



ROLE OF ICT IN TEACHING AND LEARNING

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ABSTRACT

In this paper we explore the Role of ICT in education. A present new era has evolved in the education sector by means of ICTs. Different ICTs are now set to become instrumental to help expand access to education, strengthen the relevance of education to the increasingly digital workplace, and raise educational quality by, among others, helping make teaching and learning into an engaging, active process connected to real life. The application and exposure to and deployment of ICTs fundamentally change the way education is conceived and delivered to students. ICTs are enablers that optimize student-centered pedagogical methods. Due to its easy accessibility this means of education has become very popular all over the world. Distance education has got a thrust after the evolution of ICT-based education system. Uses of ICTs in education are widespread and are continually growing worldwide. It is generally believed that ICTs can empower teachers and learners, making significant contributions to learning and achievement. Of the teachers interviewed on the effectiveness of ICT in education majority of them felt that introduction and use of ICT adequately will be extremely effective in children's learning and achievement. Many teachers are reluctant to use ICTs, especially computers and the internet. Some of the reasons for this reluctance include poor software design, skepticism about the effectiveness of computers in improving learning outcomes, lack of administrative support, increased time and effort needed to learn the technology and how to use it for teaching, and the fear of losing their authority in the classroom as it becomes more learner-centered. In terms of using internet and other ICT as a resource for lesson preparation, most of the teachers interviewed, admitted to never or rarely using it, while very few used the internet to gather information sporadically or regularly. This paper intends to give an idea about ICT-based education all over the globe and its applicability in teaching and learning.

KEYWORDS: *ICT, Computer, Internet, World Wide Web, Teleconferencing, Radio, Television.*

INTRODUCTION

The education has vital role in building the society. Education determines standard 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. 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.

Convergence in communication technologies means that different kinds of communication technologies are coming closer to each other. During the past few decades of rapid technological advancements the borders between

telecommunications, the Internet and mass media are receding. The convergence of communication technologies means one terminal device, for example a mobile telephone or a digital television can be used for various different services.

Media sources find ways to get involved with the new technology, Internet. Due to the high demand for the new media called Internet, other sources of media such as newspapers and other TV channels started taking advantage of this source and- began to make their homepages on Internet sites. The difference between the Internet and other media sources is that Internet provides Information technology, such as digital recording system, voices, images and broadcasting media etc. all in one medium.

The peculiarity of the emerging information society also is that both information and communication technologies such as telephone, computer, cable television and other media



technologies are all merging together to form one entity working for the effective communication of information compressing time and space to almost nil. Digitization, convergence of technologies, and networking (all the specialties of postmodern technologies) lead to a transformation in the nature and expectations of mass media.

These technological advancements made mass media more interactive. For example SMS voting became popular in the present times and increased audience interactivity in the case of both print (such as newspaper) and broadcasting media (such as television and radio). The convergence of media technologies and the digital forms of access and delivery offer even more ways for the audiences to engage with the media.

The convergence of wireless form of communication allows the audience to a higher interactive platform. For example an IGNOU student sitting at the study Centre can engage in a discussion with the subject expert at the University centre also by viewing him on the TV screen. Another example is how some official web sites invite audience to vote and decide what is being broadcasted or a viewer can ask a question to the anchor of a programme while it is being broadcasted either in TV or radio. It is important to state that the convergence seems to be a condition of all contemporary media and the media technologies; all contemporary media can be associated with other media forms and the boundary between them are getting less clear as new technology developments enters the market. New technologies that allow convergence between televisions and computers have been developed. Experts even predict a total convergence of television and Internet where Internet is available through TV sets.

UNESCO ICT Competency Standards for Teachers

In recent years, several studies and reports have highlighted the opportunities and the potential benefits of information and communication technologies (ICT) for improving the quality of education. ICT is viewed as a “major tool for building knowledge societies” (UNESCO 2003) and, particularly, as a mechanism at

