The Study of the Contribution of Current Innovative ICT to Pedagogy

Dr. Piyush U. Nalhe
Assistant Professor, Faculty of Commerce
Shankarlal Khandelwal Arts, Science and Commerce College, Akola, Maharashtra, India
piyushnalhe@gmail.com

Abstract: *The present era is the electronic age. You are hearing the name of e-mail, e-commerce, e-ticketing, e-banking, etc. everywhere in today's time. The information revolution has given the much-hyped word e which means an electronic form of traditional resources. For example, letter/mail is converted into e-mail today, ticket booking is now e-ticketing, banking has changed to e-banking, and business is now slowly taking the form of e-commerce. The development of information and communication technology has made various facilities very easy, fast, and intuitive through electronic means. How can education remain untouched when an electronic entry has been made in all the activities of life? In this research paper, various electronic interventions have been studied in the field of education. The contribution of current innovative ICT in pedagogy has been studied in this research paper.*

Keywords: Pedagogy, Current Innovation ICT, Research, E-Portfolio, OECD, New National Policy on Education, E-Learning

Data Collection Method Used for Research: Data for the research paper has been collected from secondary data.

Objective of Research:
1) To get information about e-learning, its various forms and e-learning service providers.
2) To study about various electronic interventions in the field of education.
3) To study the contribution of current innovative ICTs in pedagogy.

I. INTRODUCTION

ICTs are seen by teachers as tools to help create an environment for more 'learner centered' learning. The mere existence of ICT will not change the practice of teachers. However, ICT can help teachers to change their teaching methods and achieve greater competence, provided the necessary conditions are provided. Teachers' pedagogical methods and rationale affect their use of ICTs, and the nature of teacher use of ICTs affects student achievement. ,

In OECD (Organization for Economic Co-operation and Development) countries, research findings suggest that the most effective use of ICTs is in cases in which teachers, with the help of ICTs, engage in whole-class discussions or individual Challenges students' understanding and thinking through small group work. ICTs are seen as important tools to enable and support the transition from traditional 'teacher-centered' teaching to learner-centered approaches. ICT can be used to facilitate change and support/enhance existing educational practices. it can be used by teachers in teaching practices, from essentially minor enhancements to traditional methods of teaching practices, to more radical changes in their approach to teaching. ICT can be used to reinforce existing pedagogical practices as well as to strengthen the way of communication between teachers and students. The use of ICT tools for the presentation of information has a mixed effect.

The use of ICTs as presentation devices (overhead and LCD projectors, television, electronic whiteboards, guided "web tours", where students simultaneously view the same resources on a computer screen) is seen to have a mixed effect. While this can promote class understanding and discussion of difficult concepts (particularly through the demonstration of simulations), such use of ICT can reinforce traditional pedagogical methods and reduce the distance from the topic being discussed. Or divert attention from the equipment being used. Recognizing the importance of

Information and Communication Technology (ICT), the Ministry of Human Resource Development has used ICA as a tool in education as per the mission documents. The aim of this is to increase the current enrollment rate in higher education. The Ministry has also launched a web portal named 'Sashakt', which is a 'One Stop Education Portal. High-quality e-content has been uploaded to 'Sashakt' on all subject areas and themes. Many projects are in the completion stage and are expected to bring about a paradigm shift in the teaching and learning system in India. Presently the project "Development of pedagogical trends suitable for research in different classrooms, intellectual orientations, and e-learning" is being implemented by IIT, Kharagpur. Faculty of all IITs and many NITs are participating in this curriculum development plan. Electric Frequency Shift Application has been developed which is for Low-Cost Oscillert.

The new National Education Policy seeks to harness the potential of ICT through Information and Communication Technology (ICT) by providing high-quality personalized and interactive knowledge modules over the Internet/Internet to all students in higher education institutions at any time anywhere medium. A centrally sponsored scheme has been envisaged for upliftment. This is expected to lead to substantial interventions in the form of increasing the Gross Enrollment Ratio (GER) in higher education and ensuring access and quality in higher education. The new National Education Policy under its aegis has created virtual labs, open source and access tools, virtual conference tools, talk-to-teacher programs, and non-invasive blood glucometers through Information and Communication Technology (ICT) and catalyzed laboratory experiments. There are two important components of a DIE mission, i.e. content creation and provision for access tools for institutions and learners. It aims at bridging the digital gap, i.e., to bridge the gap in the skills of urban and rural teachers/students in the higher education sector in the use of computing devices for education and learning, and to empower those who were hitherto untouched by the digital revolution. It focuses on pedagogy appropriate for e-learning and provides online availability of teachers to guide and mentor learners by facilitating online testing and certification, performing experiments through virtual labs, and providing education satellites (Education Satellites). EDUSAT intends to focus on the appropriate pedagogy of e-learning by empowering teachers to make effective use of Direct-to-Home (DTH) methods.

