INTE 2014

Communication technologies and education in the information age

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Abstract

Today, paralel to developments in computer and communication technologies, the importance of information is ever increasing. Due to the continually developing new communication technologies, sharing and transfer of information in the internationalscale is getting far easier and the interaction among individuals is getting rather intensified. In an information society, particularly the information technology, the means of telecommunication and computers are used extensively. Moreover, the changes in communication Technologies play a significant role in social life and create new opportunities in the field of education. In this study, there flections of the developments in communication technologies on education will be analyzed.

Keywords: information society, communication technologies, education.

1.Information Technologies in the Information Age

Communication comes into existence with people and ensures stability in the structure of the society. A society, which transfers its traditions from one generation to the other, becomes long-lasting by way of communication. Media needs of people continuously bring up novelties and developments in the global world. New ideas and new

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values are disseminated to the whole world via mass media and global communication networks. It is possible to say that the developments in the communication field shape and give direction to the world. An event, which occurs in any part of the world, instantly expands to every single point of the world via communication networks. Mass media, which can reach very wide masses simultaneously, make up a new dimension in the communication process. Using the mass media, which have turned to a significant part of our daily life, we acquire knowledge on the events, which occur all around the world, and interpret them. "Communication, as a giant market, has become a sector, which increases both production and consumption levels and which directs the world economy. As a result, a giant sector has become a topic of economical, cultural, local area, psychological, anthropological, historical and philosophical research from advertisement to TV shows, documentaries to movies, mutual conversation to persuasion, propaganda, attitude and behavior changes and has increasingly become the focus of sociological researches with differing attitudes and paradigms'' (Tekinalp 2009:20).

By way of new communication technologies, changes come up in various fields of human life. Relations of people with each other and with organizations take new forms with the impact of mass media, which are effective in every single field of life. The movement, which brings forward technology as the driving force of social changes, is called technological determinism. Marshall McLuhan and Harold Innis are the leading actors of technological determinism movement. Marshall McLuhan, who suggests that the world is formed by communication systems, argues that the world has turned to a global village after expansion of communication technologies and products. Mc Luan -the Canadian communication theorist- suggests within the framework of the global village concept that people, cognizant of each other as if living in a small village, will capture the world as a whole.

Individuals of socio-economic and cultural classes in all societies have found communication, which is as old a concept as human history, important along centuries. Due to need of people for communication, we can observe remarkable developments in this area every single day (Büyükbaykal, 2003:185).

The developments in communication technologies, distances diminishing every single day and connectivity of the whole world via internet are the indicators of existence of the global village. However, obtainability of the same technology by the whole humanity to the same extent is a matter of dispute. Some people are not educated-cultured enough to use this technology yet; besides they do not have the same financial sources. Therefore, the global village argument may be subject to criticism in this sense.

Information and the developments in communication technologies have paved the way for a new age called information age. Today information becomes more significant with the developments in computer and communication technologies. There has been a transition from industrial society to information society. Information has turned to a significant foot of globalization. One, who holds information, has the power in a sense. While information used to be an element, supporting production in industrial capitalism, information has turned to one of the most significant production sources; one of the elements, determining circulating and accumulating rate of capital. In the societies going through the globalization process of the 21rst century, the information production is regarded as an industry itself. In the present system, information production gains speed every single day and the information at hand grows old as a result. Therefore, information and technology are two complementary concepts. Development of technology speeds up dissemination of information. As technology develops today, societies have to revise and give new forms to educational fields for bringing up individuals with appropriate capabilities for the information age. Modern education systems are reshaped with momentary developments in technology.

"While the new society, replacing the industrial society, is named as 'post-industrial society' in USA, it has been given the name 'information society' in Japan. The first country, preparing a development plan for gaining an information society identity, is Japan. Mausa has contributed to preparation of this plan. Invention of steam engine, the innovative technology on which the industrial society is based, increased the production rate and speeded up economic development. According to Masuda, the innovative technology on which the information society is based is computer technology" (Güçlü, 2005:131). On the other hand; according to Daniel Bell, the heart of post-industrial society is "encoded information" (Bell, 2007:463).

