

Impact of Modern Technology on Education

Lortie, K. L.

Department of Education, Universite Tunis Carthage, Tunisia.

ABSTRACT

Today the changes brought about by new technology had a significant effect on the life of people living in every corner of the globe. Traditional process of teaching and learning in education has been replaced by new and emerging technologies. Modern Technology is having a major impact on all areas of education- curriculum, methods of teaching, classroom learning etc. Rapid communication with increased access of Information Technology (IT) in home, work place and educational institutions has made education a life-long process. Modern technology helps in promoting opportunities of knowledge sharing throughout the world. These can help teachers and students in gaining up-to-date information and knowledge. For effective teaching and learning right information is necessary. Information technology is a set of tools that can help the right people with the right information at the right time. This paper highlights the importance of modern technology in educational sector and on classroom teaching.

Keywords: Information Technology, Teaching-learning process, Communication, Internet, Computer.

INTRODUCTION

In our contemporary society, knowledge and information are the main keys of obtaining the productivity, competition, wealth and comfort. So human beings have concentrated on approaches for gaining better quality of education. Education in the 21st century is the centre from which all changes and developments arise. Today information technology has the ability of facilitating the education and learning process. Information technology is referred to the knowledge process and its applying methods, processing, transferring and making information in progress IT includes gathering, organizing, storing, publishing and using the information in the form of sound , picture graphic, text, number, by using the computer and telecommunication tolls. Important changes resulting from IT, has became the source of basic changes in the classes [1]. The most important changes have roots in this fact that technology has enabled students to accent the out-of-class information and this has caused the increase of their motivations for learning.

Information Technology has affected changes to the methods, purpose and perceived potential of education.

Information technology can provide necessary educational information when needed. Technology is bound to rule our present and our future. This is an escapable fact that we need to face. It has ruled over different facets of our life and influenced the way we live. Computers and the Internet technology in particular have undoubtedly revolutionized the field of education [2] [3] [4]. It plays an important role in this field. The student teacher interaction has drastically changed since the introduction of technology based class structure. The teacher is no longer the centre of the classroom but rather a middleman between information and student. Instead of being passive listener, the students now become active in gaining, rearranging and displaying information.

As information technology has developed, it has provided increasing opportunities, options and strategies for education [5]. [6] argues that the prevalence of

information technology has generated an expectation that all education institutions will have a virtual as well as a physical location, and that students can now access most of the information they need via their web browser. This capacity of information technology to modify traditional understanding of the location of education, suggests the need for a completely different set of social and institutional infrastructures with which learning can be facilitated [7]. School, like work, is now not necessarily something one “goes to” - information technology means that both work and education has the potential to be delivered directly into the homes of most people in the developed countries. [8] argues that the current reformation of information technology directly impacts education, since it mediates the way information is accessed, organised, stored and transmitted; while [9] argues that information technology brings about change in the way information is also learnt and taught. These changes of access, learning and teaching have particular bearing on education and therefore require further examination.

Changes to learning

[10] argue that being able to access large databases of information fundamentally changes education, since learners can now be creators and collaborators in the access and construction of discourses of information. [11] argues that, due to their technological literacy, young people can derive cultural capital from their understanding of modern information technologies, and thereby have input into educational change. The same technology also facilitates the rapid exchange of information by researchers on specific topics, so that the speed of the dissemination of information is greatly increased [12]. [13] argues that the increased access to huge amounts of data means students need help selecting, evaluating and analysing information, and they need to learn how to determine the currency, validity and veracity of the information itself. All of these changes in learning have implications for teaching practice as well.

Changes to teaching

Information technology is enabling new ways of teaching [14]. [15] argue that the highest level of change occurring in relation to information technology and education is in the way teaching is increasingly being seen as occurring via the medium of technology, rather than utilising technology as an additional extra in the classroom. Information technology particularly impacts course content and teaching methodology and the recruitment and training of teaching staff [16] as well as the content of teacher education courses [17].

[18], [19] [20] all suggest that information technology requires teachers to learn new sets of skills. At a practical level, [21] [22] both note that the advent of information technology, particularly emails, have dramatically altered the activities of a typical academic and teaching day. Loveless, [24] further support this by suggesting that modern information technology can bring about change to the management of classrooms. [25] argues that utilising computer technology improves the educational experience of the students - not so much because of the media itself, but because software programs require teachers to think laterally and systematically, and produce better teaching materials. Thus, experientially, practically and pedagogically, teaching practices can be affected by information technology.

