A RESEARCH ON THE PURPOSE OF INTERNET USAGE AND LEARNING VIA INTERNET

Ass. Prof. Dr. Nursel Selver RUZGAR,
Marmara University, Technical Education Faculty, Department of Computer Education, Kadikoy, Istanbul
nruzgar@marmara.edu.tr

ABSTRACT
New technologies are rapidly changing our ways of communication, and also the art of teaching, as well as extending ways of learning. The dramatic growth of Internet usage has changed the lives of millions of people around the globe during the last decade. For students and teachers, the Internet is becoming an increasingly important part of the educational process. In addition, a new kind of multimedia approach is making the Web available not just in the classroom, but in the textbook as well. This study is based on an online survey conducted at a Turkish University to obtain student views about intensity of Internet use, reasons for using the Internet, impact of the Internet on student life, via the Internet, web-based lecture notes, exercises, an electronic discussion panel and an internal course email communication system and their future plans about web-based learning. The sample was drawn from different faculties of Marmara University in Turkey. 744 students answered online survey, but after extraction 720 survey results were evaluated by SPSS. On the evaluation process, frequency and percentage graphs were sketched the results were compared with cross-tables. The results indicate that in the future the profile of education will be changed, mostly the students will access to Internet and take their courses via Internet. The young generation is exposed to Internet at very early ages and this will rapidly increase Internet usage in the near future. Sending/receiving e-mail topped the list in sample followed by research for school-related work. Approximately fifty percent of students believe that Internet access at home improves their grade-point-averages (GPAs).
Keywords: Learning via Internet, Student preferences, Internet usage.

INTRODUCTION

The use of information technologies has shown a very rapid growth during the last decade in almost every country in the world. Increasing computer ownership and access to the Internet have changed the lives of millions of people who get online on a daily basis at home, at school, at work and other locations such as Internet cafes. They go online to send/receive e-mails, chat, research for school or work, download music or images, and to do many other activities.

More recent statistics for the United States indicate that, the end of 2002 connected 166 million people connected to the Internet, representing 59 percent of the population (CyberAtlas, June 11, 2003). Coupled with this high connection rate and increasing use of fast connection systems such as cable modems, Americans also spend a lot more time on the Net than the citizens of other countries. As reported by Nielsen//NetRatings Inc. in May 2003, the average Web usage in the United Kingdom was about 12 hours per month for both home and work combined, while the corresponding statistics for Australia was 13.5 hours per month (CyberAtlas, June 16 2003). In the United States, the total time spent on the Web was about 99 hours per month (25.5 hours at home and 73.5 hours at work). The rapid diffusion of the Internet is not a unique to the United States. Internet penetration in the European Union has also shown very rapid growth during the last few years. The number of households online has increased from18.3 percent in March 2000 to 40.4 percent in June 2002. Five countries now exceed the 50% penetration rate with the Netherlands leading the pack (66 %), followed by Denmark (65 %), Sweden (64 %), Luxembourg (55 %) and Finland (54 percent). Greece had the lowest penetration rate in EU with 9 percent (eEuropa).
By the end of 2002, 48 countries in the world had Internet populations of 1 million or more (Cyber Atlas, June 11). The United States leads the world in Internet technology and usage. Overall, it was estimated that 143 million Americans (54 percent of the American population) were using the Internet, up from 45 percent in August 2000 (DOC, 2002). Japan had the second largest online population with 56 million people and 44 percent access rate while China, the most populous country in the world, ranked number three with 46 million people but only 4 percent access rate. Turkey had 2.5 million people online with an access rate of 4 percent. Countries with similar access range were Romania (4 %), China (4 %), Mexico (3 %), Colombia (3 %), Indonesia (2 %), Pakistan (1 %) and India (1 %).

The Internet is a global system of connections between millions of computers that allows almost instant access to and dissemination of information. The use of the Internet as an instructional tool in higher education is rapidly increasing. Today, there is an increase in the development of academic course websites with huge amounts of learning materials imbedded within them. The Internet's ability to provide students quick access to government documents, scholarly list serves, and databases located at geographically-removed institutions makes it a

