

## Recognition of Access to Educational Technologies in the Educational System of Iran

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### ABSTRACT

One of the main and important elements in the educational systems is Educational Technology that on the one hand increases the quality of education and on the other hand led to cost reduction and help to economy of educational systems and Education, which in some cases, in specialized training, costs has been reduced to half. From mid - twentieth century, with the invention of computer, domination of technology on industry, services, agriculture and on all sides of human's life was revealed. Information and educational technology for learning knowledge and skills has become an essential element in educational systems in all over the world, and with the use of educational technologies can be responded to needs of scientific community. In this research in addition to review the existing approaches and their positive and useful effects and the role of technology in education, analyzed components such as knowledge, quantity, quality, and easiness. Research method is descriptive, and survey. Statistical sample has been selected from teachers and experts in educational technology. The results show that there is significant positive relationship between access to technology and teachers' satisfaction and success. There is also a significant relationship between the components of knowledge and application of technology. About the quality and quantity of technology and being update of technology and teachers' satisfaction and success there is also a significant relationship.

**Keywords:** Information technology, accessibility, educational technology, quantity and quality, technology and economy.

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### INTRODUCTION

The current age has been named as the information or knowledge age. In this age, information technology is known as a strategy and new thinking way. Information society is a phenomenon that has had a profound effect on all sides and aspects of social, human and organizational life. This effect is seen in the case of educational system. This change has led to the creation of new developmental model of knowledge based societies. In this model is impossible to ignore the role of training and educational systems as one of the director pillars of tendency towards knowledge-based, science, and thought development movement. Progressive educational systems in the turbulent world of the third millennium and the change age need to display themselves capable and powerful by continuous reconstruction of quality. Today, according to Sheppard: capable educational system delivers tomorrow people to society, not merely maintain the human resources or producing contemporary people.

To strengthen and enable educational systems must using of educational technologies in teaching. This has caused that schools and educational systems moving toward equipped with electronic tool, and new terms such As Speaker Wall, Speaking schools, knowledge Self-service, and Library without Walls Generate from This tool .Lankestar and his colleagues believes that information and educational technologies, questioned and hesitate the enclosed space of the past and are exposed to challenge the manuscripts and teacher in stance of concept transmitter (Lankestar, 1996, P18). This educational technologies as an integral part in teacher's educational program (Barrow, 2003,P143) leads that school to get out from the traditional form and becomes" School Smart " that their costs are intensively reduced.

#### 1. Problem Definition

Educational technology has been one of the major evolutions in industry, Services and large organizations. Its greatest impact today is in the human resources that we see in the educational systems. This technology provides golden opportunity for the educational systems to reduce their Costs and raise productivity levels. Access of different communities' education to educational technology, caused improves quality, depth, training and even learning speed is increased.

Today, in the educational systems talking about learning environment and learning organization that achievement of this educational revolution is breaking time and geographical boundaries. In fact, emergence of virtual educational system has been main factor for reducing costs of learning and educating and also changing the face of education and training

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throughout the world. Virtual educational system by outstanding reduction of teachers and accessibility for greater number of learners to content, audio, video and hybrid education through computer and even without having to visit the educational centers with very long distances has created dramatic transformation. In the new era easily seen break down the time, place and qualitative, quantitative and multiple developments of human resource in various areas. In this research not only we autopsy the category of information and communication technology, but also we focused on educational systems and discuss of cost reduction, even profitability, growth and development of educational technology in the area of education. There for components of knowledge, quantity, quality and ease of access in information technology is the main research base of this article.

## 2. Information Technology

In the path of scientific progress, the invention of steam engine by James Watt caused advent of deeper evolution that achievement of it's, was creating a new concept named "Technology" (Hayati, 2008, pp 67-95). Term of technology has been taken from the word "technologia" which in the Greek means systematic doing of the art or profession. The first part of this word is a combination from the meaning of art and technology that comprised related knowledge and second part refers to reasoning, explanation and presenting reason. So it refers to reasonable or logical application of knowledge (Herchbach, 1995, pp1-2). In the other definition, Technology consists of tools, mechanisms, knowledge or a process are used for converting inputs to outputs in order to enhance the capabilities of individuals, work groups and organizations (Badpa, 2010, P54).

