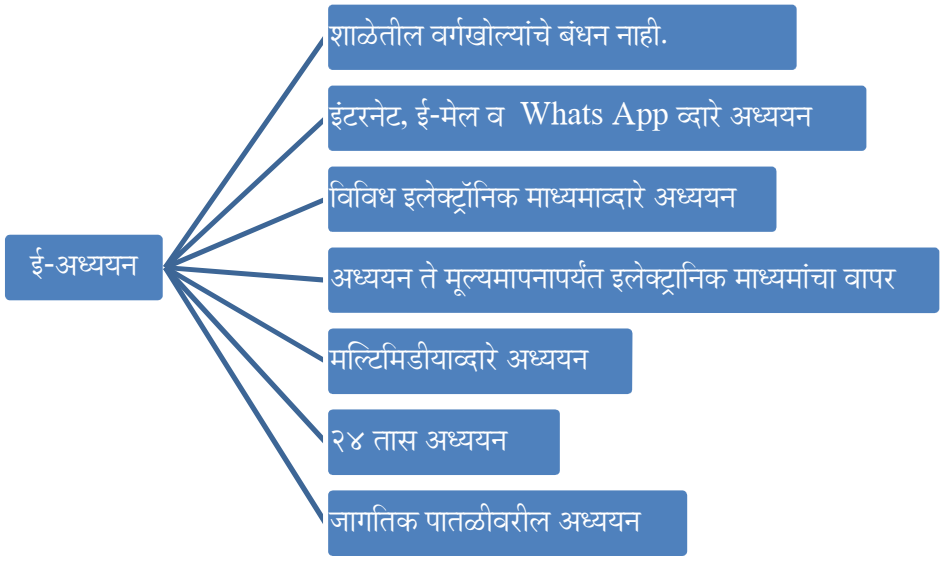
आजचे युग हे माहिती तंत्रज्ञानाचे युग म्हणून ओळखले जाते. आज मानवी जीवनात वेळोवेळी माहिती तंत्रज्ञानाचा आधार घ्यावा लागतो. मानवाच्या प्रत्येक कृतीशी माहिती तंत्रज्ञानाचा संबंध येत असतो. आज साक्षरतेचा निकषही माहिती तंत्रज्ञान व संप्रेषणाचे ज्ञान असणे हा झाला आहे. आज प्राथमिक स्तरापासून महाविद्यालयीन स्तरापर्यंत संगणक (इंटरनेट) च्या अभ्यासक्रमत समावेश केलेला दिसून येतो. आज माहिती संप्रेषण व तंत्रज्ञान अभ्यासक्रमापुरतेच न राहता ते आज एक अध्यापन व अध्ययनाचे प्रभावी साधन म्हणून त्याचा वापर केला जात आहे. म्हणूनच त्याचाच भाग ई-अध्ययन संकल्पना उपयोगी ठरत आहे.

ई-अध्ययन :

इलेक्ट्रॉनिक साधनांच्या सहाय्याने केले जाणारे अध्ययन

अध्ययन :

अध्यापन प्रक्रियेत हेतूपूरस्सरपणे माहिती तंत्रज्ञान संप्रेषणाचा वापर करणे म्हणजे ई-अध्ययन होय.



अध्ययनासाठी वापरली जाणारी माध्यमे व साधने

संगणक	⟷	इंटरनेट
वेबसाईटस्	⟷	मोबाईल
प्रोजेक्टर	⟷	एज्युसॅट
व्हर्च्युअल क्लस	⟷	दूरदर्शन
ऑन लाईन विद्यापीठ	⟷	रेडीओ
एल.सी.डी.	⟷	डीव्हीडी
चॅट	⟷	ब्लॉग्ज्
टेलि कॉन्फरसिंग	⟷	व्हिडीओ कॉन्फरसिंग

ई-अध्ययनाचे फायदे

पारंपरिक अध्ययनापेक्षा ई-अध्ययनाव्दारे अधिक परिणामकारकपणे विद्यार्थ्यांचे अध्ययन घडवून येते.

ई-लर्निग तंत्रज्ञान शिक्षक व विद्यार्थ्यांना हाताळण्यास सोपे आहे.

१) ई-लर्निग तंत्रज्ञान शिक्षक व विद्यार्थ्यांना हाताळण्यास सोपे आहे.

२) विद्यार्थ्यांना जागतिक स्तरावर अध्ययनाची संधी उपलब्ध होते.

३) घरी बसून शाळेत न जाता निरंतर शिक्षण प्राप्त होते.

४) अध्ययनार्थीना स्वत:च्या आवडीनूसार अभ्यासक्रम निवडण्याची संधी मिळते.

५) विद्यार्थ्यांची उपस्थिती वर्गात टिकून राहण्यास मदत होते.

६) विद्यार्थ्यांची शाळेतील गळती थांबते.

