

13th International Educational Technology Conference**The Evaluation of University Students' Views on Internet Resources**Hasan Aydemir^{a*}, Ali İhsan Benzer^b, Osman Karahan^c, Egemen Akmençe^d*a. Yrd. Doç. Dr. İnönü University, Education Faculty, Malatya, Türkiye.**b. Öğret. Gör. Mustafa Kemal University, Hatay, Türkiye*

Abstract

The present time, which is described as the information age, internet is a very important source of knowledge. It is known that students widely make use of internet resources for their courses, research and projects. However, at this point, it is discussed that how reliable the internet resources are. Regarding this issue, there are people defending that internet resources are reliable as well as people suggesting that they are not. In order to make the discussions on this issue clear, it is useful to evaluate internet resources epistemologically and scientifically. So, students' views on internet resources, their point of view and finally getting information about their awareness concerning this issue are important.

In this study, the aim is to determine university students' views on internet resources and to analyze them in terms of different variables. The analyses will be realized in the context of educational technology. The study is a descriptive one and the data are obtained through likert-type items and analyzed with descriptive statistical techniques. It is expected that the results obtained through analyses will contribute to the discussion in question.

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Introduction

Mankind, who got knowledge from oral and written sources of knowledge for a long time, met a new source of knowledge in late 20th century described as virtual. Being different from the one stored in mind, tablet,

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signboard and paper, this knowledge travels on internet, which is called the virtual environment. Internet (web) is basically a strong communication system linking a computer anywhere in the world to another (Davenport ve Erarslan, 2001). In another definition, internet is the largest network of communication and data bank consisting of computers linked to each other (Şahan, 2005). This source of knowledge on the internet line has led to a radical change in habits like accessing, saving and sharing knowledge to the extent that it has given 21st century its name, the information age.

In short, the knowledge in virtual environment described as internet resources, has changed the progress of philosophies, theories and activities concerned with knowledge. Thus, with the pervasion of the internet technology, accessing knowledge (information) is no longer a problem. So, internet is accepted as the fastest and cheapest way to access knowledge at present. When it is remembered that people went far away from their hometowns in the past to access knowledge facing a lot of difficulties, this transformation can be understood better.

One of systems that the internet has fundamentally changed is the education. Essentially being a "knowledge-making process" and have organized for this purpose, the school system has been degraded almost to a *centreless circle* with the widespread of internet. As a result, to establish schools and classes only to reach knowledge has largely lost its meaning. It is because the internet has made knowledge (and education as well, if it is merely transferring knowledge) free from time and space. Internet is a time-and-space-free technology that offers the whole world to school, teachers and students. Furthermore, the internet frees students from chalkboard, teacher, and book trilogy and provides them opportunity-rich environment full of visual materials, resources, and experts; and thus learning becomes more meaningful, more enjoyable and longer lasting (Sen, 1999). Removing the boundaries of learning, the internet provides students the opportunity of virtual school without walls and global learning (Halis, 2001; Askar, 2003). From a different perspective, internet eliminates significant differences in education such as age, class, gender, nationality, religion, special needs etc. (Ergun, 1998). As for the internet which is called as wider source of information than a teacher, Baykal (2008), has evaluated that "computer is a more patience test expert, magnetic memory has already left organic memory in the lurch, artificial intelligence is at the door" and asks "what is left to school?" and answers himself that "what is left to school is a pair of eyes gazing into your eyes, a head leaning on your shoulder, a compassionate hand patting you on the back, the taste of the anger, the pain of separation".

What is the point in erecting buildings costing a lot which are so-called schools and which have been established on valuable premises particularly in cities merely for teaching while the internet cut the ground out from under school that they have deployed for centuries (school for transferring knowledge and teaching)? When the matter is handled from the perspective of accessing to knowledge or getting knowledge, it can be said that school has experienced a significant loss of meaning against to the internet reality. In this case, it can be foreseen that the school system cannot lean to a goal like merely teaching but it will have to find some other rightful bases in these times when the internet is common as such. If school will remain as its present form (a centre for information or knowledge distribution) in the future, it will have to find new forms and bases concerning its mission by making radical knowledge-based changes. The leading debate about education in the years to come can already be estimated to be on school's mission of giving knowledge. It is because epistemological problems have always been at the forefront in educational process, which is a process of giving knowledge in a sense (Büyükdüvenci, 2001).