Aristotle" with an analytical view to technology believed that: human experience has three ways, theoretical, practical and innovative and poetic. According to Aristotle "technique" is innovative and poetic and says: technique appears in two ways: One in the production of tools, and the other as fine arts such as painting (Zarghami, 2009, p17). So he introduced technology beyond a tool or mere device and considers it as a product of invention. "Heidegger," with attention to Aristotle's remarks and historical investigation that he conducted, believe that: in the past, technology was not related to the activities and skills of workers, and it was poetic. He believes that the way of technology manifestation in the ancient and the new era is different. In the past, way of technology revealing was the invention or procreation, but the new way of technology "revealing" is required to attack nature and this was the most fundamental difference between the old and new technology (Zarghami, 2009, p18).

Technology as a human phenomenon (Bagheri, 2002, p76) said to any systematic Knowledge that is based on experience or scientific theory and increase the capacity of community in the production of goods and services and embodied in the form of the manufacturing skills and organizations or machines.

The mid-twentieth century with the invention of the computer, a new era began in the different areas of industry, that one of them was "information processing". Word of information taken from the verb "to inform". Also the verb of inform have taken root from the word of "informer" which its meaning is "To put in to shape" and "To mould". Initially the Latin word informer has been used by "Cicero" (Zarghami, 2009, p22). "Information" in general concept as a dominant energy of new century with surprising speed has replaced by technology that relying on energy that is mortal. Development of information processing in different groups of society and its dramatic effects caused to call current era "information age". The advent of this era caused emergence of another form of technology which known as "information technology" that is based on information knowledge.

Today, information technology as a dominant discourse of the new century (Montazer and et al, 2005, p105) has so much potential in different areas of human life, no doubt that it can be seen as a symbol of a new civilization or the rise of a new wave of civilization. This wave has been identified by interpretations and expressions such as "meta industrial" and features such as "information society" and "knowledge economy" (Manian, 2005, p6). Development of information technology has changed all the micro and macro variables and has created terms like "information society", "information age" and "knowledge based economy" and the new subjects such as "electronic commerce", "medical electronics", "electronic government", "virtual university", "electronic publishing", "electronic library" and "virtual schools".

Information technology refers to tools and methods, someway collecting, storing, retrieving, processing and distributing the information in various forms (sound, image and text). In the instrumental approach, information technology can be called to whatever led to the collection, circulation, processing, exchange information and messages without spatial and temporal limitation (Fani & Mosleh, 2007, p161).

Generally, information technology is a kind of technology that, "all the internal (essence) and external (accident) operations is performed by using information elements, on this basis, all technologies can have their own corresponding information form" (Batini and et al, 2009, pp106-117). So the term of information technology can be observed from two perspectives. Table 1 shows these two perspectives.

Table 1: Perspectives about information technology (Barto, 2000, p19)

Perspective	Descriptions
First perspective	Information technology implemented for describing techniques that helps we in the record, storing, process, recall, transfer and receiving information.
Second perspective	Information technology is a set of tools and methods that provide production, processing and information supply for human user.

### 3. Impact of Technology on Education

Wallace believes that: technologies from pencil and paper to computer software and internet, can from five aspects affect teaching jobs. Table 2 shows a summary of these five aspects.

Table 2: Impacts of technology on education (Wallace, 2003)

Aspect	Description
Boundary	For the use of technology in teaching, what is important is the usefulness of its in curricula. Each of the technologies is appropriate for specific courses and specific subject and does not fit with the whole curriculum.
Stability	Unlike traditional sources and materials, educational technologies rapidly change and Will not remain stable for the coming years.
Authority	Teachers should have high understanding and information of science to come over the valid and proper content identification for teaching.
Pedagogical Context	The most difficult works on teaching with technology are control of education and learning. With the arrival of information and communications technology to the educational environment has changed this philosophy and the environment in which teacher is recognized as providing the main teaching content.
Disciplinary Content	Threaded order refers to the coordination of technology with curriculum and field and include integrity of subject , good relations with area of knowledge, appropriately compiling the content and related activities

According to Wallace, boundaries referring to this that a technology can not be used for all courses, because any technology and training aids have a particular application. It also sometimes changes rapidly and will not remain constant for the coming years. But ,some devices and educational technologies such as "laboratory material", " maquettes " and "maps" are very stable and based, and always used in teaching. If the teacher diagnosis that the content is valid and appropriate and technology is used correctly, Irregularities, clutter and confusion in presentation of lessons will be reduced.

