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The Educational System Challenges from the Perspective of Modern Technologies

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Abstract

Information and communication technology and the movement from traditional societies to information communities have affected all human dimensions and needs. Educational institutions, including universities and schools, are the largest producer, distributor and storage of information and knowledge and if done, a good effort to properly apply information technology and focus it on the development plan, educational systems will be able to become one of the largest sources of skilled human resource development in information technology and play an important scientific and economic role in the country and global competitions. The most important obstacle to the use of modern educational technologies is economic impediment from the perspective of teachers and managers. After that, the most important barriers were strategic, educational, technical, legal and cultural barriers respectively. Also, the study of the researches between the use of modern educational technologies and students' educational progress shows that there are many barriers in using information and communication technology that is influenced by the situation and its application fields. Therefore, this research tries to address the barriers to the application of information and communication technology in the educational system.

Keywords

Educational System, Information Technology, Modern Technology, Barriers, Challenges

1. Introduction

In the age of information and communication technology, educational systems are required to rethink and rebuild a curriculum for computer literacy, on the other hand, to revitalize and enrich the learning environment for interaction

between learner and learning resources. It is therefore necessary to review traditional teaching methods and replace them with new ways to equip learners with cognitive skills. Therefore, the use of information and communication technology is inevitable to achieve quality learning goals for everyone.

By reviewing the statistics and information available on the extent of information technology development in education in developed and developing countries, it has been documented comprehensive programs for equipping schools with a variety of facilities, such as computers and the Internet, the invention of new methods of education, the use of computers in classrooms, the use of educational and multimedia software, the use of Internet and e-mail, the expansion of educational networks, and has been the emergence of education from the new impacts of the use of information and communication technology in education.

Modern technologies can play an important role in the skill, knowledge and motivation of students. In the era we are living today, the criterion of strength and superiority of countries is the amount of information generated, the breadth and speed of access of individuals to the correct and up-to-date information. Nowadays, other education is not limited to the closed school framework, and with the disappearance of borders and distances, it is accessible to everyone. The appropriate environment for learning is always on a wide and flexible basis with the help of information and communication tools, in such a way that the conditions for continuous education are provided for individuals. Today, we are in the information society with the growth of technologies and the expansion of communication and information facilities. The characteristics of a society include: high density of information in the lives of most citizens; the use of compatible technology in a wide range of personal, social, educational and commercial activities; and the ability to transfer and receive digital data quickly between different locations regardless of distances [1].

Information and communication technology is a technology that helps us capture, store, process, retrieve, transfer, and receive information. Information technology has revolutionized the way we do things. Information and communication technology is interdependent, so that information is considered to be a machine of work and communication. Information and communication technology is a force that changes many aspects of life.

Hamza Beigi and Maghsoudi (2004) define information technology as a powerful platform and tool for new criteria for assessment, decision making, monitoring and planning. Today, in the 21st century, it seems that, given the massive amount of information, individuals are guided towards information management [2]. The volume of information is very wide, but access to reliable information and the information needed by each individual must be affordable and of high quality and not worthy of access [3].

The term "information technology" includes new technologies such as computers, faxes, microelectronics, telecommunications, as well as older technologies such as document archiving systems, mechanical computing machines,

printing and sculptures. Although the term is new, but conceptually, it dates back to the age of human desire to communicate. Information technology is not equivalent to the Internet or computer. Internet and computers are high-capacity technologies and, in principle, a tool and opportunity; While information technology is an idea, a culture and an influential thinking stream. Although information technology has been achieved, with the expansion of the Internet to the peak of its power and capabilities in the current situation, it cannot be commented on its future [4].

Information technology consists of collecting, organizing, storing and publishing and using information in the form of sound, image, graphics, text, number using a computer and telecommunication tool.

Information technology is the technology that helps individuals capture, store, process, retrieve, transfer, and receive information, including new technologies such as computers, telephony and other communication devices [5].

The development of information technology and the use of modern tools and concepts provides for the development of information and easy and low-cost access for learners, including students, students and teachers in a continuous manner, allowing for the rapid exchange of information and cultural interactions.

Undoubtedly, students will have better access to computer and information technologies [6], educational, economic and social opportunities. With the development of information technology, network learning and participatory learning were quickly developed in educational environments [7].

Information Technology "and" Information and Communication Technology "are complementary to the educational system, not its substitutes, and the goal of its development is to improve and more efficiently develop education resources, especially human resources. The development of information technology and the use of new tools and concepts provide a platform for expanded information and easy and low cost access. In this regard, the transformation in education is one of the most important achievements of information technology development [8].

2. Reviewing the Status of the Educational System

Education has a centralized system, despite the efforts made in the field of detailed educational and training planning, as well as in executive and administrative contexts. It prescribes the same curriculum without any flexibility for all students, including urban and rural, and with any kind of talent, interest and economic and social origin, of any sex, race, language and culture, in terms of the content of teaching and teaching practices And the type of evaluation for each subject. It is not possible to emerge in such systems. No significant and effective innovation and initiative, because any action must be taken and enforced from top officials and globally.

In addition to the focus, the statehood of all the activities of procurement and production of materials, and educational software has been hampered by the

growth of the private sector, while the success of the application of IT in education, is the active participation of the private sector.

Human resources in education are facing two inadequacies in terms of application of IT in education:

1) Lack of education in cases such as logical thinking, mental creativity, cheerfulness, and skill of managing the learning process due to inadequacies in teacher education programs and the lack of work environment conditions for the emergence and prosperity of any type of creativity in teachers.