In the last twenty years, internet has been included in every aspect of life in Turkey as in the world. According to the data, %30.5 of the world population is internet users in 2011. This rate is %41.6 in Turkey (Esgin, Baba and Aytac, 2011). Correspondingly, it is observed that there is a radical change in school systems. This change can be seen in a wide range from using the internet as the source of knowledge or learning environment to online universities. However, in Turkey, the reflection of internet to school systems appears in the classrooms equipped with internet facilities and students to access it. The most typical example of it is Fatih Project which is put forward with great hope and with its huge cost.

Internet which has been included into the education system resulting in important changes may have a lot of functions. One of them is to use it as the source of knowledge in the classrooms. With this function internet has become one of the fundamental learning variables. In the historical process, in terms of knowledge book-teacher-student triplet with the addition of the internet has changed into quartet or internet has replaced the book and the system has turned into student- internet- teacher.

With different forms and positions internet is now one of the fundamental variables in the classrooms as well as in higher education. It can be said that internet has been gradually replacing the teacher and the book and is candidate to become the unique source of the classroom and the problems occur at this point. These problems are all about the new position of internet as the source of knowledge. The first problem is that internet is seen as the only source of knowledge. And this situation is not appropriate for Constructivist approach which has been applied since 2005-2006 education year. The first problem is the inconsistency between internet and the current education system principles because in constructivist approach the primary source of knowledge is individuals like teacher, students, others...etc. The second one is that based on a verbal culture if the social culture will adjust to an imaginary culture constructed via internet and how correct it is. The third one is that basically based on informative approaches. Turkish education system has lost its prestige and the question is that how this situation will be prevented. The fourth problem which is arising from the perception of internet as the only source of knowledge in the classroom is also the focus of this study. This problem is the reliability of internet sources in the process of learning. As the school and education construct mind, this problem in fact is a problem which has roots in philosophy, epistemology, and axiology. This construction problem is a future problem for the society, because the survival of a society is also a problem of national mind construction. In this sense, it is important that internet sources are studied to understand the problem.

Method

This study was carried out in survey design and it is a descriptive one. Survey design is a model based on describing and explaining the existing situation by taking samplings from the population (Arseven, 1994; Balci, 1995; Karasar, 2005).

2.1 Population and Sampling

The studying population of the study includes the last year students attending various faculties of Firat and İnönü Universities in 2012-2013 Spring term. The sampling consists of 517 students chosen from the population using the random sampling method and volunteered to be involved in the study. The distribution of these students into universities is as follows; Firat University (n=234; %45.3), İnönü University (n=283; %54.7). When the fact that a sampling of 356 participants is enough for a population of 5000 people in 95 % confidence interval in a scientific study (Balci, 1995:110 as cited in Anderson, 1990), it can be said that a sampling consisting of 517 students for this study is enough. The distribution of students making up the sampling according to some variables is seen in Table 1.

Table 1. The Distribution of Students Making up the Sampling According to the Variables

Variables		N	%
Gender	Female	273	52.8
	Male	244	47.2
Faculty	Education	169	32.7
	Science	115	22.2
	Humanities and Social Sciences	105	20.3
	Engineering	67	13.0
	Divinity	61	11.8
Total		517	100

2. 2. Means of Data Collection

The data in this study were obtained through questionnaires developed by the authors. While preparing the questionnaire, an item battery was formed consisting of a sum of 22 items, 2 items for personal information and 20 for internet resources, as a result of searching the related literature. And then, these items were given to five academicians to get their views on content validity. Following this, the draft questionnaire was ready for pilot study as a result of making necessary corrections in accordance with the suggestions of the experts. The pilot application was carried out for 68 students who weren't involved in the study. Factor analysis was made for the data obtained from the pilot study so as to test the content validity of the questionnaire. The results obtained from the factor analysis were KMO= 0.631; Bartlett= 151.890 ($p=0,000$) Cronbach Alpha= 0.67. In the analysis, the items with a factor load of 0.35 or more were taken and eight items below this value were omitted and a questionnaire of fourteen items was shaped finally. The factor loads of the items in the questionnaire were between 0.381-0.657. Taking these values (Büyüköztürk, 2002:120) into consideration, it can be said that the questionnaire was reliable. The items in the questionnaire was graded as "yes", "partly" and "no".

2. 3. Collection of Data and Analysis

In this study, the items were analyzed with percentage and frequency techniques. Chi square (X^2) technique was applied to determine whether there were significant differences among students' views according to the variables. Only the items with a significant difference among students' views were involved in the study.

