Impact of ICT on Education

Madhuri V. Tikam, H. R. College of Commerce & Economics, Mumbai, Maharashtra, India

ABSTRACT

Information and communication technologies (ICT) are extremely influencing every discipline under the sun including Education. It is affecting every aspect of education from teaching-learning to assessment and evaluation. It improves the effectiveness of education. It aids literacy movements. It enhances scope of education by facilitating mobile learning and inclusive education. It facilitates research and scholarly communication. Impact of ICT and its potential for the education field is manifold. It positively affects all the stakeholders of the education field. The current papers discuss the same along with the various challenges posed by ICT. The challenges include economical issues, educational and technical factors. Appropriate content, Design and workability of ICT also play a crucial role in adoption of ICT in the education field. The paper delineates in brief the challenges and probable solutions.

Keywords: E-Learning, Information and Communication Technologies and Research, Information and Communication Technologies for Education, Information and Communication Technologies for Inclusive Education, M-Learning

INTRODUCTION

UNESCO (2009) has rightly stated that the demand for higher education cannot be met in the developed and developing world without distance or virtual modes of learning which is facilitated by Information and Communication Technologies (ICT). The impact of ICT on trainers, learners, researchers and the entire learned society is tremendous. It is changing the contours of the education delivery system in the world by enhancing access to information for all. It also ensures effective and inclusive education. ICT supports the concept of open learning where the thrust is upon enhanced student access and the development of student autonomy.

ROLES OF ICT IN EDUCATION

ICT can play varied roles in developing an effective learning environment. It acts as a teacher and explains core content concepts and addresses misconceptions. It acts as a stimulant and fosters analytical thinking and interdisciplinary studies. It networks a learner with the peers and experts and develops collaborative atmosphere. It plays the role of a guide and mentor by providing tailor made instructions to meet individual needs. Online learning facilitates learning through digital mode. With the help of multimedia, it enhances effectiveness of teaching-learning and hence proves crucial for early learners, slow learners and differently abled learners. Modern ICT tools not only

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deliver the content but also replicate formal learning experience via virtual learning. The intention of virtual classrooms is to extend the structure and services that accompany formal education programs from the campus to learners.

ICT also addresses the need of mobile learning. It offers independent space and flexibility that comes from working away from the learning institute or tutor. It makes education accessible to all, irrespective of geographical barriers or resource constraints. Learners from remote areas, working people who want to learn further and update their knowledge and differently-abled students who find travelling an issue of concern - benefit from the mobile learning mode. As per Scott Motlik’s technical evaluation report on “Mobile Learning in Developing Nations”; by comparison, mobile phone technology is widespread, easy to use, and familiar to learners and instructors. (Motlik, 2008). An exploratory study of unsupervised mobile learning in rural India conducted by Anuj Kumar and his colleagues showed a reasonable level of academic learning and motivation among rural children who were voluntarily engaged in mobile learning. (Kumar, 2010). Similarly a study by Douglas Mcconatha, Matt Praul, and Michael J. Lynch, revealed that the use of mobile learning can make a positive and significant difference in the outcome performance than traditional methods of class lectures, notes and reviews (Mcconatha, 2008). Dr. Fahad N. Al-Fahad’s study about students’ attitudes and perceptions towards the effectiveness of mobile learning in King Saud University, Saudi Arabia, also supported that m learning makes the learners truly engaged learners who are behaviorally, intellectually and emotionally involved in their learning task. (Al-Fahad, 2009).

A lot of educational resources are available in m learning formats. Google books have worked with major publishers to bring pages, chapters and books in mobile readable format. It also offer mobile version of book search since February 2009. Other publishers like Amazon, EBL, BBC, etc. also provide mobile collection of e-books and/or audio books to their users. Databases like JSTOR, LexisNexis, EBSCO, etc. are available on mobile devices. Many libraries all over the world like California State University, Fullerton Pollak Library, National University of Singapore Libraries; Public Library Münster, Germany; University of Virginia Library; Washington State University Libraries; London School of Economics, United Kingdom; etc. offer mobile based library services. Many mobile service provider companies are providing educational programs via mobiles. E.g. Tata Docoma launched mobile sex education program – Sparsh, they also offers programs like English Seekho, Storytelling via mobile. Universities like S.N.D.T. Women’s University, Indira Gandhi Open University, etc. are developing tie ups with mobile service provider companies to offer distance education programs with the help of mobile phones. Publishers like Tata McGraw Hill also initiated mobile based courses like TOPCAT. Thus, ICT offers possibilities of transforming the learning paradigm and bringing knowledge to those who have not earlier been able to participate in education.

ICT AND INCLUSIVE EDUCATION

Inclusion helps to involve the identification and minimizing of barriers to learning. It encourages participation and maximizing of resources to support learning. This participation is irrespective of the gender, age, ability, ethnicity or impairment of learners. ICT proves a boon in such circumstances. It unlocks the hidden potential of those who have communication difficulties. It enables students to demonstrate achievement in ways which might not be possible with traditional methods by developing tailor-made tasks to suit individual skills and abilities. It improves independent access to students to educate themselves at their own pace. Visually impaired students using the internet can access information alongside their sighted peers while students with profound and multiple learning difficulties can communicate more easily besides gaining interest in educa-
Assessment and Contrast of the Effects of Information and Communication Technology
www.igi-global.com/article/assessment-contrast-effects-information-communication/41722?camid=4v1a

Internet Use among Older Adults: Constraints and Opportunities
www.igi-global.com/chapter/internet-use-among-older-adults/68310?camid=4v1a