Role of ICT in Teaching-Learning Process

Sajad Ahmad Hajam

Lecturer

GDC Budhal

Rajouri

Jammu Kashmir

Hajamsajad121@gmail.com

Abstract

ICT has three words information, Communication and Technology. It means to promote information via communication with the help of technology. It involves storage, processing, transmission and display of information by electronic means. ICT enables self-paced learning through various such as assignment, computer and Television etc. as a result of this the teaching learning process has become more productive and meaningful. The use of ICT in classroom teaching learning is very important as it provides opportunities for teachers and students to operate, store, manipulate and retrieve information, encourage independent and active learning and self-responsibility for learning such as distance learning, motivate students and teachers. ICT helps in the professional development of teaching and learning and individuals involved in the program of teacher education. ICT provides access to resources so that teachers can apply new knowledge and skills they have leant.

Keywords: ICT, ICT tools, Web Browsers, Technology enhanced learning, Instructional software, U-learning, E-learning, Blended, integrated Learning, Impact, Learning outcome, pedagogies

Introduction

The world that awaits us is a world of huge technical change presently the world is inhabited by very large number of scientists and technologists that have lived on it during the history of mankind. All developments mainly on the economic growth of the nation are based on updated knowledge and information into economic activity has resulted in a profound structural and qualitative change. Appropriate use of ICT can transform the whole teaching-

learning processes leading to paradigm shift in both content and teaching methodology. ICT has the potential to transcend the barrier and space. ICT integrates in the field of education and has impacted hugely in improving the quality of education. It is widely believed that ICT integration with help us in making education more accessible and affordable increasing role of ICT will make education more democratic that is improving the quality education services available to even students sitting in far-flung remotest corners of the country. The new environment of interactive-centered approach of ICT has completely meta-morphosis the process of education i.e. delivery and dissemination. The technological creativity learner will help generate sharing of knowledge to perform tasks in a better way and to develop their capacity and skills keep pace with the rapid changes but the pace of change is so fast that what was avant-grade few years ago in just a thing of past. We must not allow the ICT related opportunities to slip out of our hands.We must empower our youth with the latest technology to tap the latest skills and hidden potential of our youth population. There is considerable hope that technology can expand and improve education in all levels with special reference to design and content of instructional materials, delivery, and assessment and feedback.In Technology enhanced Learning (TEL) teacher's role will be more challenging and definitely different from what is presently the traditional class room teaching. In the new role he will be more a director/coach or a facilitator, because the ET enhances the quality of teaching and learning by arousing inquiry, curiosity and exploration. ICT will afford opportunity to the individual for self-paced learning, which caters to leaners abilities and aptitude.

Scope of study

The paper attempts to discuss the role of ICT to meet the challenges of knowledge economy and to explain the development of new methodology of learning and teaching aptitude in the changing text i.e. privatization, liberalization and globalization. One of the major advantages of using ICT's in the class room has been to prepare the present and next generation of students for a workplace where ICT's particularly computers internet and others related technologies are becoming more and more important. These computer savvy and technologically literate students possess the desired competencies to use ICT's effectively. These knowledgeable persons possess the competitive edge in an increasingly uncertain globalizing job market. Along with the technology literacy development of specificity skills are also required. For well-paying jobs specifically of skill is of the primary importance.

ICT which includes radio and television as well as other high technology newer digital devices such as computer and Internet have been treated as generally powerful enabling tolls or educational change and reform. On-line teaching as innovative teaching has been accepted widely, which includes on-line networking, role of e-moderator, e-learning? Web-sites which are very popular with teachers and students are Google, Yahoo, Gmail, Rediff mail, Wikipedia. The modern concepts of ICT have helped professionals to cap the challenges for digital information and technology through the development of digital literacy resources. This can be built by:

a) Acquiring Digital Media
b) Buying Access etc.

The role of computers in Education is generally helpful for educational activity which requires significant interaction for that instructional software should be highly interactive. Interactive learning environments are called Intelligent Testing System. Because of their interactive capability computers provide individualized and self-paced learning. SW may be customized to meet the specific requirements of the individuals depending upon and their diverse background and abilities. The use of word Excel, Access, PowerPoint, animation, graphics can be utilized to enhance the learning of content. Computers are good for explaining complex processes. Computer-aided learning is not a replacement technology but a complementary tool. Computers are useful for teaching, problem solving and decision-making skills. providing internet connectivity and now through UGC-INFONET which is planning to provide those facilities like E-access to journals. CAL and E-governance to become reality. Electronic journal may be defined as any journal, magazine, e-zine, Webzine, newsletter or type of electronic serial publication which is available over the internet and can be assessed using different technologies such as World Wide Web {WWW}.