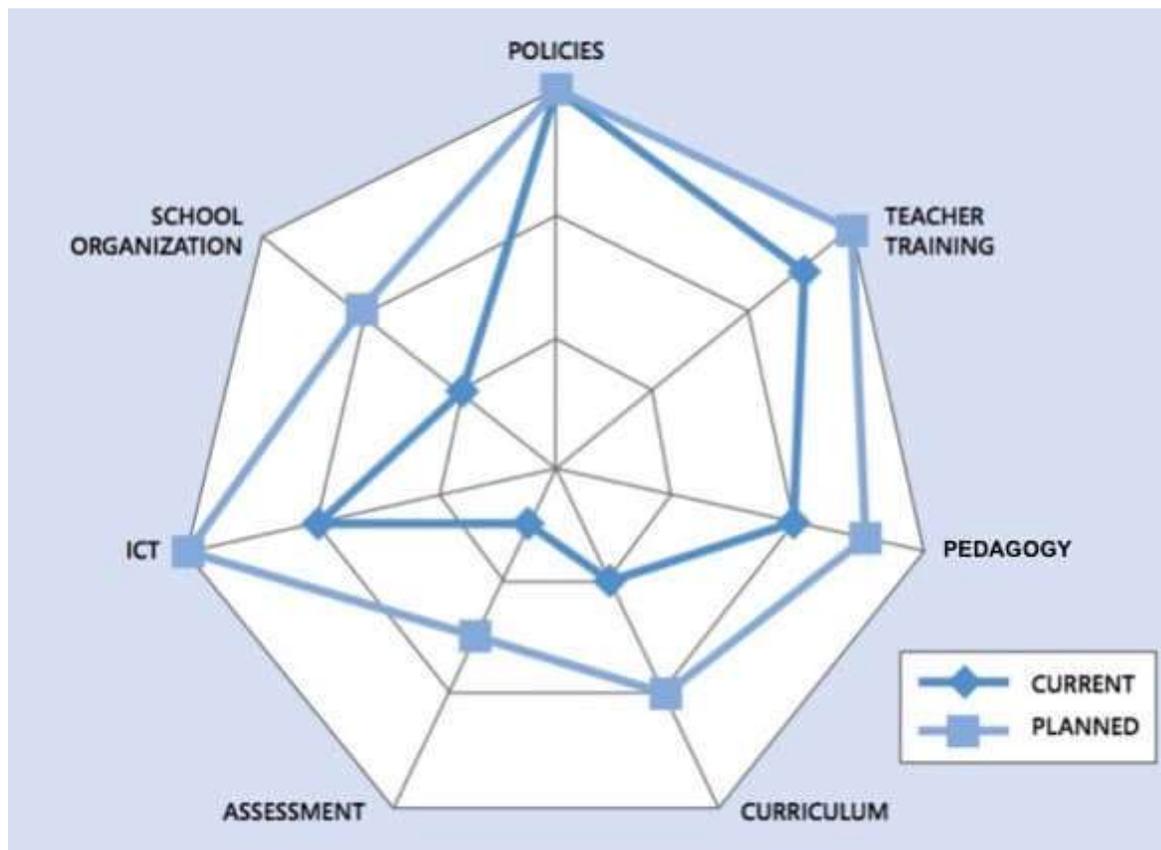
the school education level that could provide a way to rethink and redesign the educational systems and processes, thus leading to quality education for all.

Use of ICT in school education is considered a key factor in improving quality at this educational level. UNESCO is promoting the use of ICT in learning processes through its eLearning Action Plan, one of the aims of which is “to improve the quality of learning by facilitating access to resources and services as well as remote exchange and collaboration” This report outlines several aspects to be observed and promoted, such as widespread access to broadband technologies, professional development support policies for teachers, more research into how people teach and learn using ICT, development of new high-quality online content and adaptation of current regulations to make the use of ICT at schools easier, as more recent UNESCO publications also highlight (UNESCO 2008).

The efforts of different governments and administrations have been focusing on providing the schools with good equipment. However, an analysis of the educational uses of ICT in the classroom has been lacking.

This research focuses on the need to develop appropriate strategies to face this new teaching role and, additionally, the students’ role when integrating ICT in the teaching and learning processes. The role and the perspective of teachers have become highly relevant, highlighting them as crucial players in this process. Particularly, teachers use technology depending on their perceptions and their trust in the way it can contribute to the teacher and the learning process. Through knowing what they think, we will be closer to understanding what they do or what they might do with technology in their classrooms and in relation to their work.

According to UNESCO, “Measuring ICT in education is therefore important to inform policy makers in setting national priorities and developing ICT in education policy.”



Published in 2008 by the United Nations Educational, Scientific and Cultural Organization (UNESCO), the ICT Competency Standards for Teachers is a useful reference document for school leaders and teachers. The standards used to develop teacher competency consist of three parts:

a policy framework explaining the rationale, structure and approach of the project;

a competency standards modules' structure, which crosses the components of educational reform with various policy approaches to generate a matrix of skill sets for teachers; and Implementation guidelines providing a detailed syllabus of the specific skills to be acquired by teachers within each skill set or module.

To live, learn, and work successfully in an increasingly complex, information-rich and knowledge-based society, students and teachers must utilize technology effectively. Within a sound educational setting, technology can enable students to become:

- Capable information technology users
- Information seekers, analyzers, and evaluators
- Problem solvers and decision makers
- Creative and effective users of productivity tools

- Communicators, collaborators, publishers, and producers
- Informed, responsible, and contributing citizens

Through the ongoing and effective use of technology in the schooling process, students have the opportunity to acquire important technology capabilities. The key individual in helping students develop those capabilities is the classroom teacher. The teacher is responsible for establishing the classroom environment and preparing the learning opportunities that facilitate students' use of technology to learn, and communicate. Consequently, it is critical that all classroom teachers are prepared to provide their students with these opportunities.

Both professional development programs for teachers currently in the classroom and programs for preparing future teachers should provide technology-rich experiences throughout all aspects of the training coaching and (professional learning).