If the historical background of the information society is examined, particularly the impact of radical changes based on technological developments is observed. Notably in the post-Second World War period, the developed countries gave priority to use of information technology and made effort to obtain high efficiency level. On the other hand, there are opinions suggesting that the information society came into being in the 1950's and 1960's in the developed countries particularly in USA, Japan and Eastern Europe.

"Fritz Machlup, the USA economist, had used the concepts "information concept, information economy" for the change emerging in his society in the year 1962. Information society may be used for discussion of a society, where

communication is used to a full extent; significance of information and technology production in intense international competition or flexible production systems, which increase in number in production." (Geray, 1997:37).

With the continuously developing new communication technologies, global sharing and transfer of information are facilitated and interaction rate between people increases. Since the societies of our time are structured on information and information technologies, they are named as information societies. Information society is where information technology, telecommunication media and computers are used extensively. Information technologies have an impact on all social dynamics; primarily economy, politics, health, trade, production, transportation, education, culture and publication. Information sharing has gone through transformation with this impact eliminating time and place differences in communication.

Speed of social change and renewal is due to the fact that the internet is the open network system most widely expanding among communication systems. As far as expansion of the most significant communication media, having an impact on mass communication, is concerned, we can say that it took 74 years for telephone to reach 50 million people; the said period is 38 years for radio, 13 years for television and only 4 years for internet (Sarmaşık, 2011:223).

Upon globalization of technology, constantly renewable communication media speed up circulation rate of information and news in the global area. With the developments in computer and communication technologies today, importance of information increases steadily. "Technology has been positioned as one of the sole elements having the potential to change human life"(Castells, 2005:662).

Information production gains importance in information society with the help of information technologies. The driving force of the information society is information, which is the product of information technology. This is shortly referred to as "computational information"; since computational information is processed and obtained by way of scientific methods and processes within computer systems, it has an objective content. Computational information of the information society is that, which has been processed using information technologies for use in the future (Önur, 2002:105).

1.2. Communication Technologies and Education

Rise of new technologies and information technology restructures the traditional ideas in the education and business medium and transforms them in a sense.

Developments in communication technologies also pave the way for restructuring of the social structure. Novelties in communication technologies and expansion of the information technology influence the education field too. It is possible to say that education has been restructured due to increasing rate of computer use and use of multimedia technologies today. Both primary school students and undergraduate or postgraduate students use the facilities, provided by internet, for acquiring information or doing research within the scope of their assignments. For instance, Finland is the most developed information society all over the world. Internet connection is available in all schools in the country and the majority of the population knows how to use computer. "The individual, carrying on with his education via information networks, confronts an affluent content; he does not solely depend on his instructor/is not passive" (Bozkurt, 1996:191).

Will digital media replace school books in a short term? If children start to prefer computers instead of instructors, will schools be able to maintain their existence in their present condition? It is said that new technologies may not be made a part of the present curriculums easily, they will dig their foundation and will transform them. The reason is that since young people of today's world have grown to the information society, they are more accustomed to technologies of this society if compared with many grown-ups including their instructors (Giddens, 2008:778).

Communication technologies of today change the communication structure of people and organizations too. There is an interactivity now in the communication medium. On internet medium on which moment and speed are highly significant, people may now establish a more intensive communication particularly thanks to new media technologies and social media. Students, instructors, academic members, who use social media as a common ground, communicate with each other and thanks to this new communication system on social media, information can be transmitted to a large community. The new generation, who can communicate by e-mail other than social media, may share information instantly with this facility. For instance, an academic member shares any changes in his lecture schedule with his students using social media; on the other hand, students may show their opinions, expectations or issues relating to lectures or an academic member on a common platform.

Education plays a key role in information society. The common education concept in industrial society gains a personal form in information society and life-long education concept is formed (Crawford, 1991:18). We can say that education gives shapeto the society and rises the development rate of the society in a sense. Within this scope, information society is the medium in which information is shared and expands by way of technology. In information societies, bringing up individuals, who are capable of obtaining, using and producing information, becomes more significant increasingly. The fact that developed societies make investments in education and research areas to a higher extent is an undeniable fact.