Growing Use of Emerging Methods of Modern Educational Technologies

Technology is a powerful tool and it is playing pivotal role in transform all aspect of life. In education it has entered late in comparison to other mode of survival. It facilities all educational participants and develops advance relationships between educators and students. It is helping society and education participant to reinvent their approaches, it is helping us in leaning and collaborating, it is helping us to minimize the long -standing gap and build equity and in adopting learning experiences to meet the needs of the learners. It is helping educators to seek new knowledge and upgrade skills along with their students. It is helping educators to

become leader leader and set vision to create learning experiences which provide leverage and support to the students. To make education system more effective, easy and relevant and to provide authentic learning experiences, educator must adopt, and practice technology effectively. For the betterment of the education systemall the education stakeholders and participant {Teachers, Faculties, Leader, Researcher, Parents. Policymakers, Financers, Promoters, Technology Innovators and Developers, Society, Community and Organizations} have to adapt and use technology.

Electronic Learning {E-learning}

All electronic source of information which facilitate in learning, training and education program is a part of e-learning. It is broad educational concept primarily characterized using electronic information network, media, computer, electronic devices and other types of communication technologies like, internet -based learning. Intranet {LAN} extranet {WAN}, online education, computer-based training, DVD, You Tube, video-based learning, CD-ROM based learning, Webinars, Virtual classrooms, Mobile learning, custom e learning off – the shelf e learning etc.

Blended Learning

Blended Learning model is a combination of "Teacher, Pedagogy, E-Technology" and Learners. In this, teaching is been carried out face-to-face in the classroom with the use of E-Technologies Solutions. This model offers synergies between the teaching process and pedagogy with Educational technology. In this teacher invest time and create learning materials to manage learners and proceed through all quadrants. Teachers develop dynamic learning environment by facilitating learners with E—Study Materials which generate curiosity among learners to learn. This model allows students to have some control over time, place, path or peace of learning. Students adjudicate at what time they need, at what place they need and what they need in learning. Sometime learners and teachers are fac e to face in large groups, some time they are face to face in small groups and some time learning from their peers, nears and dears. Blended learning facilitates learning activities through variety of technology enabled leaning zones optimized for collaboration, informal learning and individual focused study.

Active Learning

Growing ICT use in education has enabled learners in many ways. These learners are learning according to their desires, need and requirement. ICT mobilizing required tools for examination and calculation. It is facilitating leaners to make an appropriate analysis and it serving as an active learning platform for students where student can entire and construct new information of their use. It is making learning more relevant and appropriate analysis and it serving as an active learning platform for students where student can enquire and construct new information of their use. It is making learning more relevant and appropriate to their life situations. ICT transformed traditional pedagogy of memorization into enhanced learning through increased learning engagements. It developed just in time learning system in which active learner what they want to learn and what and when they need to learn.

Collaborative Learning

ICT use in education has developed a deep link and a sound relation among learners, teachers and experts. It encourages interaction among them irrespective of their cast, creed, religion and destination. Educational ICT has created, is creating and will create opportunity for all educational participants and is helping learners in learning and enhancing participant communication skills and their collective awareness. This collaborative learning is not limited to particular age but throughout the life learners can expand their learning. They can collaborate across the world with pears, experts and mentors of diversified fields.

Integrated Learning

Educational ICT has enhanced learning and elevated learning standard. It promoted thematic integrative approach of teaching and learning rather than memorization. Integrated learning modules of educational ICT are basically thematically focused classes and are delivered primarily over internet. The course content is integrated and comprehensive according to the themes. Content is also integrated with language and facilitate learners to learn both content and that through additional language. It stimulated in depth discussions and forced teachers to rethink, redesign and keep on updating their pedagogical models according to the theme. This model also eliminates the artificial separation between various academic disciplines, theory and practice.