### 4. Impact of information technology in education

An important feature of the information and communication technology phenomenon is that facilitates and promotes the human connection with other, as well as environment. Due to power of information and communication technology to make vicissitudinous and dynamic communication with educational and academics centers, possessed an important role in transferring of knowledge.

Information and communication technology have led to the fundamental changes in education. In new era, education has been faced with new goals, new approaches to teaching and learning has been against to the traditional approaches and the role of teacher and learner has changed, and in general its believed that use of information and communication technology to achieve learning objectives with quality, is unavoidable to everyone (Garrison and Anderson, 2003).

If this technology be used in educational system, to be improved the methods of teaching - learning. The use of these technologies in schools with regard to proven educational, social, economical reasons, considered a basic necessity and many governments to support projects in development of information and communication technology in education, attempted to invest and planning in large scale (Pelegram, 2001). This technology provides the structure through which the quality of education improved and students and teachers by using this technology, acquire extensive learning resources, increase their learning motivation and used the different forms of learning. Also in Iran has been made fundamental planning to improve the quality of education through the development of information and communication technology.

There are two approaches about impact of information and communication technology in the education field. The first approach, that "reformist approach" named, is believed that the effect of new technologies (information and communication) in education, are gradual and this phenomenon cause that traditional teaching methods, just be more efficient. In other words, ICT accelerate the reforms in education. Along with this approach, in "Evolutionist approach", which is believed to evolve creating of ICT in education and believes that information and communication technology make fundamental change in tools and even the policies and objectives of education (Mehr mohamadi, 2005, p84).

Marshall McLuhan believed that "We change our tools after those tools will change our." also evolutionist approach refers to this. But perhaps more true approach is an integrated approach. This means that while information technology accelerate trend of training, caused tools and policies also be changed.

Different philosophical approaches to the role of information technology in education

There are various opinions about this question that what is (are) the role of information technology in education of humans. These opinions make up the three general views that each of them have their approaches, and include: modernism or Technicism, critical view, and postmodernism. From first view substantive educational approach, from the second view two levels of "political and economic" and "sociological" and from the third view "social constructivism" has been investigated. Table 3 shows these three approaches.

Table 3: The Role of information technology in education system (Zarghami and et al, 2007, pp13-19)

Approach	Description
Modernism or Techniques	This view has a romantic looking to computer and emphasized on skills. Proponents of this view argue that information technology improve human life and should benefited from the gains of education system. In fact, has a non-critical and neutral view on the application of information technology. In general is founded on two assumptions: 1 - need for the effect of information technology on teaching and learning process through utilization of this technology

Approach	Description
	2 - information technology was useful and necessary in review and solving the experimental and social problems
Critical View	Has a tragic view to the computer like normalization. This view provides an opportunity to think seriously about the destructive and regrettable achievements of technology.
Postmodernism View	In this view information technology is seen as a part and pertains to life .Information and communication technology is not an objective tool and apart from the world that can faced with the world and explain the relationships between its components.

If we have linear, directed, and evolutionary view it become clear that postmodernism view is more comprehensive than other views. But if we assume these three views in the form of cycle that affect each other, we'll come to another view, this view tells us:

- 1 - Application of information technology is required to holistic view,
- 2 -Information technology is the product of human knowledge rather than producer of knowledge.

### 5. Educational Technology

In today's world, the volume of finding and results is high so much that to quote of the thinkers, sometimes what happens in a day in the second half of the twentieth century considered equivalent with one hundred years exploration in past centuries (Group of authors,2000,p140). Not more than few decades that the term "educational technology" has found place in education culture. Before the concept of educational technology is raised, teachers and instructors used audiovisual educational equipment and materials to improve the teaching and getting better results. But after being introduced this concept, not limited solely to the use of training materials and equipment in schools. Because this phenomenon, has a broad concept and need to be defined first.

"Educational technology" can be likened to educational engineering that through which a user of educational technology can use the methods that he (she) knows, present a plan for training while facilitating it, faster and sustain the learning. "Educational technology" is similar to an overall literacy that the information and communication technology, undertake the part of transferring the knowledge. Technologies which support teaching, causing significant and purposeful learning and alter the traditional teacher-centered teaching method to student-centered learning and Teaching.

