A Comparison of the Use of Educational Technology in the Developed/Developing Countries
Farideh Hamidi\textsuperscript{a}, Farhad Ghorbandordinejad\textsuperscript{b}, Maryam Rezaee\textsuperscript{c}, Mehdi Jafari\textsuperscript{d}

\textsuperscript{a} Assistant Professor of Psychology, fhamidi@srttu.edu
\textsuperscript{b} Assistant Professor of English Language, farhad@srttu.edu
\textsuperscript{c} MA student of Curriculum Development, rezaie1984@yahoo.com
\textsuperscript{d} MA student of Curriculum Development, M-jafary2006@yahoo.com

Shahid Rajaee Teacher Training University, Department of Education, P.O. Box 167855-163- Tehran-Iran

\section*{Abstract}
In this paper, a descriptive - comparative analysis is used to compare the use of educational technology in the developed and developing countries. In European countries advanced information technology is used in working groups while African countries have been unable to independently create and use new technologies in their education system. Iran is investing in information technology to be able to build the infrastructure and then train people in the necessary skills to use information technology. The best development for developing countries is benefiting from experiences of developed countries and progressing in parallel.

\section*{Keywords:} Comparative Study, Educational Technology, Curriculum, Developed Countries, Developing Countries.

\section*{1. Introduction}
Technology is the most significant criterion of development and growth in today's world and education is a means for getting to know and achieving the new technology. Changing the educational system is the first step for a society whose objective is to advance on the basis of knowledge and technology. To do this, the country needs to employ educational technology, i.e. planned designing, implementation and evaluation of fundamental and practical studies\cite{1}.

Considering the studies and the available information about the growth of IT (Information Technology) in education across the world, we'll find that in many countries, including developed and developing countries, comprehensive programs have been codified in order to mobilize the schools with equipments like computers and internet \cite{2}.

Comparative studies in education are among the methods through which we can help educational systems remove their weaknesses and deficiencies. Guangze (2004) defines comparative educational technology as "discovering and synthesizing the similarities and differences, in theory and practice, of education among countries, regions and nations with the goal of development and growth of learning\cite{3}.

In this article, the researcher has scrutinized the status of educational technology in the curriculum of a number of developed and developing countries, so that curriculum developers in developing countries can use these experiences to implement IT in their own system of education.
2. The Features of Educational Technology

Being aware of the features of educational technology helps us in benefiting from this knowledge and prevents wrong understandings of the purpose, concept, nature, practice and domain of it. The features include:

- Educational technology is the practice of scientific principles in education.
- Educational technology emphasizes the development of effective teaching-learning methods and techniques.
- Educational technology is not synonymous to audio-visual equipments.
- Educational technology facilitates learning by controlling the learning environment, media and educational methods.
- Educational technology is a general term and cannot be taken as a series of components or a process. This knowledge includes educational technology, technology in teaching, software education, self-education, system tendency, and …[4].

3. The Status of Educational Technology: British Curriculum

There are three types of textbooks available in England: student's book, teacher's guide, and student's guide. Considering the importance of technology, English curriculum developers have made amends in the education system. And as a part of such amends, some technology and communication related activities have been implemented in these three types of books[5].

In order for the students to experience communication and information technology, two approaches are taken into account in textbooks: a) group projects, b) special activities in the field of communication and information technology such as using word processors to write reports, using graphic computer programs, utilizing educational CDs, and using computer in doing school assignments[6].

4. The Status of Educational Technology: American Curriculum

Developed countries have investigated a lot on Information Technology (IT) since 1990. The U. S. provided more learning opportunities to eliminate the gap made among the students who needed to access the internet at home [7]. State and, sometimes, legal characters' assets were directed in the direction of bridging this gap. Firstly, more resources and equipments were provided for the students at schools. Secondly, these equipments were planned to become available to all students, especially weaker ones, equally. By 1994, thirty percent of classes had an online connection and this grew to 93% in 2003[8].

The national guidelines of the American Information Technology for teachers and learners are as follows:

1- All students and learners will have access to IT in the classroom, school and at home.
2- All teachers will use IT effectively in order to enhance academic achievement and to achieve fundamental skills in students.
3- All learners will have the necessary skills to obtain informational and computer-related literacy.
4- Further analysis and evaluation will be carried out in order to expand the future applications of technology in education and learning [9]

5- Japan

In 1998, the government of Japan carried out a number of projects to create a link between education and information and communication technology. Among these projects, they defined a program called "computerization of education' the purpose of which was to provide computers and internet for all classrooms in Japan, supporting teachers in using IT in learning-teaching process, and developing the connection between industry and education[10].

Japan's national program of using information and communication technology in education

Japan's education, sport, science and technology ministry considers education as an integral part of the social unit and proposes some applicable plans to prime minister for conformity with information world in cooperation with other ministries. These plans are mostly based on the developing the information and communication technology in schools and universities; and consist of expanding the information networks,
and satellite communication, improving teaching methods, training professional teachers and providing curriculums according to web-based learning and teaching[11].