2) Significant weakness of motivation due to lack of interest in a teacher's profession or lack of ability to play this role. The atmosphere of decent and non-cooperative management of administrative relations, a small amount of salary, the feeling of discrimination between government employees and teachers, and finally the lack of a teacher's professionalism given the key role of teachers and middle managers in the success of IT applications in education.

Universities of the country do not perform significant training in the field of specialties related to the use of information and communication technology in education, especially the provision of appropriate educational content and software.

Students encounter limitations in interacting with the outside world via the Internet, due to the different language of the computer software used in the world in the Persian language.

The inefficiency of the country's telecommunication network and equipment in providing easy, cheap, reliable and secure communication on the one hand and the lack of adequate laws to defend material and moral rights.

The issue of financing in education and budget deficit are obstacles to the use of information technology in education.

3. Teachers' Attitudes in Information and Communication Technology

The international technology education community emphasizes that today's teachers should be prepared to provide technology-centric learning opportunities for students. In fact, the class teacher is the main person in helping learners to access technology capabilities. Preparedness for technology use and awareness of how technology support should be among the core skills of teachers, on the other hand, research has shown that the use of ICTs gives students the opportunity to master technology and self-management.

In fact, the teacher can provide the content of new information to the student by changing the role of the transferor to facilitating and facilitating learner activities [9].

Teachers are the influential people in successful engagement with information and communication technology in the educational system. Each teacher has his own method of teaching blackboard or any other means, so how much technology is used in teaching depends on the experience and attitude of the teachers.

UNESCO experts emphasize that today's teachers do not experience the use of technology in their classes, because the development of a new generation wants teachers trained in using the new tools of information and communication technology [10].

The new role of the teacher is to help students access information and use it. Langshyr emphasizes that teachers and students have the opportunity to develop concepts and knowledge Frasth and this arises from the actions of communication and breadth of mind and self-control [11].

With regard to the issues and results of various researches, one can mention some of the main obstacles to the use and use of these technologies in schools:

- The teachers' reluctance and desire to use and use these software in the teaching process;
- Lack of familiarity and low teacher's ability to use and use of modern teaching technologies;
- High volume of textbooks and lack of time in delivering concepts and topics;
- The lack of teachers' awareness and belief in the positive and important outcomes of using modern technologies in the learning process;
- The lack of proper monitoring and evaluation of teachers' work in exploiting modern educational technologies;
- Lack of self-confidence in teachers in the use of modern teaching technologies.

4. Application Challenges of Information and Communication Technologies in the Teaching Process

The result of many studies has shown that the entry of new technologies is as any other change that has been encountered with resistance and barriers. The results of Shahbaz's research (2006) also indicated that the most important barriers to ICT use in secondary schools in Isfahan include lack of fluency in English, lack of computer integration with curriculum content and weakness in computer knowledge of teachers from the viewpoint of teachers and managers [12].

Pourateshi and Mokhtarnya (2008) in a research study on the views of the faculty members of the campus of agriculture and natural resources of the University of Tehran showed that there are significant barriers to the use of information technology, lack of familiarity with the computer, lack of personal computer, English fluency in fluency [13].

Toprakci (2006) identified the challenges of ICT integration in schools, according to the viewpoints of teachers and managers in the elementary and secondary schools of Turkey: material barriers, lack of technical services, and lack of training for school staff on ICT, lack of computers, old information, or lack of information, the process of providing information to the IT system and the lack of educational software [14].

Drent and Meelissen (2007) identified the main challenge, the lack of cooper-

ation of the management staff in the use of information and communication technology in the school curriculum [15].

The findings of the 2009 meta-analysis paper indicate that teachers have a strong desire to integrate and integrate ICT in education, but they face numerous barriers and obstacles in this way. Major barriers include lack of self-esteem, inability and lack of access to resources [16].

Sanjra and Gonjalez (2010) in a study examined the role of information and communication technology in improving the learning process in elementary and secondary schools and they showed that the development of information technology in education is in the interest of the learning and learning process [17].

5. Limitations and Considerations of the Application of Technology in Education

- Increasing the class gap (both among individuals and between countries).
- Increased training costs and the lack of availability of facilities and resources.
- Lack of strategic plans and individual practices in the education environment.
- The lack of a teacher with a student and the learning of new technologies.
- Easy access to prohibited resources.

Four different aspects influenced by ICT are evaluated in the study of how to make changes in the technology-based educational system, including the axis of time and space, and the quantitative and qualitative aspects of education. In other words, in the direction of these four axes, there are changes in tools and supplies, training courses, educational resources, and training of the educator and educator.

Information and communication technology in the education system as a culture, a program and an educational stream and hardware component, only part of this technology emerges in the educational system.

Considering information technology and communication as a culture is essential for the development of a culture of proper use of this technology as well as the groundwork for better productivity of this technology. Today attention has been paid to the need to pay attention to the coordination of the educational system with the community, as it creates in a world with information networks a jobseeker who knows how to use technology as a tool to increase productivity and creativity. Rapid technological advances and rapid upgrades of facilities and tools have provided opportunities for further improvement and further development in schools.

Finally, we can propose to improve and overcome this great challenge:

The use of modern tools, such as educational films and multimedia, in-service training for elementary teachers, equips primary schools with hardware and software infrastructure, equips schools with the Internet with the appropriate speed and bandwidth requirements; and creates the necessary motivation for managers and teachers to take advantage of ICT in schools and the teaching

process by establishing incentive schemes and selecting active schools in this field including courses related to use of information and communication technology in educational training courses and Farhangian University.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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