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Implementation of electronic learning in the country and world with investigation of its advantages and problems

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Abstract

Human efforts in present age need to move toward increasing knowledge and new technologies gradually for acquiring the necessary capabilities for life that is full of information and communication technology. One of the indicators in development of each country is determined by consider to the production, distribution and consumption of information. Electronic learning is one of the fields that it is inevitable to improve the quality of education; In fact, it can be said that electronic learning tools use for data and knowledge transfer electronically. In this field, you can find opportunities to making attractive and rich the concepts and lessons with the use of teaching aids. Firstly, this paper tries to provide definitions of electronic learning. Secondly, it states the benefits and challenges of electronic learning. The research method is interpretative and descriptive. Major part of the current research is based on a literature.

Keywords: electronic learning, education, information technology, tools

Introduction:

Twenty-first century, is the century of wisdom and knowledge, in which societies are moving towards wisdom, it is century of change from industrial society to information society. This change is not limited in technology, tools and environment, but this change will cause to struggle toward meanings and directions of life. Not only how to live with the problem. How to live not only lead to difficulty, but also the applied concepts will be changed to the concept of basic education (Majidi, 2001). Education and training are born along with human, but has being constantly changed over time, and its offering has been changed. This means that the emergence of any means or industry and technology, the education has been changed accordingly. In recent century, that it was transition period of the industrial age to the information and communication age, the education compared to earlier times has been changed dramatically both in quantity and quality and speed of the offering (MehrMohamadi, 2004). In today's rapidly changing world, people should be equipped by the daily changes. They should be able to achieve information, knowledge and necessary skills for successful living through the use of various communicative and informative resources and have active role as a responsible and committed member to himself, family and community in all positive aspects of life and collaborate to solve problems, using the most convenient means of communication with the local community, nationally and internationally. Integration of electronic technologies in the process is necessary and inevitable issue, because learners must learn how to live and work with community in which media electronic constantly provide them the different cultures and values from indigenous cultures and values.(khosravi, 2007). Electronic learning is one of these human achievements that have changed the world.

The definition of electronic learning

Electronic learning can be expressed as follows:

- Electronic learning is use of information technology easily in order to distribute the educational services to citizens directly and boarding and as well as providing necessary facilities for individuals to access the information and educational services and correct their quality and Participation in democratic processes and institutions. (Bretschneider, 2003).
- Electronic learning is said to a wide range of applications and training techniques based on information technology (such as computer, network, Internet), that provides possibility of teaching and learning for each individual in any field, in any place and to for lifetime.
- Electronic learning is offered by using computer via electronic media, Internet, and Intranet and satellite networks, discs and audio tapes, media situations, such as videos. In fact, Electronic distance education is based on technology.
- In other words, the transmission of voice, picture and text used to offer the content of the course that the quality of education period will be reached to its highest level by Utilizing mutual relationship between the learner and the teacher or even between learners.

The importance and necessary of electronic learning

In the information age that education purposes becomes more complex, Learners are expected to reach a higher level of problem-solving skills, creativity, collaborative learning and power of combination. During this period, the needs of learners are different, and they obtain various concepts with respect to local diversity.

Information directly related to development. Information refers to any obvious knowledge, fact, certainty or any of the symbols and messages that contain knowledge and also refer to any knowledge that is obtained in any way.

In an information society everything that grows fast enough that people, companies, organizations and communities need tools that help them to adapt the rapid changes. One example of this change, that has lot of speed, occurs in the field of knowledge in which the man, who was worth because of their knowledge, loses their previous value and instead someone, who has the ability to learn deeper in less time, would be more valuable. In such a society, it is need that people be able to search for information and knowledge through the Internet and other information networks.

In the process of education, development of educational activities is a global necessity. Education is one of the most effective and safest factors related to internet technologies and that is why it is welcomed by everyone extremely.

This development has been considered in higher education centers of the world more seriously than any other place and impact on development of quantitative and qualitative. Internet is most powerful tool to "equal and empower " and offers opportunity to people by providing situation to access the fast, accurate and up to date information, that stabilize their Professional, educational, scientific, cultural and economical activities based on global criteria and standards, and become a citizen of a the world. Internet is language of world citizen (Mohammad AliPur and Karimi, 2007).