5. Developing Countries

China

According to the latest information on the Global Bank, in China, there were 19 computer sets per every 100 people in 2001. The number has been reported as 508 in Singapore, 394 in Japan, and 126 in Malaysia. With a population of 1.3 billion people, China is the most populated country in the world. However, a very small proportion of its GDP is invested in education (Less than 3 percent). The number is 4.8 for a country like Brazil which has almost the same GDP as China. The average educational investment of the countries across the world is 6.1 [12].

Iran

There are no statistical evidences on the access of the schools to the technological education. However, some observations show that there is a huge gap between the possibility of the student’s access to the opportunities of using the information and technology at schools. The ministry of education of Iran in spite of the attempts done in the domain of explanatory curriculum of the education and lessons and in the domains of administration and experiments is a central system. This centrality includes the same lesson programs for all the students from urban and rural regions with every kind of aptitude and different economical status and from every gender prescribe a inflexible curriculum. In this case the use of technological education is possible only in one subject matter is applicable. Because of this centrality the ability of the curriculum development and the leadership of the learning process, that is the basic skills in application of information technology weren’t developed among the teachers[13].

Strategies for the Development of the ICT

Some of the strategies are such as:

- The experts and authorities attitudes upon the value of ICT has a vital role in the quality and quantity of education [14].
- The need to the use of abilities from information Technology and communications have direct relation with the amount of attention the evidence for this is the condition in the north America. Because of the various economical conditions and geographical conditions and also scientific purposes caused an attempt to equip the educational setting to the Technology[15].

6. Results

The best approach for developing countries is to use the experiences of the developed countries and to have parallel strategies with them. The logical cause of this suggestion is the digital gap between the developed and developing countries.

Application of communication and information Technology in educational system of Asia countries is different. Countries such as Japan, China, India and Korea can use computer facilities and internet in their educational system. However, their are invisible in Asia countries. one important problem is, a symmetrical use of Technology. An other is related challenges of teacher training. European countries have equipped themselves with information and communication Technology, where as African countries except North Africa and Egypt haven’t use knew able to Technologies. It is suggested to pave the way for an integrated model of knowledge, view and capability in Iran. Because without this, you can not expect the objectives com in to reality. One of tools for create the change in education, is use of informational technology in education. One of scholars names four revolutions in information[16].

7. References

1. H. Rastegarpoor, N.Abdollahi, Thy ways of Developed of Information Communication Technology, Tehran, People knowledge (2005).
2. K. Sampat: Panir Salvam, A’santanam, Crewe in Education al Technology, Translation of Iraj Etemad Mohammad Hassan Rezai, Shiraz Publication Rahgosha (1999).
3. Guangze, Xu, Comparative Education technology and Education Reform in Asia, Available at: <http://www.com.net/scb/preconference/Ed%20Reform%20papers/31.XU%>(2004).
4. A. Eyaghma, characterizes Instructional Education, Journal Technology Education Roshed, period 16’sh5 (2000).
5. B. A. Zamani, technology of educational essay in England books: technology magazine Winter (2004) period 19.
6. B. A. Zamani, education of technology in textbook in the advance countries (England) growth of educational technology, number155 (2004).
7. Donnelly MB, Dove T, Tiffany-Morales J., Technology-Related Professional Development in the Context of Educational Reform: A Literature Review, Arlington, VA: SRI International (2002).
8. J. Parsad, B. 2005. Internet Access in U.S. Public Schools and Classrooms: 1994-2003. NCES 2005015. Washington DC: Department of Education, National Centre for Education Statistics (2005).
9. M. Dilghmani, the easy of informational technology in American education, technology’s magazine, period 19 (2004).
10. A. A. Gallali, and M. A. Abase, ICT (information, connection Technology) in others countries of world education, Annual showing ICT in age, Tehran, Iran lesson planning (2004).
11. M. Sarkaranieh, "Japan's national curriculum reform with emphasis on the fusion approach, Journal of Educational Innovation, the first year No. 1, p. 67-80 (2002).
12. S. A. Razavi, Modern issues instruction technology, Ahvaz, Shahid Chamran University, First edition (2007).
13. Information technique and communications in education Iran, ITanalyze. ir (2005).
14. A. Trottter Technology counts: Australia and Pacific. Available at: http://counts.edweek.org/sreports/tc04/article.cfm?slug=35.asia.h23ts.edweek.org/sreports/tc04/article.cfm?slug=35.oceania.h23(2004).
15. S. Cavanagh, Technology counts. North America. Available at: http://counts.edweek.org/sreports/tc04/article.cfm?slug=35.n/America.h23(2004).
16. Sh. Shiba and D. Walden: Four Practical Revolutions in Management, productivity press (2001).