So educational technology "is a set of instructions and techniques that use the scientific findings to solve educational problems including design, implementation, and evaluation of educational programs" (Fardanesh, 2004, p17). American association of educational communication and technology defined educational technology such: "technology is the theory and practice of design, supply (production), use (application), management and evaluation of processes and learning resources» (Ibid, p17).

Generally educational technology refers to all the facilities that can create the conditions in the classroom which under those circumstances, students are able to with a complete understanding obtain new information, behaviors and skills. Educational technology includes the following elements:

- Real and factual tools that will assist teachers in teaching,
- Skills needed for effective production or use of equipment and tools,
- understand the educational process, how to select the devices and their proper use,
- Human resources for more effective application of equipment and tools,
- Coordinating the production and proper exploit of equipment and tools (Bits, Translated by Oshrat zamani&Azimi,2009, PP 20-21).

Much research has been conducted on the impact of educational and information technology on the educational performance of students. About positive effect of educational technology and information technology on education, in a research has shown that educational results have had significant in schools that are rich in terms of educational technology (Myer, 2001). Some of positive results of this technology are: improvement of academic performance, higher test scores, improvement of student attitudes, raising the level of enthusiasm at students in learning. Below are four examples of this research.

First research 'in first report of survey that conducted by United States Ministry of Education, that took place on 9 school , showed that the use of educational technologies in schools led to progress of all learners regardless of age, race, income level of parents or other characteristics.

In another report that has been resulted from a ten-year investigation by Apple , indicated that students trained in enriched environments, have better performance and have been acquired various skills.

In a famous study, Carter and his colleagues found: "expert teachers with help of picture, can take correct results about activities of their classroom" (Carter, 1998, p27). According to Marzano norford and et al using graphical and symbolic representation strategies for students in order to similarities and differences can increase their understanding of learning issue from rate of 50 percent to 95 percent (Waker tilston, 2006, p61).

Generally, educational technology use of the various sciences such as psychology. In order to optimal use of educational technology, attention to the set of points is essential:

- 1- Preparation of educational instruments by students, parents and teachers,
- 2- Forming associations of educational technology in the form of school groups,
- 3- Invite faculty and authorities in order to familiarize teachers with the preparation and construction of educational instruments,
- 4 - Use of field trips as an educational technology,
- 5 - Development of school’s educational technology by scientific and psychological designs,
- 6 - Use of new technological methods of new visual technology,
- 7 - Use of games, patterns and models as educational technology (Group of authors, 2000, pp141-143).

**6. Advantages of educational technology**

- 1 - Educational technologies have positive and significant effects on the functions and output of students in all course categories and all educational levels of normal students and exceptional students.
- 2 - Application of educational technology was effective in hope of students to their educational future.
- 3 - Educational technology and new technologies has led to student-centered approach.
- 4 - More cooperation, collaboration and participation in learning.