Electronic learning tools

Electronic learning tools can be classified in the three levels of productive tools for electronic learning, presentive tools for electronic learning and other tools to access the electronic learning. (Hashemi and shahbarami, 2014).

1- productive tools for electronic learning

It refers to the process of writing and content composition. At this stage, raw media elements are produced. They are combined and the pages are made. Then, they come into the dramatic and educational issues. Then these elements are combined and created different lessons. In addition, lessons are related together and then courses are made. A comprehensive production course is made by related courses. Electronic learning tools Includes various tools such as Authoring tools, Web authoring and electronic content tools, test and evaluation tools, media editing tools and media conversion tools.

2- presentive tools for electronic learning

This ensures that produced electronic learning creates comfortable effective way to accessibility for learners. Presentive tools for electronic learning provide numerous functions, Such as, creating accessibility for electronic learning on the Internet or an internal network. Management of electronic learning, control and access tracking of electronic learning. Presentive tools for Electronic learning provided several major categories: Web servers, educational management systems, collaborative tools. A web server, such as Web browsers in terms of technology, is main part and core of electronic learning. If electronic learning is provided by an Internet, you will need a type of Web server software. Other Tools perhaps attract more attention, but Web server is responsible for the heavy work. An educational management system simplifies the process of scientific and practical management. A complicated system is used by the managers, administrators, teachers and learners to plan, register, pay the bills and tracking learners work in courses and other training activities. This system will enable the students to find courses and register, and start online courses, control their talents and measure their progress over a period. Collaborative tools help the people work and train together from long distances. This tool will enable people to share their ideas. This classification is included of wide tools. It is included of E-mail systems, that are Text-based, and simultaneous meeting tools in complex virtual classes.

3- Access tools for electronic learning

The third category is electronic learning tools that the learners, by using these tools, access to electronic learning tools. Various tools are required to access electronic learning. Web browsers are presented tools,

and most important one. Choosing a browser is not isolated from other elements selection, such as Web server software that is used to host electronic learning courses. If web host software is coordinated by a compatible browser, greater value will be provided by presenting different educational elements. Programming language is most important cases in using of browsers in the electronic learning. The issue that whether or not, the users of electronic learning will correctly observe the desired content by the browsers depends on the programming language used in the production of electronic learning content and support the presented browser of this language. Also, speed loading of educational material in user browser and web server, are also directly related to programming language used to educational material.

Advantages of electronic learning

In general, Advantages of electronic learning can be stated in several bases as follows:

A. Methods in presenting the courses for students
   - The independence of the classroom to a specific time.
   - Comprehensiveness, learning, dynamics, up to date and meet the educational needs in desired time.
   - Increasing the quality of education (due to the presentation of courses by using multimedia tools).
   - Increasing the effectiveness and efficiency of the education (due to the elimination of limitations in time and place).

B. Interaction between professor and student
   - Unnecessary physical presence of teachers and students in the classroom.
   - Reducing the time and cost of travel for students.
   - Supporting a large number of students in a class.
   - Ability to record the activities and progress of students by professor.
   - Ability to prepare different models of education by professors.
   - Easy communications and educational learning.

C. To Access the sources of information
   - Continuous accessibility to a virtual library.
   - Searching intelligently.
   - Flexibility, availability, and easy access to educational resources.
   - Increasing the student right to choose in determining courses.
   - Changing the content of teaching (from the "limited and selective" to "unlimited and diversified").

D. Changing attitudes and knowledge of users
   - Changing the level of education in graduates (from the classic education to creativity and producing knowledge).
   - Changing attitude to teaching and learning (from the individual to social).
   - Changing attitude to learners (from the "creating competition" to "cooperation and partnership").
   - Changing the task of learner (from the “data storage and Increasing the preservations " to "management of information and producing knowledge").
   - Increasing the speed in education and learning.
   - Increasing the scientific level of community.
   - Ability to set the learning music for learners.

- User bases.

E. Management
- Easy and efficient management
- Exact observation and control on educational system and information.
- Quick collecting the feedbacks and analysis them.
- Reducing the cost and time.
- Providing the same educational opportunity for all.
- Increasing the speed in development and progress.

