

The Impact of Information and Communication Technology in Education: Opportunities and Challenges

Authors : M. Nadeem, S. Nasir, K. A. Moazzam, R. Kashif

Abstract : The remarkable growth and evolution in information and communication technology (ICT) in the past few decades has transformed modern society in almost every aspect of life. The impact and application of ICT have been observed in almost all walks of life including science, arts, business, health, management, engineering, sports, and education. ICT in education is being used extensively for student learning, creativity, interaction, and knowledge sharing and as a valuable source of teaching instrument. Apart from the student's perspective, it plays a vital role for teacher education, instructional methods and curriculum development. There is a significant difference in growth of ICT enabled education in developing countries compared to developed nations and according to research, this gap is widening. ICT gradually infiltrate in almost every aspect of life. It has a deep and profound impact on our social, economic, health, environment, development, work, learning, and education environments. ICT provides very effective and dominant tools for information and knowledge processing. It is firmly believed that the coming generation should be proficient and confident in the use of ICT to cope with the existing international standards. This is only possible if schools can provide basic ICT infrastructure to students and to develop an ICT-integrated curriculum which covers all aspects of learning and creativity in students. However, there is a digital divide and steps must be taken to reduce this digital divide considerably to have the profound impact of ICT in education all around the globe. This study is based on theoretical approach and an extensive literature review is being conducted to see the successful implementations of ICT integration in education and to identify technologies and models which have been used in education in developed countries. This paper deals with the modern applications of ICT in schools for both teachers and students to uplift the learning and creativity amongst the students. A brief history of technology in education is presented and discussed are some important ICT tools for both student and teacher's perspective. Basic ICT-based infrastructure for academic institutions is presented. The overall conclusion leads to the positive impact of ICT in education by providing an interactive, collaborative and challenging environment to students and teachers for knowledge sharing, learning and critical thinking.

Keywords : information and communication technology, ICT, education, ICT infrastructure, learning

Conference Title : ICHETL 2018 : International Conference on Higher Education Teaching and Learning

Conference Location : Rome, Italy

Conference Dates : November 12-13, 2018