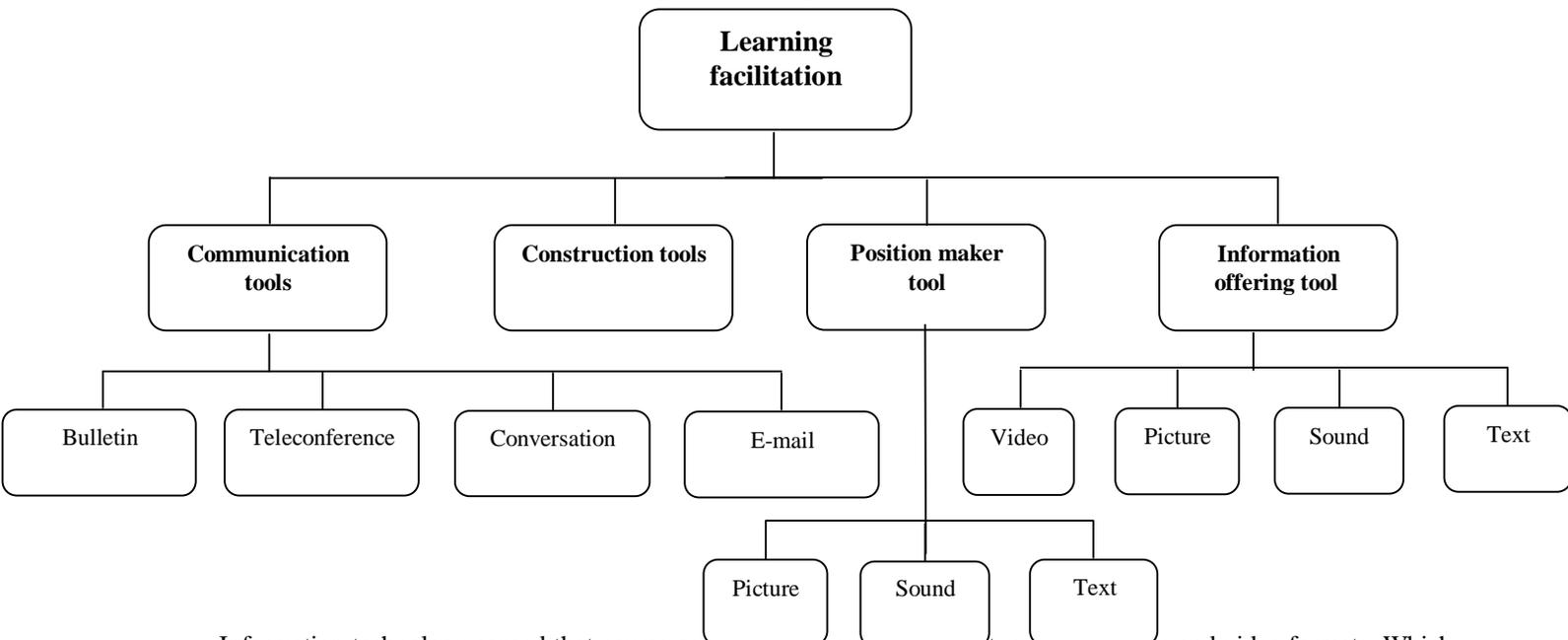
**7. Advantages Of Applying Information And Communication, And Educational Technology In Educational System Of Iran**

Entry of educational and information and communication technology in educational system led to fundamental transformations and has caused that new targets to be considered with regard to this matter ,here referred to some of these changes.

1 - Teaching and learning is facilitated by educational and information and communication technology; Information and educational technology due to their characteristics caused facilitation of learning. For this reason information and communication technology is used as a powerful tool in teaching and learning process. Information and educational technology causes that students put in an environment to get scientific experience. Simulated learning environments and educational games and virtual reality are an example of such cases. This technology makes the unobservable cases, can be observed (Mumtaz, 2000).

Figure 1 demonstrates four instruments which leading to facilitate the learning.

Figure 1 - learning facilitator tools



Information technology caused that course content to be presented in text, audio, graphics and video formats. Which this type of contents is a kind of multimedia or meta-media resources (Montazer&Diani, 2003, p6).

2 - Conversion of teacher-centered approach to student-centered approach; information and communication technology due to its essence characteristics have capability in their access and analysis of information and provides an opportunity for learners to be able to play its central role. Outcomes of information and communication technology application are participative learning, independent and autonomous learning, learning by problem solving method, and creative learning.

3 - Promoting critical and creative thinking; Information and educational technologies improve and enhance the thinking skills in students and teachers and move toward critical and creative thinking. Critical thinking is the systematic process of mind in thinking, analysis and combine ,and active and subtle evaluation of information collected through observation, experience, reflection and reasoning, and be considered as a belief and practical guideline for person (Scriven and Paul,2004). "Critical thinking", is the ability of review and analyzing the information. So that it can reconstruct decisions and judgments (Waker tilston, 2006, p69).

Information and communication technology provide an opportunity for students to access to the large volume of information from multiple sources and puts them in conditions that would address the obtained information to assess their accuracy.

"Critical thinking" makes students to reflect on the studied contents, and perform learning activities with more scrutiny, thinks about questions and answers and revised their answers. In fact such opportunities reinforce student's ability to self- evaluation and reflection and critical thinking (Seraji and et al, 2007, pp101-102).

Educational and information technology causes that students operate their divergent think and foster and increase their flexibility. Educational technology help students by using computer able to change, edit and create and offer new ideas , that is creative thinking. In Education of Singapore, expansion of creative thinking is one of the main goals of educational technologies (Jalali &Abbasi, 2005, p22).