Challenges and problems in electronic learning

However, this method of learning is growing, but it will face potential problems some of which are listed in the table1 (Sohrabi and Daremi, 2004):

Table1. Challenges and problems in electronic learning

Row	Challenges and problems
1	Lack of face-to-face meetings and thereby reduce social opportunities to meet face to face (Nasiri,2004)
2	Possible restrictions due to lack of network bandwidth (Hosseini, 2003)
3	Spend more time and cost to the teachers (and the need to dominate the technology of providing learning in addition to materials) (Hagh Panahi and Mapar,2004)
4	Permanent costs for development and updating the electronic learning content (Javidan Nezhad and Samiee, 2004)
5	Constant educational content for all audiences (Javidan Nezhad and Samiee, 2004)
6	The possibility of withdrawal of the learners because of high expenses (Farahi and Hamidi,2004)
7	Time and space restrictions (Sohrabi and Daremi, 2004)
8	Cultural barriers (electronic learning seminar, Industry Development Institute, 2007)
9	The necessity to be fluent in English (Sohrabi and Daremi, 2004)
10	Inefficient systems used to create added value on education (Farahi and Hamidi, 2004)
11	Extensive dependency on technology (Nasiri, 2004)

Electronic learning in Iran

Electronic learning in Iran is passing his childhood. The 80s (2001s) can be regarded as the origin of Electronic Learning in Iran. Currently, some universities, including Amir kabir University, Shiraz, Science and Technology offer it.

- ✓ **Science and Technology University**

For the first time in 1383 (2004) the electronic learning center of this university started to admit the B.A. students after that in February of 2006 (1384) the admission of M.A. students was started. Undergraduate courses include Information Technology Engineering and Industrial Engineering, and postgraduate

courses include Information Technology Engineering, Chemical Engineering and Executive Management. In this institute, a training design for the students was in a way that the students were provided with the main materials of the course through multimedia files and in a weekly period. If needed the course professor uses assignments and exercises during the work to complete and test the students' learning; and finally the exercises and problems are solved and complementary learning materials are presented in the virtual class. In such way, the students attend the class with partial knowledge on the subject of the course and its related activities can discuss about them. The professor can also explain the subjects in the virtual class which need more explanation by checking the assignments and exercises before attending and based on the students' feedback update the learning materials.

- ✓ **Shiraz University**

School of Electronic learning of this university started its activity in 1382 (2003) as the first virtual university of Iran. And in February of 2007 (1385) the students were graduated at discontinuous- B.A. degree in "Control and Instrumentation" from this university. And it was changed to the school of Electronic learning in 1387 (2008).

- ✓ **Amir Kabir Industrial University**

The center of Electronic learning higher education of this university was established in 1383 (2004) and in admitted students February of 2004 in four fields of: Information Technology and Management, Computer Architecture, Medical Information Technology Management and Telecommunications Engineering; and added more four M.A. degree fields to the other fields in March of 2006 including Information Technology Engineering- Computer Networks, Electric Energy Management, Biomedical Engineering- Biomaterials and System management and Efficiency.

Electronic learning in the world

The Electronic learning institutions have been established according to the countries' specific educational requirements. In a country like Australia, the extent of territory and population distribution is among the most important factors of the emergence and popularity of electronic learning. In countries like China and India, the main factor of tending to electronic learning system is insufficient capacity of the current higher education and limited educational budget. In Germany, America, France, Japan and the UK the issue of adult continuous learning and getting acquainted with new sciences and skills are among the important factors of establishment the Electronic learning institutions. In most African countries insufficiencies of primary, secondary and higher education and economic pressures has made the Electronic learning to be largely replaced with the traditional educational system as a low-cost system. In Iran the large number of volunteers at the Universities, the need to train the teaching staff of schools and make opportunities for employees to continue their education have a key role in the establishment and running of the Electronic learning institutions. (Beheshti, 2004). In the following we will describe Electronic learning situation in several countries:

- ✓ **Indonesia**

Electronic learning in Indonesia is a digital technology, which has created a new status for education. Among these statuses the followings can be mentioned:

- o It allows having interactive educational processes and gaining new experiences with new software.
- o Learner can stimulate an experience (without actually exist) during Electronic learning.
- o It increases the availability of resources and databases.
- o Learner can easily repeat or review or practice the materials.

