

Role of information and communication technology (ICT) in promoting knowledge based society

Najmah Peerzada

Sr. Assistant Professor Faculty of Education University of Kashmir, Jammu & Kashmir, India

Abstract

The use of information and communication technology is becoming an integral part of education. Shifting from Black Board to smart classroom has changed the facet of the modern classroom. Information Communication Technologies (ICTs) can substantially support the educational system if a teacher is enough competent to use the tool. It has changed the society into informative society. The main objective of this research article is to describe the role of ICT in present system of education. Using different ICTs appropriately can help in expanding access to education and making teaching- learning process connected to real life.

Keywords: Information and Communication Technology, Educational Process, Teacher Education, Quality Education

Introduction

Knowledge based society is a society where creating, sharing and using knowledge are key factors in the prosperity and well-being of its people. Knowledge economy, Knowledge workers, Knowledge management are various facets of knowledge society. The emergence of information technology and access to electronic media, advanced telecommunication system, audio- visual technology and multimedia has led to new possibilities of collection, development, organization and dissemination of information. Digital resources offers one such possibility and poses an advantage over traditional source with respect to access to information.

The technological changes are taking place at a very high speed especially in comparatively new and emerging disciplines. The conventional disciplines are also applying the knowledge of emerging disciplines. The fast change in the computer and information technology is affecting the way of life. The use of information and communication technology (ICT) has made a dramatic impact on the contemporary society. Information and communication is considered as a potent agent in shaping the new global economy and producing radical changes in society we live in.

The information and communication technology revolution is an important in terms of its spillover and economic impact as many technological revolution of the past two centuries. The new technology has not only led to the introduction of a wide range of new products, but has also resulted in a sharp decline in costs and vastly improved technical performance in many sectors of the economy. Global information networks have made it possible for different process in the production chain to be linked worldwide, resulting in sharp decline in transaction casts. The impact of ICT on learning is currently in relation to use of digital media, primarily computers and internet to facilitate teaching and learning. ICTs are the technologies used in conveying, manipulating and storage of data by electronic means. ICTs provide an array of powerful tools that may help in transforming the present isolated teacher- centered and text-bound classrooms into rich, student-focused, interactive knowledge based environment.

It is without any doubt that significant changes over the past

decade in ICTs have impacted many aspects of our lives. ICT is an umbrella term that includes any communication device, or application encompassing Television, Cellular phones, Computer, Satellite system and so on. Educators, researchers and thinkers have take up the challenges of using ICT since 1980s. Information and Communication Technologies (ICT) continues an assembly of facilities used for the treatment, modification and exchange of information. ICT can be an effective tool in supporting teaching- learning, enhancing teaching- learning and to raising educational standards. ICT is believed to contribute to innovative, pupil centred learning environment which in turn acts as coaches instead of lectures (Verma, 2012) ^[1].

ICT Promotes Knowledge

Technology is affecting education in revolutionary ways and the momentum towards these changes is irreversible. The emergence of ICTs as learning technologies has coincided with a growing awareness and recognition of alternative theories. The theories of learning that hold the greatest way today are those based on constructivist principles (Duffy Cunningham, 1996) ^[7]. Undoubtedly the information and communication technologies has given rise to a phenomenal growth in global electronic commerce, improved quality of life, health care, emergency interventions, international understandings and is ushering in a knowledge based society with more conscious, humane and better informed citizens.

With the advent of internet technology, the world is fast becoming a global village. There will be always a void gap between information and knowledge that can only be bridged by education. Education calls for a smart link between sources of information and the user. Learning approaches using contemporary ICTs provide many opportunities for constructivist learning through their provision and support for resource based, students centered setting and by enabling learning to be related to context and to practice (Berge 1998) ^[3].

Using ICTs enable students to communicate with other students abroad and thus share each other's ideas, knowledge, experience and culture. It enables skills and capabilities of students, which assist them in studies and professional life.

ICT and Teacher

Information Communication Technology (ICT) has broadened the horizons of opportunities among teachers. With the technology facilitated learning there are now opportunities to extend the teaching pool beyond their specialties. Through the affordance and capabilities of technology, today we have a much expanded pool of teachers with varying roles able to provide support for learners in a variety of flexible settings. ICT has revolutioned and has brought drastic changes in teacher education. It is a well known fact that not a single teacher is capable of giving up to date and complete information in his subject. The ICT can fill this gap because it can provide access to different sources of information. Students and teachers can exchange their ideas and views and get clarification on any topic from different experts, and practitioners. On INTERNET many websites are available freely which may be utilized by students for understanding different concepts, improving Vocabulary developing Reasoning & Thinking etc.

Uses of ICT for Learning at Home

Desktops and laptops are available in every home and children of all groups are fond of using them. With the rapid changes in the society, computers have played major roles in creating generation gaps as a child is much better than his father in exploring multiple use of technology and leads him to new digital era. It facilitates self-learning, introduces educational skills, increases self-confidence, improves activity vocabulary etc. The internet access has made computer use more lively and productive. ICT is being utilized in every part of life. Due to increasing importance of computer, children the future citizens cannot afford to keep themselves aloof from this valuable medium. Profound technical knowledge and positive attitude towards this technology are the essential prerequisites for the successful citizens of the coming decades.

Conclusion

In view of the rapid advancement of knowledge and rapid growth of complexity of technological endeavour, the future will need greater technical competence. And as a consequence of this need, educators must provide improved methods of technology for today's need and the challenges of tomorrow. Advanced technologies like computers can be used to educate large numbers of students at all levels of education who are useful to themselves and to the society globally. Thus we can say information and communication technology is producing knowledge based society.

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