Meaning of "creative thinking" is that students bring out new ideas or they will be able to combine their ideas to gain new idea. In short, meaning of creative thinking is the ability to understand and design analogy and metaphors and relationship of one thing with other things (Waker tilston, 2006, p69).Information technology based education can foster creative thinking and train explorer, troubleshooting, innovative and change generating individual. In general, according to definitions presented, information technology, education and satisfaction, has an important role in the development of knowledge in society. Application of educational and information technology can meanwhile learning deepening part of learning, also following the teacher's satisfaction. In addition to these components, access to educational and information technology as well quantity and quality can be influential in level of satisfaction. These components are discussed below.

## **8. Knowledge**

Applying educational and information technology requires digital literacy that this can be done through on the job training. Trainings that have high quality and available required technical information and training to teachers make teachers' attitudes more sustainable towards the effectiveness of educational and information technology, it is necessary that teachers and instructors before entering higher education system acquire required skills, up to expert human resources be trained at various levels. And with required scientific and practical support, achieve specific mechanisms for the implementation of this technology. Holding seminars can also play an important role in familiarize teachers with educational and information technologies.

In general, about the technology and materials which produced in electronic form, must given precise, deep and comprehensive trainings to teachers and instructors. These increase the digital and technological literacy of teachers and reinforced their "computer skills".

## **9. Quantity and quality**

The number of maquettes and training maps, training videos, laboratories and projection panel, computers and a sufficient number IT classes have great impact on teachers' satisfaction levels from educational and information technologies . These equipments in fact are necessary infrastructure for development of ICT in education. Quality and quantity that are two major pillar of TKFA plan is known under infrastructure title. Dynamic development model of TKFA has 5 components. Human resource development, contents and applications, entrepreneurship and infrastructure are components of TKFA plan that infrastructure was first component of this plan and more important from other components (Fathian, 2004, pp277-278). Quality of educational technology refers to this that if can not establish necessary interaction between the elements of learning; the old and traditional methods will substituted by technology based methods.

## **10. Access**

In issues such as access to high speed Internet and to databases and digital libraries and equipped laboratories, possession of educational and multimedia videos is considered. Among these access to the Internet is most important types of access. With increasing access to the high-speed Internet, Computer aided training, has found completely new aspects in terms of communication. If the Internet not grown rapidly in the past decade, today there was no something with title of e-learning (Teir, 2004). For example, with the availability of computers and Internet, access to digital libraries and databases are simple and easy.

## **11. Educational technologies and economy**

What makes technology-based education distinct from traditional education, being economical of these educations. Meaning that this educational style and use of educational technologies have economic benefits for the educational system.

In a research conducted to determine the cost-effectiveness of traditional education and technology-based education, It was determined that the costs of traditional method were higher than new method. Figure 2 show the levels of cost for a student during 5 years in two training methods.

Figure 2: Comparison between the costs of a course in two types of trainings (Askar poor and et al, 2004, p239)

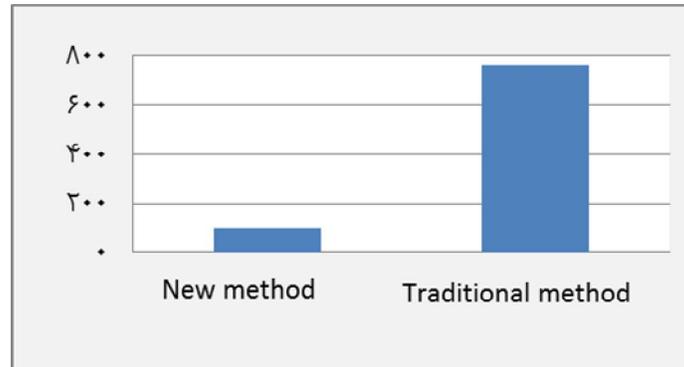


Figure 2 confirm that new technologies dramatically reduced the costs. With regard to conducted researches, it was found that if the educational systems use from educational technologies and substitute electronic training with traditional training about 50% to 75% saving in costs and these cost reduction will be done gradually. And in the long run costs reduced significantly. Retain of working hours also forms part of the savings (Teir,2004).