- Role of the teachers changes from information sources to facilitator and supervisor of the learning-teaching process.

✓ **Singapore**

Many agencies in Singapore participate actively to develop Electronic learning industry and promote in organizations. Some of these agencies such as IDA play the role of facilitator catalyst so that Singapore can become a valid central interface of internet connection for Electronic learning in the Asia-Pacific region. This is done through cooperation with relevant public agencies and industries; its objective is to create a business environment of Electronic learning in Singapore. As the industry matures, it is expected the use of Electronic learning be remarkably increased in the future.

✓ **European Union**

The "Action plan of Electronic learning as an educational strategy in order to design the future learning methods" has been proposed in the European Union as the main and key slogan. This action plan places the everlasting learning among its objectives and considers Electronic learning in the form of general lines of infrastructure, education, services, content and participation.
In the action plan of digital literature, educational use of new technology-based resources and the management of changes are the most basic and primary issues that should be considered in teachers' training. The use of content, services and novel learning environments on the basis of considering the existing standards of Electronic learning is also the most basic of the approved guidelines. The equipment and technical infrastructure, learning, services and contents and participatory processes are the most fundamental actions which are highly considered by the action plan.

Conclusions

Human society is passing a great evolution. This evolution is not only in the technology and tools, but the fundamental concepts, from work to education, are undergoing major changes. Education has dramatically changed both in quantity, quality and speed in the last century, which is the time of transition from the industrial age to the information and communication age than earlier times. During the past two decades, advances in communications technology and the development of the Internet have created a network-based learning, i.e. Electronic learning; and various educational aspects of the world has faced new opportunities and challenges by this evolution. The internet has this potential to be spread around the country and is an ideal tool to provide qualitative and cost-effective learning. Some of the benefits include how the courses are provided to the students, interaction between teachers and students, access to sources of information, change the attitudes and knowledge of users, management; and some challenges include possible restrictions due to lack of network bandwidth, permanent costs to make developments and update Electronic learning content, the possibility of withdrawal of learners because of high expenses, time and space restrictions, excessive dependency on technology, and inefficient systems used to create value added on education.

References:

Beheshti, Zahra, 2004, study the role of Electronic learning on solving the problems of traditional learning, the second Electronic learning conference, Tehran.

Bretschneider, S. (2003). Information technology, e-government and institutional change. Public Administration Review, 63(6), pp.738-741.

Electronic learning seminar, Industry Development Institute, 2007.

Farahi, Ahmad; Hamidi, Majeed, 2004, Strategies for the development of electronic learning, the second electronic learning conference in Tehran.

Hagh Panah, Mohammad; Mapar, Reza, 2004, combined learning in the Applied Science system, the second Electronic learning Conference, Tehran.

Hashemi, Mahdi; Shah Bahrami, Asadollah, 2014, study the necessity of Electronic learning implementation in the village and identify its key success factors, the second National Conference on Apply the Computer Science and Information Technology.

Hosseini, Seyyed Hamid, 2003, study the benefits and concerns of Electronic learning by looking at the education practices to the human, School of Hadith Sciences.

Javidan Nezhad, Human; Samiee, Saeed Reza, 2004, Electronic learning, 21 century organizations need.

Khosravi, Mahbubeh, 2007, information Technology and development in the world of education, the second Educational Technology Conference researches "New approach in the education system", Tehran: Allameh Tabatabai University Press.

Majidi, Ardavan, 2001, the Premier system, future learning and the future of learning, Tehran: Termeh publication.

Mehrmohammadi, Mahmud, 2004, Rethinking the concept and signified of educational revolution in the field of Information and Communications, the third annual conference on ICT curriculum, lesson planning association, Tehran: Ayizh publication.

Mohammad Alipur, Nasrin; Karimi, Mansureh, 2007, a comparative study on electronic learning studies, the first International Conference on Electronics City.

Nasiri, Alireza, 2004, the management of virtual universities and Electronic learning institute, Tehran University.

Sohrabi, Babak; Daremi, Hadi, 2004, knowledge management, Solutions to the problems of online learning communities, the second Electronic learning conference in Tehran.