"Developments in the social area, information sharing rising every single day under impact of information society and higher education level based on information sharing ensure that individuals gain more diverse perspectives about life". Progress in communication technologies plays a major role in information production and transfer, which is one of the common traits of information society. In order to be able to catch the information age and to be an information society, first of all investment level in this field should be increased and educational competition in the fields of science and technology should be maintained. Significance of continuing education and the value of shared information instead of one, which is kept in hand, should be borne in mind. The most major responsibility in capturing the information age is held by educational institutions.

In information age, people should be more independent as far as education is concerned and should plan and control their career developments. In this sense, continuing learning will be the most significant element of education in the information age (Hope, 1997:11). In addition, people from every single occupation should be given the discipline and motivation to carry on with learning. Since continuing learning will ensure self-development, occupational success will be a plus. Education should be open to people from every segment of society at differing ages.

Peter Drucker emphasizes significance of a continuing education, which is based on a life-long learning in information society, as below: people should receive reiterating education in an information society even if they have completed their education. Continuing education is extremely significant for occupations like physicians, teachers, scientists, directors with higher education level in order to carry on with their education as well as development of societies (Drucker, 1993:248). Step has been taken to information society with uninterrupted attention given to lifelong education.

As emphasized by Masuda, one of the leading figures of information society theory;

- Formal school limitations will be eliminated in information society.
- The present education systems will be replaced by information networks.
- This will fill the gap between developed regions and undeveloped regions.
- Self-learning will become the main form of education. In formal education system, students are given one-sided education by the teacher. However, in an information society, the teacher will adopt the role of a consultant particularly thanks to computerized environment.
- The present education is mandatory and is completed at a young age. In an impermanent information society, education of grown-ups has the same level of significance.
- Mass education will be replaced by an education system, which is proper for individual skills and preferences. In other words, an education system appealing to personal traits will be put into practice (Masuda, 2005:289).

Novalties emerging in the technology area, development of programmes, preparation of educational sources and carrying out new structural changes require continuing training of the education personnel (Numanoğlu, 2014). In an information society, which is given shape under the impact of technology and information, there is a need for competent individuals, who are in search of new technologies. In this sense, individuals of information age of today should be open to learning and research and should improve themselves continuously. Transfer of information gains speed by way of the developments in the communication technology, which eliminates issues of time and space and people can easily establish online communication. Today, it is a commonly observed that education is not given at schools; "distance education" is possible thanks to technology. In recent years, distance education or open education faculties have been founded in many universities and computerized lectures are given; by the hand of these facilities, efficiency of education is not only limited educational institutions. For instance, in a distant education programme, which gives online education, the student may ask a question to the instructor and has the opportunity to share ideas by way of participating in the course actively.

Globalization and technological developments have generated a global market in the higher education area. Higher education have at all times maintained its international dimension up to now –thanks to exchange students, research projects going beyond country borders and international scientific conferences- however we can speak of radical

new cooperation possibilities among international students, academic members and education institutions today. By way of formation of internet-based education and "e-universities", education and other facilities may be transfered to a global audience more easily… Moreover, even long-established universities take steps on the way to being a "e-university". This ensures that organization consortiums share academic sources, research services, education and student online facilities of each other (Giddens, 2008:782-783). Through this channel, a student in Turkey may use the online library of a university in United Kingdom and do a research. Besides, he may ask questions to an academician of a university in the States and ask for support for the area he is doing a research. However, this requires reaching a technological development level and elimination of both technological and educational infrastructure issues.

People need education, which is a significant process ordering our life in the modern social structure, in every time period of their lives. Education plays an utterly significant role in information society. The future of a country depends on the education of the community of that country. "Education may be defined as transfer of knowledge and skills from one generation to the other and generation of the terminal behavior in the individual." (Bozkurt, 2005: 278). Development level of a society is in direct proportion to increase of educated people in that society. It should be borne in mind that information is transferred through education; therefore required level of attention should be given to education. In today's society, participation of individuals in rapidly developing information society by way of acquiring new knowledge and occupying a place in life-long learning process is extremely important. Learning capacities of individuals should be increased through widespread use of communication technologies within the education process and education should take its place in every area of life. Therefore, education should be turned to a life-long activity. Education systems of countries should be restructured by taking into account the technological developments and the lacking points in this area should be eliminated for adjustment to the globalizing world of today.

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