### 12. Case Study: Effective Use Of ICT In Singapore Schools

Singapore is among the few countries that have succeeded take basic steps in integrating ICT with teacher and students training approaches. Education officials in Singapore to establish high-speed computers in schools, have turned to National Master Plan in which train teachers who could use of this technology in training and encourage students to research with use of web and create website and designing network projects on. At the end of 2001 for every person in this country there are five computers that this rate is higher than countries such as Japan and the U.S. (Safari, 2006, pp37-38).

### 13. Case Study: National Program Of ICT In The United Kingdom

The United Kingdom is a country that well used of IT and ICT in the education system. Require students to learn the skills and knowledge and understand of following elements:

- 1 - The ability to full utilization from the process of problem solving for meets the needs and develops research skills,
- 2 - Development of ideas through the use of IT, improve and refine work results and improve the quality and accuracy of obtained information.
- 3 - Exchange of information and direct participation in it or through electronic media,
- 4 - Review and evaluation of their work and critical thinking about quality of results obtained.

Also students should acquire attitude to application of information technology that help them to work with others in the context of research, create and transmission of information and knowledge (Lawson and Comber, 2000, P419).

In the years 1998 -1999 was carried out high encouragement from schools to use of IT and ICT as infrastructure of curriculums. Internet access rate from 17 percent in 1998 reached 62 percent in 1999. In a same time, Internet connections in schools increased from 83% to 93 % (Salimi, 2002).

### 14. Case Study: ICT In The Centralized Education System Of Turkey

More than 20 years in the educational system use from computers. Ministry of Education, in 2802 elementary schools, has 3188 IT class. 1630 portable computers were in available of 2000 elementary schools inspector. 25,000 elementary schools teacher participated in the on the job courses in computer literacy (Attaran, 2006, p5).

### 15. Research Method

This research has descriptive method and a kind of survey, and the statistical community is teachers of Qom province. Also statistical sample include 58 elementary school teachers and experts of educational technology in Qom province. Data collected by researcher made questionnaire and accredited by the experts, and the number of statements of questionnaire are 20.

#### 15.1. Hypotheses

Main hypotheses

There is a significant relationship between components related to the use of educational technology and level of teacher's and instructor's satisfaction.

**15.2. Sub – Hypotheses**

There is a significant relationship between components of access to educational technology and teacher's and instructor's satisfaction level.

There is a significant relationship between components of familiarity and application of educational technology and teacher's and instructor's satisfaction level.

There is a significant relationship between components of educational technology quantity and teacher's and instructor's satisfaction level.

There is a significant relationship between components of quality and getting update of educational technology and teacher's and instructor's satisfaction level.

**15.3. Hypothesis Testing**

In this study to testing hypothesis of research first it must be determined whether distribution of collected data is normal. For this purpose Kolmogorov- Smirnov test was used. Table 4 shows the results of these tests.

- H<sub>0</sub>: ρ=0      distribution of observations follows from normal distribution
- H<sub>1</sub>: ρ≠0      distribution of observations doesn't follows from normal distribution

Table 4: Kolmogorov- Smirnov tests

Variable	Number of samples	Test statistic	amount of Sig	Test result
Access to technology	58	0.607	0.854	Normal
Knowledge to technology and its application	58	0.665	0.769	Normal
Quantity of technology	58	0.743	0.639	Normal
Quality and getting update technology	58	0.521	0.949	Normal

As seen in Table 4, amount for statistic of test level of 0.05 is lower than critical value. Therefore, null hypothesis means data was normal accepted and contrast hypothesis that means data is not normal rejected. Therefore, with attention to normality of data, to test this hypothesis, Spearman correlation coefficient test is used. Results of hypotheses Testing is as below.

**15.4. Main Hypothesis**

There is a significant relationship between components related to the application of educational technology and instructors and teachers' satisfaction level.

$H_0 : \rho = 0$	there is no significant relationship between components related to the application of educational technology and teachers and instructors' satisfaction level
$H_1 : \rho \neq 0$	There is a significant relationship between components related to the application of educational technology and teachers and instructors' satisfaction level.

By doing relevant test, in confidence level of 99 percent p\_vale equal sig = 0 / 005, because less than sig = 0 / 05, therefore H<sub>0</sub> rejected and H<sub>1</sub> is accepted. Thus, there is a significant relationship between components related to the application of educational technology and the satisfaction level of teachers and instructors. As well as in random interviews that conducted with some of the teachers, this feeling has been clearly emphasized.