3. Findings and Interpretations

Table 2: Students' Views on Internet Knowledge Sources

Views	(1) Yes		(2) Partly		(3) No	
	%	f	%	f	%	f
1 Do you make use of internet as a source of knowledge?	46.8	242	42.9	222	10.3	53
2 Do you question the knowledge sources on the internet?	17.6	91	28.6	148	53.8	278
3 Is the knowledge on internet reliable in your opinion?	62.9	325	27.5	142	9.7	50
4 Is the knowledge on internet reliable in terms of ethics in your opinion?	52.4	271	40.2	208	7.4	38
5 Is the knowledge on internet scientific in your opinion?	66.5	344	24.6	127	8.9	46
6 Do the resources on internet have the quality of knowledge in your opinion?	47.2	244	37.7	195	15.1	78
7 Do the resources on internet have the quality of knowledge in your opinion?	51.1	264	39.7	205	9.3	48
8 Can knowledge at wisdom level be reached on internet in your opinion?	42.9	222	37.9	196	19.1	99
9 Is your aim of reaching knowledge sources on internet just "getting knowledge"?	63.6	329	24.0	124	12.4	64
10 Is your aim of reaching knowledge sources on internet just "learning"?	50.7	262	35.4	183	13.9	72
11 Is your aim of reaching knowledge sources on internet just "surfing"?	64.5	334	20	103	15.5	80
12 Is the primary source of knowledge in the class course books in your opinion?	54.2	280	33.3	172	12.6	65

When the opinions of students in Table 2 are analyzed, it is understood that they take advantage of the internet to a large (%46.8 yes+%42.9 partly) extent. This evidence could be interpreted in a way that the monopoly of the teacher and books has been overcome as a traditional source of knowledge. If it is considered that the internet is involved in every phase of life, it also reflects on education process as a matter of course.

Here 42.9% "partial" rate could be related to the problem of students in getting access to the internet rather than their distrust of the internet. Because some students find it reliable to a large (62.9%) extent. Also the students accept knowledge on the internet without questioning and it supports this interpretation. Furthermore, the students consider knowledge on the internet reliable by 66.5% and they find the knowledge ethical by 52.4% and these can be considered as a sign of reliance. This would be pleasing if the source of knowledge on the internet was really reliable.

However in literature many suspicions are uttered against knowledge originating from the internet. (Ergönül, 2011). In this case, students' reliance on knowledge from the internet might be based on two possibilities. First, students might be unaware of the aspects of knowledge as the source of knowledge, its types or its being ethical, since students are epistemologically inefficient. Hence there is no (except one or two) epistemological lectures or contents in higher education. Second, students' reliance on the internet sources might be related to easy access to this source. Because it is more difficult to obtain knowledge from textbooks and lecturers than the internet. Therefore in this regard, it is defined as a technology developed in accordance with needs of humanity on "sharing/keeping the produced knowledge and getting access to it easily". It is possible to reach knowledge on many subjects with the help of this technology in an easy and a cheap, fast, reliable way (Korcuklu and Balay, 2005).

The internet has three functions as a source of knowledge. These are scanning, presenting and linking. (Syidoğlu, 1997:221). Akkoyunlu and Orhan (1998) state the benefits of the internet as “researching, reviewing, answering questions, sharing knowledge”. When the answers of students participating in the research are analyzed it is understood that 64.5% of the students use the internet “for browsing”, 63.6% of them use it “to obtain knowledge” and 50.7% of them “to learn something.” These evidences can be interpreted in a way that students use the internet to receive superficial knowledge and for browsing as well as they use it for the purpose of learning and education. In fact, the knowledge (more like information) obtained pointlessly and acontextually (almost through skimming) does not mean so much for learning. Because the benefits of knowledge for mankind make it valuable and meaningful (Yalçın, 2012)

Knowledge can be defined differently in literature. This diversity is related to adoptions about knowledge. Mengüşoğlu (1992, Akt: Cihan, 1998) defines knowledge in general as “the result of relation between the subject and the object.” The diversity in the definitions of knowledge -according to its nature, dealing context and the philosophy relied on- is also a case in classification of it. For instance, the most classical classification of knowledge in educational sciences is Bloom’s Taxonomy. In this taxonomy the simplest form of cognitive knowledge is “remembering”, the most complex one is “evaluation.” (Bloom, 1998).

Knowledge can be classified as verbal and cognitive knowledge. Knowledge, with a more traditional approach, is classified as “ilm-el yakin” (knowing by knowledge), “ayn-el yakin” (knowing as seeing) and “hakk-el yakin” (knowing all about). In literature, information is classified as “phenomenon”, “information”, “knowledge” and “wisdom”. Bellinger, Castro and Mills (2013) grade this classification as: Data, information, knowledge, understanding, wisdom. In this classification the nuance between information and knowledge is missed. In contrast to information, knowledge provides a sound base. (Akgün, 2000). Furthermore, within the context of diverse disciplines, knowledge is also classified as phenomenal knowledge, conceptual knowledge, principle-generalization, law-hypothesis (Kaptan and Korkmaz, 2012). Apart from those, in respect of its sources, knowledge can be classified as given and gained knowledge.