1.1 The Contribution of Current Innovative ICT to Pedagogy

Information and communication technology is used for the tasks that are used to transmit, store, create, display or exchange information by electronic means. This broad definition of information and communication technology includes all radio, TV, video, DVD, telephone (both landline and mobile phones), satellite systems, computer, and network hardware and software; Apart from this, services and devices related to these technologies, such as video conferencing, e-mail and blogs, etc., also come under the purview of ICT.

There is a need to incorporate modern forms of Information and Communication Technology (ICT) in education to realize the educational objectives of the Information Age. To do this effectively, education planners, principals, teachers, and technology experts will need to make several decisions in the areas of technology, training, financial, educational, and infrastructural requirements. For most people, this task will be as difficult not only as learning a new language but as teaching in that language. Teachers, planners, researchers, etc., all seem to broadly agree that ICT has the potential to make a positive and significant impact on education. What is still being debated is the exact role of ICT in education reform and the best ways to harness its potential.

Invention drawn from around the world to demonstrate policies, strategies, and practical steps for the use of technology, Success covers the following topics. such as educational TV, educational radio, web-based instruction, libraries for discovery, practical activities in science and technology, use of media, technology for teacher preparation and career-related training, technology for design and data management, technology for school management, and technology studies in various fields including instructional material, audio, visual and digital products, software and content are communication channels, media, educational websites.

A portfolio is intended to be a complete collection of selected student work that provides the student and others with a description of the student's efforts and achievements in one or more areas. Portfolio types include Learning Portfolio, Credential Portfolio, Showcase Portfolio, Dossier Portfolio, Training Portfolio, Reflective Portfolio, etc. E-portfolio refers to certificates (artifacts) stored and preserved in digital form that represent and reflect the hard work, creativity, and collaboration of an individual. The benefits of an e-portfolio include the development of skills of information and

communication techniques in the students, information of the student's past knowledge, continuous cumulative record of student's achievement, help in self-assessment of the student, etc. Google Sites is one of the main tools for building an e-portfolio. Evernote, Word Press, etc. E-learning is a form of computer-based student-controlled instruction, which generally refers to the use of information and communication technology systems in teaching and learning. Many forms of e-learning are becoming popular in the present time and for this many other terms such as online learning, virtual learning, and web-based learning is used. The types of e-learning are individual self-paced e-learning online, individual self-paced e-learning offline, synchronous (group based) e-learning, asynchronous (group based) e-learning, etc., and many more. The service providers providing the service of learning are Coursera, edx, Alison, etc.

 Moodle (Modular Object-Oriented Dynamic Learning Environment (Moodle)) Moodle is a learning management system or software primarily available within a free, open-source educational resource that is used for e-learning or online learning. Its broad form is Modular Object-Oriented Dynamic Learning Environment. Moodle's development is credited to Martin Doziam, who created it to help teachers build online courses. The first version of Moodle was made available on 20 August 2002. The word silent was first used in 2008 by Dave Cormier. Dave for the course called Connectivism and Connective Knowledge, a free online course developed by George Simon and Stephen Down. Mook is a completely internet-based open learning system designed for a large number of participants. Teaching, education, and research material produced in any medium that is available digitally or otherwise in the public domain or is released under an open license and is available without cost and without restrictions Or it is an Open Educational Resource (OER) that provides freedom to use, adapt and redistribute by others with limited restrictions.

Rubrics means "the marking guide used to assess the quality of students. Ruby Star, RCA Campus, Google Force, etc. are the service providers of building rubrics. Today these innovative ICTs are being used for education in many countries including India.