**15.5. First Sub-Hypothesis**

There is a significant relationship between components of access to educational technology and instructor's and teacher's satisfaction level.

$H_0 : \rho = 0$	There is no significant relationship between components of access to educational technology and instructors and teachers satisfaction level.
$H_1 : \rho \neq 0$	There is a significant relationship between components of access to educational technology and teachers and instructors satisfaction level.

By doing relevant test, in confidence level of 99 percent p\_vale equal sig = 0 / 001, because less than sig = 0 / 05, therefore H<sub>0</sub> rejected and H<sub>1</sub> is accepted. So, there is a significant relationship between components of educational technology access and instructors and teachers satisfaction level.

**15.6. Second Sub-Hypothesis**

There is a significant relationship between components of knowledge and application of educational technology and instructors and teachers satisfaction level.

$H_0 : \rho = 0$	There is no significant relationship between components of knowledge and application of educational technology and instructors and teachers satisfaction level.
$H_1 : \rho \neq 0$	There is a significant relationship between components of knowledge and application of educational technology and instructors and teachers satisfaction level.

By doing relevant test, in confidence level of 99 percent p\_vale equal sig = 0 / 000, because less than sig = 0 / 05, therefore H0 rejected and H1 is accepted. So, there is a significant relationship between components of knowledge and application of educational technology and instructors and teachers satisfaction level.

**15.7. Third Sub-Hypothesis**

There is a significant relationship between components of quantity of educational technology and instructors and teachers satisfaction level.

$H_0 : \rho = 0$	There is no significant relationship between components of quantity of educational technology and instructors and teachers satisfaction level.
$H_1 : \rho \neq 0$	There is significant relationship between components of quantity of educational technology and instructors and teachers satisfaction level.

By doing relevant test, in confidence level of 99 percent p\_vale equal sig = 0 / 035, because less than sig = 0 / 05, therefore H0 rejected and H1 is accepted. So, there is a significant relationship between components of quantity of educational technology and instructors and teachers satisfaction level.

**15.8. Fourth Sub-Hypothesis**

There is a significant relationship between components of quality and being update of educational technology and instructors and teachers satisfaction level.

$H_0 : \rho = 0$	There is no significant relationship between components of quality and being update of educational technology and instructors and teachers satisfaction level.
$H_1 : \rho \neq 0$	There is a significant relationship between components of quality and being update of educational technology and instructors and teachers satisfaction level.

By doing relevant test, in confidence level of 99 percent p\_vale equal sig = 0 / 01, because less than sig = 0 / 05, therefore H0 rejected and H1 is accepted. So, there is a significant relationship between components of quality and being update of educational technology and instructors and teachers satisfaction level.

**16. Conclusion**

Third millennium is domination millennium of information age over all categories. Accordingly, all things are subject to alteration. The most important category that has been affected by this era is the educational system & Education. Educational technologies brought and developed in this era. By entering and application of these technologies in educational system, have been carried fundamental changes in the area of Science Learning. Productivity of educational centers increasing intensively and educational costs also decreased to 75 percent. In addition to the mentioned advantages, application of educational technologies have other advantages such as easy training, offering material regularly, fostering creative and critical thinking in students, that have effect in satisfaction of the teachers to application of educational technology. Furthermore, components such as accessibility, knowledge, quality and quantity have effects on teacher's satisfaction.

The results show that in Iranian primary schools, there is a significant relationship between components of quality and being update of educational technology and instructors and teachers satisfaction level. Quality refers to the number of maquettes and training maps, training videos, laboratories and projection panel, computers and a sufficient number IT classes have great impact on teachers' satisfaction levels from educational and information technologies.

Also, there is a significant relationship between components of quantity of educational technology and instructors and teachers satisfaction level. In addition, the There is a significant relationship between components of knowledge and application of educational technology and instructors and teachers satisfaction level.

On the other hand, there is a significant relationship between components of access to educational technology and instructor's and teacher's satisfaction level. In issues such as access to high speed Internet and to databases and digital libraries and equipped laboratories, possession of educational and multimedia videos is considered. Among these access to the Internet is most important types of access

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