In this study, several questions are added to find out how the students perceive internet-based knowledge and whether they are aware of various forms of knowledge. The answers given by students are seen in table 2. According to this, %51.1 of the students perceive internet-based knowledge as *information*, %47.2 of them perceive it as knowledge and %42.9 perceive it as *wisdom*. Although this finding can be interpreted as students are aware of the order of knowledge from simple to complicated or from superficiality to profundity, the fact that the rates of grading are close to each other brings presence of students’ awareness into question. Hence, the same students considering schoolbook as the primary source of knowledge at the rate of %54.2 supports this suspicion. When these findings are handled as a whole, it can be said that students don’t have *information* about knowledge indeed or they are confused. Taking into account that they haven’t had classes related to this in education process, the situation can be considered as normal. In order to demonstrate the depth of students’ perception of internet based knowledge in the context of classification of knowledge, more comprehensive studies (including interviews) are needed.

Chi square test was applied to determine whether there are significant differences among students’ views on the items included in Table 2 in terms of variables. Test result shows that there is significant difference according to gender for the items 1. ($X^2=17.135$; $p=0.000$) and 7. ($X^2=8.465$; $p=0.015$). The difference of the 1st item is in countenance of male students. Accordingly, male students has answered as ‘yes’ to the question ‘Do you make use of internet as the source of knowledge?’ at the rate of %60.3 while female students has given the same answer at the rate of %39.7. Consequently, it can be said that male students make use of internet as the source of knowledge more than female students do. Similarly, the significant difference in 7th item is in the countenance of male students. According to this difference, male students answer ‘yes’ at the rate of %56.8 to the question of “Do the resources on internet have the quality of knowledge in your opinion?” while female students do at the rate of %43.2. When this finding is taken into account, we can say that male students find internet based knowledge more superficial than female students do.

Among the students opinions about the items in Table 2, only the item 5 ($X^2=20.192$; $p=0.027$) has the significant difference in terms of faculty variable. According to this, Faculty of Science students are the ones who said 'yes' to the question of "Is the knowledge on internet scientific in your opinion?" more than other faculties(%80) while Faculty of Social Sciences students do the opposite (%55). This finding shows us that students of Science Faculty consider internet sources as scientific more than students of Social Science Faculty do. One of its potential reason could be the way students of Social Science Faculty approach knowledge. They do it more questionable as the nominees of social scientist.

4. Results and Discussion

The results found out in this research which aims to evaluate the views of students on internet sources and the suggestions asserted through these results are pointed out below:

- The Internet, one of the main realities of the Information Age, has influenced the structures and representations of curricula in instruction process through education and school system just as it has influenced almost every area of life. The internet has not only cheapened and facilitated the way to reach the information but it also has made the knowledge independent of time and location. Apparently, it is no more a problem to reach the information. From this point, universities which are based only on the instruction phase have faced a gradual erosion on their chance of leading status with this only mission. Furthermore, it seems that lecturers, against the internet, have lost their role as the only authority from the aspect of knowledge in class forever. In light of these circumstances, universities and lecturers are required to take on valid and effective positions against this recent information source.

- Internet is one of the ways which are frequently utilized to reach information in all instruction levels as well as higher education. However, this virtually-unlimited information source brings about a reliability problem. Nevertheless, according to the conclusion of this study, university students define their web sources as reliable and get each piece of information without questioning through these sources. This circumstance is likely to cause troubles on students' intellectual stimulation and their perceptions of science and reality. On this point, universities should take the necessary precautions in order to enable students to be competent at questioning, deciding and recognizing the correct information. For this purpose, new courses can be added into the curriculum or present course contents can be reconstructed if necessary. Moreover, informative activities can be arranged.

- Another result achieved in this study is that the purposes of students' internet use are as in the sequence of surfing, getting information and learning. The purpose of surfing on the internet should especially be converted into a learning objective. Thus, universities should encourage the students to use the internet for sharing, reinforcing, rewarding and extending the information they learn.

- It is concluded that the university students in this study consider the internet-based knowledge mostly as information. However, it is a suspicious fact whether this kind of an evaluation depends on an epistemological awareness according to the answers achieved in this study. From this point, extensive research is required to determine students' epistemological perceptions on internet-based information.

- Internet-based knowledge may bring out scientific and ethical problems. Universities, from this aspect, should carry out studies for developing scientific and ethical criteria on internet-based information.

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