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Role and Impact of ICT Innovations in Teaching – Learning

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ABSTRACT: Technology is growing at a very fast rate as a strong instrument in evolution of learning. Use of Information and Communication Technology (ICT) have provided new dimensions both in teaching and learning. It has helped to make learning far more productive and aesthetic than it was in olden times not only for students as well as for teachers. Multimedia has given education a new face by making e-resources a global Repository. With the help of multimedia students have a wider approach towards e-learning? Multimedia enabled different types of learning such as Visual, Auditory and Kinesthetic learning methods making e-learning an interesting component in teaching and learning process. E-learning resources with integration of networking has reduced the burden of keeping hard copy of materials. With the government new policies e-content development made education globally reachable to every child through distance education, e-learning, Virtual class rooms and digital classrooms. So becomes mandatory in training of teaching staff in the pedagogical issues and are convinced of the value of using ICT in their teaching learning process. The World Wide Web is being used to improve communication, collaboration and sharing of resources by promoting active learning and delivery of education globally. This paper will provide an overview of various innovative techniques and methods used for bringing in quality of education and make teaching and learning more effective.

KEYWORDS: Innovative methods, e-learning, multimedia tools.

I. INTRODUCTION

The education plays a significant role in building the society. It is one of the most essential requirements for the well-being of an individual and the society. Imparting Quality education to every individual helps in empowering the nation in all aspects. In this digital era, technology is the most effective way to enhance the learner's knowledge. According to UNESCO: ICT is a scientific technological and engineering discipline and management technique used in handling information in application and association with social, economic and cultural aspects [1]. Learning through ICT is popularly known as e-learning. Impact of ICT on education includes any communication device, application or service used for educational purposes to support and improving the learning of the students. Students learn from multiple sources and for that ICT & multimedia is a much essential tool in Education system where even teacher's knowledge of ICT & multimedia is much in demand. Thus, making it necessary for ICT training in Teacher education in higher education. By experimenting innovative methods and strategies using ICT in teaching learning we can improve student's motivation, stimulate their interest and make them active in classrooms. So, ICT plays a very vital role in the field of education from both teaching and learning perspective.

II. ROLE AND BENEFITS OF ICT IN TEACHING LEARNING PROCESS

ICTs are a potentially powerful tool for extending educational opportunities. The use of ICT is making major differences in the learning of students and teaching approaches. Several studies reveal that students using ICT facilities mostly show higher learning gains than those who do not use, actually it acts as an assisting tool. It increases the scope of learning with current information through web based portals. ICT can also be used to do complex tasks as it provides researchers with a steady avenue for the dissemination of research reports and findings (Yusuf Musibau Adeoye et al., 2013). Role of technology in teaching and learning is rapidly becoming one of the most important and widely discussed issues in contemporary education policy, if ICT is properly used; it holds great promise to improve teaching and learning in addition to shaping work force opportunities. The use of ICT for teacher training has been recognized by the governments of India. Widening the availability of quality education materials through internet, is leading in creating



digital repositories and learning objects in India such as the Sakshat Portal of Government of India, initiatives like National Program of Technology Enhanced Learning (NPTEL), the Multimedia Educational Resource for Learning and Online Teaching (MERLOT) seek to create quality digital content for different levels of education (Jyoti Narayan Patra, 2014).

The roles and benefits of ICT in education are:

- a) To develop variety of educational services and medium.
- b) To promote equal opportunities to obtain education and information.
- c) To develop a system of collecting and disseminating educational information.
- d) To promote technology literacy and support distance learning.
- e) To support sharing experience and information with others.
- f) Helps in improving innovative teaching skills and makes classroom teaching effective.
- g) Acts as an assisting tool for teaching and learning itself
- h) ICT helps teachers to motivate students and develop interest in learning.
- i) ICT is store house of educational institution because all educational information can safely store through ICT.
- j) ICT helps teachers to communicate properly with their students.
- k) ICT improves efficiency both in Teaching and Learning.
- l) ICT paves way for personality development.
- m) ICT improves active participation of students.
- n) ICT allows self-paced and collaborative learning.
- o) ICT provides multi-sensory learning experience.
- p) ICT provides very flexible and rich medium for students to access the information.

III. NEED AND SIGNIFICANCE OF THE STUDY

Due to rapid advancement in the technology and its impact on the daily life, there is a technological gap between the progress of the society and methods used in the classroom teaching and learning. The scenario of the classroom environment is changing from teacher centric mode to student centric. Students learn from multi sources and for this reason use of ICT is very much essential in educational field. The technology has facilitated wide-range of learning technics catering to varied styles that the learners possess. The use of technology in the classroom by the teacher reduces the age divergence between the young students and age-old teachers.