Creative and Innovative Learning

Through technology educators are connected to global educators and experts. Educational ICT has provided a common platform to all academic participants. It has empowered

educator to become co-learner, innovative learner and creative leaner with their students by exploring the thematic content deeply. Educators by connecting with global academic network can develop creative and innovative pedagogical approach and content. Through educational ICT use educator can share their creative and innovative views with educator community and with students. ICT supported learning promotes innovation among educator they can collect the available information and can redesign it and present it in creative and innovative form. Educator and leaner can become engineer of collaboration, designer of creative learning experiences, leader of innovative learning, guides and catalyst of change. All creative and academic innovation elements make learning relevant and authentic. By using innovative tools such as video conferencing, online chat and social media sites educators can collect and collaborate with students and share information's views and experiences.

Learning through Blogging

Blogging is an active and widely accepted and standardized type of informative website. It is mainly used and maintained by an individual person. In this individual's account holder upload personal events, descriptions of events, commentary, political, social and academic views and share free available graphics and videos. All blogs are free to interact and comments on events are highly desired and acceptable. Through educative blog learners and experts interact frequently and share experience and clarify the doubts through discussion and debate. Learners post their question and seek answer information from the global experts and users.

Learners through Podcast

Podcast is non-streamed web cast. This approach facilitates educators and learners through series of audio or video files which are released in form of episode and participants download these uploaded materials through web syndication. Uploaded audio or video files accessing media on net. All the associated files are maintained and controlled centrally on the distributor web feed. Learners and other participant in podcast approach use pod catcher to assess this web feed and download files from the available services. Through this ICT approach learners update, demand and download specific information's according to their need.

Mobile Learning

Hybrid mobiles are minicomputer and facilitating all academic participants in many ways. It has emerged as a most competitive mode of educational learning tool. Educator must develop new and extended learning designs that link pedagogical strategies effectively. New created mobile learning content design must consider the basic required outcomes, futuristic pedagogy, and educational ethics and cost effective. In mobile learning integration, support interactive use and appropriate choice of tools are important factors of pedagogy.

Information And Computer Technology{ICT} Enabled Learning

Growing use of ICT in education has provided multiple academic platforms to access learning opportunities apart from the traditional barriers of time and place. It is facilitating students who are in job or are dropout but want to continue their study to access learning opportunities outside the educational institutions. It is providing high quality learning materials and their resources to students without any geographical boundary. It is enhancing learner's learning's experience through blended learning approach. To facilitate learners and educator's ICT is providing opportunity to students to combine and in person learning and it is accessing resources to students and guiding them to complete some academic activities conveniently and participate later in group discussions. It is helping educator to assess student's academic strength and compare their past and present level knowledge, their interest and motivation and support them to develop excellence. It is helping educator to provide personalize feedback, instructions and additional academic supportive material to students. ICT is also facilitating students to connect to non-academic support and helping them to manage their personal life challenges which might become obstacle in learning. It is also helping disable students especially in higher education and ensuring their active participation in educational programs and in other academic activities. It is providing them auxiliary aids and services for better communication. It is providing text books with speech to text assistive technology etc.

Positive Information And Computer Technology {ICT} Impact In Education

Present world is moving on technology and expected future is the same. Expecting things without technology is impossible. In present era of civilization, it is difficult to imagine learning environment without ICT. Use of ICT in modern society has grown tremendously and became a critical vehicle and has impacted the complete learning process. By adopting ICT teachers become more collaborative, competitive and futuristic and extended learning beyond the classroom. Introduction of ICT in classrooms has impacted positively, digital

boards attractive features have improved learning base of students. Use of educational ICT helped nations in reducing the teachers to student's ratio where they were high in comparison to international recommended standards. ICT use helped the institutions to identify their social, regional and global status. It helps institutions to make effective and authentic SWAT analysis of their institutions and take necessary action for the betterment of the institution. The greatest achievement of educational ICT is that it is converted world into village and helped education to penetrate deep in society at low cost with ease in the form of distance education and online education.

Conclusion

ICT enables self -paced learning through various tools such as assignment, computer etc. as result of this the teaching learning process has become more productive and meaningful. ICT helps facilitate the transactions between producers and users by keeping the students updated and enhancing teacher's capacity and ability fostering a live contact between the teacher and the student through e-mail, chalk session, e-learning, web-based learning and more such tools.

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