Information and communication technology (ICT) in education is the method of education that uses information and communication technology to support, enhance and optimize the delivery of information. Research around the world has shown that ICT can lead to better student learning and better teaching methods. The use of ICT leads to adverse economic consequences, social consequences, loss of earnings, and loss of self-esteem and status among the people in society. Less personal contact: Working from home, which is considered an advantage of ICT, also hurts the individual. Information communication technology (ICT) tools contribute to high-quality lessons because they help increase student motivation, connect students to multiple information sources, support active in-class and out-class learning environments, and facilitate instructors. Ability to allocate more time. The opportunities for collaboration and communication have also been expanded by technology. The walls of classrooms are no longer a barrier as technology enables new ways of communicating, learning, and working collaboratively. Technology has also started changing the roles of teachers and learners.

 By integrating technology into education, teachers aim to generate pedagogical change and address fundamental issues that affect learners with special needs. Therefore, technology can be seen as both a tool and a catalyst for change. Today, technologies used to improve and facilitate learning can be found everywhere. ICT is considered a powerful tool for educational change and improvement. Several previous studies have shown that appropriate use of ICT can enhance educational quality and link learning to real-life situations. Through ICT, learning can happen anywhere and anytime.

II. CONCLUSION

 There should be a need assessment before evaluation in the creation and participation of teacher professional development activities, these activities should be regularly monitored and assessed, and feedback loops should be established if professional development is to be effective, and targeted to the needs of teachers. Are. Continuous and regular help is essential to help in the professional development of the teacher and this can be provided through the use of ICT. A variety of changes must be made to implement adaptation to teacher use of it. Changes in teaching methods, changes in curriculum and assessment, and granting more autonomy to schools help adapt to ICT use. With enough enabling factors, teachers can use ICT as 'constructively' as their pedagogical philosophy allows. If ICT is to be used effectively, teachers should have adequate availability of working computers and should be provided with adequate technical support. Adequate time should be given to teachers to develop new skills, find their uniformity in their existing teaching methods and curricula, and plan the additional lessons required. While the introduction of ICT as an

aid to education is often part of a larger change or reform process, knowledge of the successful use of ICT must be promoted and disseminated.

REFERENCES

[1]. https://www.redalyc.org/journal/3033/303357581005/html/

[2]. http://www.gangainstituteofeducation.com/june/junerenu.pdf

[3]. https://link.springer.com/article/10.1007/s10639-019-09908-0

[4]. https://journals.sagepub.com/doi/abs/10.1177/2042753020957493

[5]. https://www.researchgate.net/publication/279640233_Role_of_ICT_in_the_Process_of_Teaching_and_Learning

[6]. https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.463.953&rep=rep1&type=pdf

[7]. https://ijarm.com/pdfcopy/2021/may2021/ijarm4.pdf

[8]. https://www.ripublication.com/ijeis16/ijeisv6n1_01.pdf

[9]. https://core.ac.uk/download/pdf/234642177.pdf

[10]. https://learningportal.iiep.unesco.org/en/issue-briefs/improve-learning/information-and-communication-technology-ict-in-education

[11]. https://www.oecd.org/education/ceri/Technology-rich%20Innovative%20Learning%20Environments%20by%20Jennifer%20Groff.pdf

[12]. https://www.oecd.org/education/ceri/GEIS2016-Background-document.pdf

[13]. https://www.riebbs.ac.in/images/documents/ICT.pdf

[14]. https://digitallearning.eletsonline.com/2020/10/teaching-and-learning-with-ict-tools-issues-and-challenges/

[15]. https://www.tandfonline.com/doi/full/10.1080/09687769.2010.529108

[16]. https://eera-ecer.de/ecer-programmes/conference/20/contribution/35828/

[17]. https://unevoc.unesco.org/fileadmin/up/emergingtrendsinictforeducationandtraining.pdf

[18]. https://www.academia.edu/4732882/The_Role_of_ICT_to_Make_Teaching_Learning_Effective_in_Higher_Institutions_of_Learning_in_Ugand

[19]. https://ijissh.org/storage/Volume4/Issue6/IJISSH-040611.pdf

[20]. https://files.eric.ed.gov/fulltext/EJ1056082.pdf

[21]. https://www.ijsr.net/archive/v9i6/SR20226203748.pdf

[22]. https://sites.google.com/site/journaloftechnologyforelt/archive/volume-6-no/2-role-of-ict-in-the-enhancement-of-english-language-skills-among-the-learners

[23]. https://www.intechopen.com/chapters/58311