७) मोठ्या प्रमाणात अध्ययन साहित्य उपलब्ध होते.

८) विद्यार्थ्यांना अध्ययन साहित्याची निवड करण्याचे स्वातंत्र्य असते.

९) ओझ्याविना शिक्षणाकडे जाता येते.

१०) फळा व खडू विरहित शिक्षण मिळते.

११) वर्गातील जास्त विद्यार्थ्यांचे वर्ग व्यवस्थापन सहज होते.

१२) विद्यार्थ्यांचे अवधान केंद्रीत करण्यास मदत होते.

१३) अध्ययन सुसंगत होते.

१४) विविध विषयातील तज्ज्ञ मार्गदर्शकांचा लाभ विद्यार्थ्यांना घेता येतो.

१५) विविध विषयाची अद्ययावत माहिती वेगाने मिळवून अध्ययनाचा वेग वाढतो.

१६) अध्ययन केलेले विद्यार्थ्यांच्या चिरकाल स्मरणात राहते.

१७) दूरस्थ शिक्षणासाठी उपयुक्त ठरते.

१८) विद्यार्थ्यांना स्वयं-अध्ययनात व स्वयं-मूल्यमापन करता येते.

१९) समुहाने किंवा वैयक्तिक अध्ययन करता येते.

२०) सध्याच्या शिक्षण व्यवस्थेमध्ये कमी खर्चात शिक्षण प्राप्त होते.

२१) जागतिक स्पर्धेत टिकून राहण्याची तयारी होते.

२२) परीक्षेचा दर्जा Online exam मुळे सुधारतो.

२३) विद्यार्थ्यांना शाळा-महाविद्यालयाविषयी आवड निर्माण होते.

अशा प्रकारे ई-अध्ययनाचे प्रभावीपणे वापर केल्यास फायदे होतात.

ई-अध्ययनासाठी शिक्षकामधील क्षमता

कोणत्याही अध्ययन-अध्यापन पद्धतीचे यश हे अंमलबजावणी करणाऱ्या शिक्षकांमधील क्षमतांवर अवलंबून असते. कारण माहिती सादर करणे किंवा पुरविणे एवढेच कार्य शिक्षकांना करावे लागत नाही. तर इतरही क्षमता त्यांच्या अंगी असणे आवश्यक आहे.

१) संगणक व मोबाईल वापरण्याची (हाताळण्याची) क्षमता शिक्षकांमध्ये असावी.

२) इंटरनेटच्या माध्यमातून माहिती शोधण्याची व मांडण्याची क्षमता असावी.

३) आशय मांडण्याचे योग्य स्वरुपात कौशल्य असावे.

४) अभ्यासक्रमाची रचना व विकसित करण्याची क्षमता शिक्षकांमध्ये असावी.

५) ऑडीओ किंवा व्हीडीओ स्वरुपात आशय सादरीकरणाची क्षमता असावी.

६) जागतिक स्तरावरील विविध अभ्यासक्रमाची परिपूर्ण माहिती असावी.

७) ऑनलाईन अभ्यासक्रम राबविणाऱ्या विद्यापीठाची माहिती असावी.

८) संगणक किंवा इलेक्ट्रानिक माध्यमाव्दारे प्रत्याभरण व मुल्यमापनाची क्षमता असावी.

अशा प्रकारे ई-अध्ययनाचे आज फायदे तर आहेतच पण याचा फायदा करुन घेण्यासाठी शिक्षकांमध्ये ई-अध्ययनाची साधन वापरण्याचे ज्ञान व क्षमताही असणे गरजेचे आहे.

संदर्भ सूची

१) गणेश चव्हाण, **अध्ययन-अध्यापन पारंपरिक ते आधुनिक.**

पुणे : नित्यनूतन प्रकाशन

२) किशोर चव्हाण, **माहिती आणि संप्रेषण तंत्रज्ञान.**

नाशिक : इनसाईट प्रकाशन

३) मिनाक्षी बरवे, **संगणक शिक्षण व शिक्षक.**

पुणे : नित्यनूतन प्रकाशन

४) शरद नगराळे, **संगणक शिक्षण व माहिती तंत्रज्ञान.**

पुणे : नित्यनूतन प्रकाशन

अध्ययनासाठी वापरली जाणारी माध्यमे व साधने

संगणक	⟷	इंटरनेट
वेबसाईटस्	⟷	मोबाईल
प्रोजेक्टर	⟷	एज्युसॅट
व्हर्च्युअल क्लस	⟷	दूरदर्शन
ऑन लाईन विद्यापीठ	⟷	रेडीओ
एल.सी.डी.	⟷	डीव्हीडी
चॅट	⟷	ब्लॉग्ज्
टेलि कॉन्फरसिंग	⟷	व्हिडीओ कॉन्फरसिंग