For effective implementation of certain student centric methodologies such as project-based learning, activity-based learning which puts the students in the role of active researches, for effective teaching and better understanding as well, technology becomes the appropriate tool. ICT has enabled better and swifter communication; presentation of ideas in more effective and relevant way. It also ignites their minds to be more productive and also helps in increasing the economy of the country. So for this reason ICT is very much necessary in Teaching - Learning.

IV. DIFFERENT STRATEGIES FOR APPLYING ICT IN TEACHER EDUCATION

- a) Providing adequate infrastructure and technical support.
- b) Applying ICT in all subjects.
- c) Applying new Pre-service Teacher Education curriculum.
- d) By using application software, using multimedia, Internet e-mail, communities, understanding system software.

Strategies Used in Teaching – Learning: Today teachers use electronic medium for the teaching – learning process in the classroom.

Electronic learning: E-learning involves more than just the presentation and delivery of the materials using the web: the learner and the learning process should be the focus of E-learning. It is also known as online learning.

Virtual Learning: Virtual learning refers to all learning activities that occur in noncontiguous educational settings where the learners and their teachers are separated temporally and spatially. The effective use of ICT change the entire teaching and learning experience by making learning very invigorating, vibrant and real.



Blended Learning: Blended learning is a face-to-face classroom interaction with online learning. Sometime it is also called “Hybrid learning”. It include a mixture of face-to-face classroom, self- paced learning and online classroom.

Blog:The term web–blog refers to a simple webpage consisting of brief paragraphs of opinions, information, personal diary entries, or links called posts. The education Blog can be a powerful and effective technology tool for teaching and learning process.

Wiki: A wiki is a web page or set of Webpage that can be easily edited by anyone who is allowed access. Wiki affords the opportunity to offer collaborative, constructive learning more extensively in our teaching- learning environment.

Collaborative Learning: It is the acquisition by individuals of knowledge, skill and attitudes occurring as the result of group interaction.

M-learning: It is one of wireless technologies which are used anywhere, anytime and by anybody. It means “Learning on the move”.

Mobile Apps: It is the recent application in smart phone which build variety of Learning Apps making learning filled with Fun, Games, etc.

Advantage of ICT over Traditional pedagogy:

- a) By incorporating picture or video into the lesson, the teachers can provide students with the necessary contextual cues to understand new concepts
- b) Visual information can provide the necessary bridge or scaffold between everyday language and more difficult academic language.
- c) Electrically generated resources are better than textbooks and others static sources of information, as they can be improved through direct editing by users or through solicitation of user feedback.
- d) Technology allow student to show what they have learned in multiple assessment of their growth.

V. CONCLUSION

Impact of ICT is significant in education as it is strongly influencing all aspects of human life. ICTs make learning more productive and aesthetic, help expand access to education, motivate to learn, facilitates the acquisition of basic skills, and can transform the learning environment thus help improving the quality of education. ICT has tremendous potential for education providing new dimensions both in teaching and learning. ICT enhances the learning experiences of students. Eventually, the use of ICT increases the quality in education and also makes the individual globally challenging. Innovative teaching is necessary for all teachers to deal with today’s dynamic youth. Teacher’s competency is a key factor influencing innovative teaching methods. With the emerging technologies such as blogs, virtual labs, web based learning, low cost internet facilities and use of smart phones with variety of learning Apps assisting the learners with better outcomes, the higher education institutions need to design and deliver better education preparing teachers as facilitators in guiding the students in their learning process.

REFERENCES

- [1]UNESCO (2002), Information and Communication Technologies in Teacher Education, A Planning Guide. Paris: UNESCO.
- [2] Yusuf Musibau Adeoye, Afolabi Festus Oluwole, Loto Antonia Blessing (2013), Appraising the Role of Information Communication Technology (ICT) as a Change Agent for higher education in Nigeria. International journal of Educational Administration and Policy Studies. Vol 5 (8), pp177-183.
- [3]Namita Saxena (2017), The Role And Impact Of Ict In Improving The Quality Of Education: An Overview, International Journal Of Engineering Sciences & Research Technology. Http: // www.ijesrt.com
- [4] Jyoti Narayan Patra (2014), The Role of ICT in improving the Quality of School Education in India. International Educational E-Journal, Vol.III, Issue-II, Apr-May-June 2014.pp15-156.
- [5] Asst. Prof.Poonam(2018), Department of Education, Chaudhary Devi Lal University, Sirsa, Volume 7, Issue III, June 2018, ISSN: 2277-1255 BHARTIYAM INTERNATIONAL JOURNAL OF EDUCATION & RESEARCH A quarterly peer reviewed International Journal of Research & Education
- [6]Swati Desai (2010), Role of Information Communication Technologies in Education. Proceedings of the 4th National Conference; INDIA. Computing for Nation Development.



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