[11] argues that in the future, education will become increasingly interactive, individualised, flexible, accessible, computer-mediated (not assisted) and will displace campus-based schools. [21] argues that simulators offer a fantastic teaching and learning methodology, where students can “experience” the consequences of actions in a virtual environment. While such simulators are currently reserved predominantly for the military and avionics, [1] argues that they could have application in a wide range of educational situations including drug awareness, conflict resolution situations and even providing automated apprenticeships. [9] [10] see the role of a teacher becoming that of an instructional

designer, working with a team of people to create virtual educational experiences. [18] agrees that the role of teachers will change with the advances of information technologies but suggests a more pragmatic role. Students do not lack information, but rather the time to find, analyse, understand and apply information [23]. A teacher's role is therefore to help students develop skills in order to determine how to find, analyse and interpret information. [14] argue that the role of the teacher is to establish learning environments which facilitate co-authors of meaning.

[5] summarises the main elements of this shift and suggests that the role of teaching in information technology enhanced learning environments is to develop a student-centred learning environment, demonstrate effective information management strategies, stimulate active learning, and facilitate group learning activities. More than just a tool, information technology is increasingly becoming the content of education, as educators seek to teach students how to use the technology that is available [10].

Five ways technology has changed teaching and learning

The classroom of today looks and operates significantly differently to the classrooms of five, ten and even 20 years ago. Gone are the days of a solitary desktop computer in the corner, the 21st Century classroom houses various technologies from Interactive Flat Panel Displays (IFPDs), to tablets, laptops and smartphones, all seamlessly connected by Wi-Fi or Bluetooth and supported by a range of software from cloud-based to apps.

The current generations of digital-native students who are used to handling the latest technology have become more independent in the classroom and technology is an expected requirement rather than an added advantage. Technology changed the face of the classroom in various ways.

Simplifying Lesson Preparation

It goes without saying that the introduction of new technologies in

schools has had an impact on teaching. While technology must always be an extension of teaching, and something that enhances but does not replace, there are some benefits for schools wanting to simplify teacher's busy schedules. Lesson preparation is an area which technology can provide a substantial level of support. Software, such as Promethean's ClassFlow allows teachers to plan interactive, multimedia-rich lessons and create assessments and assignments that can be delivered across a range of technologies for use in and out of the classroom.

Aiding Assessment

Using technology for assessment can take on many forms, but overall technology can enhance assessment by providing schools with the means to design flexible assessment criteria that supports a wide range of student's skills and competences. In this instance ClassFlow provides teacher's with the means to use real-time feedback, which allows them to determine how well a class is understanding a lesson and even drill down to individual student's comprehension, meaning certain topics can be covered and explained again if required. For the school this should mean an overall improvement in reporting and potentially grades.

Breaking Down Boundaries

The most notable use of technology is that it no longer limits lesson time to the traditional four walls of the classroom, creating a true learning continuum between home and school. Schools are empowering teachers and students to take more control over their learning and harness the potential of new learning experiences, encouraging learning to take place in other venues such as libraries and museums. Students can use technology to meet, collaborate and create content virtually. Technology helps students to research subjects, share ideas and learn specific skills.

Encouraging Collaboration

Technology allows for such flexibility in learning that it is enabling our students to work in a more collaborative manner. Technology is a key building block in facilitating collaborative learning.

Interactive Flat Panel Displays (IFPDs) allow students to contribute to lesson content from the front of the class, engage with their peers in problem solving activities and create a more collective approach to lesson time.

Whereas laptops and mobile devices are key for remote collaboration and online learning outside of the classroom. Supported by technology, students are generating new approaches to problem solving and learning how to work alongside their peers, a great attribute for their future careers.

Introducing Interactivity

While text books still have a place in the classroom, the reality is that students are much more likely to be found using a laptop or tablet or even a smartphone to support their studies by researching on the Internet. Powered by software and apps and presented on the latest touchscreen displays, lessons are delivered in a much more engaging manner. Homework and assignments are also readily available as downloadable material, meaning that the whole education experience from classwork through to homework is much more interactive than the classroom of ten years ago.

CONCLUSION

Information technology helps teachers and learners to participate cooperatively in the teaching-learning process. It broadens their thinking, knowledge and enables them to perform various educational activities in the educational sector. Various kinds of technologies both hardware and software makes the teaching-learning process more interesting. Use of the advanced

technologies has a tremendous scope in improving the products and processes of education. It fulfils many needs and requirements of the present age in the field of instruction and education like individualization of instruction, utilization of multi-sensory and multi-media aid material and efficient and effective management of different educational institutions.

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