Standards and resources within UNESCO's project "ICT Competency Standards for Teachers" (ICT-CST) provide guidelines for all teachers, specifically for planning teacher education programs and training offerings that will prepare them to play an



essential role in producing technology- capable students.

ICT AND ITS INFLUENCE FOR QUALITY EDUCATION

Information communication technologies are influencing all aspects of life, in which the impacts of ICT is significant is education. ICTs 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. ICT enables a teacher to reach out widely efficiently and effectively. It helps teachers and institutions to be more modern and dynamic[5]. Eventually, the use of ICT will enhance the learning experiences of students. It also helps for building a successful career, in a technology savvy world. The function of ICT in education is inevitable. Quick changes in the modern technologies, which shows that role of ICT in future education. □ The current educational practices deserves the development of ICT based education in different subject which is developing the attention among the learners and create the interest in the particular subject in their learning environment. □ ICT also focuses modification of the role of teachers. Teacher who can serve as a facilitator for the students who learning their subject through information communication technology and addition that the class teacher who will act as a guide for directing the students who use the electronic media in their curriculum transaction. □ Ultimately, the use of ICT will enhance the learning experiences of students [6]. 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

ICT CHANGE THE VIEW OF TEACHING AND LEARNING

EDUSAT is used to share the available expertise through modular programs. It has done by networking institutions, creation of virtual laboratories, creation of database, access to expert lectures and technological development in organizations. In the field of education ICT is inevitable one at present context. Therefore every teacher should know the reality of ICT and its importance in the field of education and teaching learning process. The real teaching environment is required to obtaining the students attention through various information and communication technology

devices are available in their institution itself. ICT in education change the view of learning from teacher centered to student centered learning system and the teacher are the facilitators, coaches and mentors were ICT Support the learning environment to student [9]. At this juncture, some of the supporting environments are Tele Education system, virtual Learning campus (VLC), Virtual libraries and digital learning, Distance learning and wireless connectivity. VI. ENSURING QUALITY EDUCATION THROUGH ICT Largely based on teacher opinion, of the potential of ICT to enhance educational quality; they also identified teachers with concerns about it leading to waste of student time and the encouragement of superficial work.

ENSURING QUALITY EDUCATION THROUGH ICT

Largely based on teacher opinion, of the potential of ICT to enhance educational quality; they also identified teachers with concerns about it leading to waste of student time and the encouragement of superficial work. This range of opinion reinforces that the educational impact of ICT depends largely on the use to which it is put. Where ICT is used to facilitate the students. It is likely to promote inter alia the development of analytical and information handling skills. While they are important life skills, they may not be reflected in curriculum and assessment system, student centered learning will tend to flourish on more fertile ground when there is harmony with such assessment systems.

ICT AND QUALITY TEACHING

ICT is an extended term for Information technology which is a technological source to make information available at the right time, right place in the right form to the right user. Earlier, one had to wait for the newspapers to get the information across the world. Now with the smarter technology, information can be accessed from anywhere using smart phones and gadgets. Technology at present occupies a crucial role for developing the teaching learning process at school environment.

CONCLUSION

Information and Communication Technology (ICT) in education is the mode of education that use information and communications technology to support, enhance, and optimise the delivery of information. Worldwide research has shown that ICT can lead to an improved student learning and better



teaching methods. A report made by the National Institute of Multimedia Education in Japan, proved that an increase in the use of ICT in education with integrating technology to the curriculum has a significant and positive impact on students' achievements. The results specifically showed that the students who are continuously exposed to technology through education has better 'knowledge', presentation skills, innovative capabilities, and are ready to take more efforts into learning as compared to their counterparts.

New trends

Introducing ICT into education is the answer for those who ask; 'how can we increase the reach of our institution, to a larger number of students?'

The Mobile learning (m-learning) as a form of e-learning is a rising trend where the education has outgrown the physical constraints of the classrooms and acquired mobility. Students access information whenever and wherever they want, and institutions that provides such advanced technological terrains is rising in number day by day.

Various devices/technology in ICT includes:

- Access of course materials through remote devices,
- Online digital repositories for lectures, course materials, and digital library,
- Online/ cloud based academic management systems,
- Employing the flipped classroom concept,
- Making use of handheld computers, tablet computers, audio players, projector devices etc.

Also, the rising number of Massive Open Online Courses(MOOCs) like the coursera, khan academy, and edx tells us that there is a huge demand for off-the-classroom learning facilities. The future of our institutions will depend on whether or not they can satisfy those needs.

Policy -makers accepts that ICT in education can help the students to compete in the global economy by being part of a skilled workforce and facilitate social mobility by:

- Enhancing learning experiences and providing new sets of skills,
- Reaching more students with Massive Open Online Courses(MOOCs),
- Facilitating the training of faculties,
- Minimising costs and saving time associated with information delivery and automating regular day-to-day tasks,

- Improving the administration of institutions to enhance the quality and efficiency of service delivery.

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