valuable information source for students (Benson, 1994; Browne et al., 2000; Lubans, 1998; Ryan, 1994. The integration of the Internet as a teaching tool in academic courses has grown rapidly. Many universities, including leading academic institutes, are implementing advanced technologies as a part of existing teaching frameworks (AFT, 2001; Bonk, 2001). It is typical to see Web pages for courses in all fields taught at universities and colleges providing course notes and related resources as supplements to courses that are delivered in traditional classrooms (Zaiane, 2001). The Internet is mainly used for information transferring from the teacher to the student. However, the mere posting of academic materials on the Web may not result in students utilizing these materials to enhance their learning or course understanding (Cummings, Bonk, & Jacobs, 2002). Bork (2001) claimed that although an enormous amount of material for Web-based learning is developed, there is little empirical consideration of the learning effectiveness of these materials. Educators using Web-based learning environments are in urgent need for no intrusive and automatic ways to get objective feedback from learners to better follow the learning process and appraise the effectiveness of online course structure (Zaiane, 2001). The Web supports many forms of learner interactivity and engagement, and provides access to a vast repository of resources (Mioduser & Nachmias, 2002; Oliver & McLoughlin, 1999). In addition, the Web is used in response to the needs of learners for improvement in accessibility and convenience, to lower costs, and to increase the relevance of contents for the workplace (Beller & Or, 1998). The Internet has been implemented in higher education teaching to such an extent that some argue we may be witnessing the formation of a new culture of learning (Bullock & Ory, 1999).

Many Web-based learning activities in the late were based providing information in lecture mode. Course materials were posted on the Web for students to download and to study on an individualized basis. Indeed, we are currently witnessing the development of huge amounts of Web-based learning materials and contents that have become a major component in many academic courses (Bork, 2001). The centrality of contents in Web-supported academic courses can be seen by the examination of the most accessible tools by lecturers who implemented the Internet in their teaching (Bonk, 2001).

RESEARCH OBJECTIVES AND METHODOLOGY

The survey form sought information on demographic data, availability of the Internet at home and school, how long students had used the Internet, with what frequency they used the Internet, what purpose they used it for, what sites were visited, impact of the Internet on student life, their attitudes about web based lecture notes, electronic discussion panel and web based education.

The data for this project was collected online during the fall term of 2003-2004 Academic years. The sample was drawn from different 18 faculties of Marmara University and 744 students responded online survey randomly, but after extraction 720 survey results were evaluated. On the evaluation process, results were tabulated and analyzed descriptive statistics, frequencies and percentages, and cross tabulation with SPSS statistical package and Microsoft Excel 5.0 spreadsheet software.

RESEARCH FINDINGS

744 students responded this online survey, but after extraction 720 reponses were evaluated. From 720 participated students, 373 were freshmen (51.8%), 181 were sophomores (25.1%), 71 were juniors (9.9%) and 95 were seniors (13.2%). The males dominated the responses (71 %) as shown in Table 1. Males still dominate Internet usage in Turkey (Sevdik; Polatoglu, 2001). Cross tabulations indicated that there were significant differences in sex or class level, freshmen/sophomores versus juniors/seniors on overall frequency of web use.

For the sample, most of the respondents went online from home (50.1%) while “other combinations” option received the second place (32.4 %). The Internet Cafes that are widely available in Istanbul explain the importance of this category. The lower access from school is because of the fact that most Colleges in Turkey have not been able to create the infrastructure to provide easy access to their students.

67.1 % of the respondents had telephone dial-up connections. The cost and availability factors explain the low usage of cable modems in Turkey. The cost is as high as $60 per month and the service is not available everywhere. One might suspect that the slow speed of dial-up modems and the relatively high hourly cost might reduce the use of Internet in Turkey.

TABLE 1. Sample Characteristics

Characteristics		**Sample (%)**
Gender	Male Female	71.4 28.6
Internet Access From:	Home Only School Only Both Home and School Other Combinations	50.1 12.8 4.7 32.4
Type of Internet Connection	Modem (Dial-Up) DSL Cable Other/Don't Know	67.1 14.6 11.3 7.1
Time Spent Online (Hours/week)	1-5 6-10 11-15 16-20 More than 20	36 20.6 11.1 22.1 10.3

ONLINE ACTIVITIES

The students used the Internet to perform a number of activities. Among these, sending/receiving e-mail topped the list (Table 2). It was interesting to discover that the school-sponsored e-mail played a small role with only 7.5 percent of the respondents using it. This finding perhaps suggests that the universities in Turkey should invest more in Internet infrastructure. Hotmail (48.3 %), Yahoo (44.7 %) and Mynet (34.3 %) were the three top e-mail account providers to the sample members.

Using the Internet to read news and sports information was the second most important activity. To do research for school-related work was the third and chatting was the fourth important activities. While about 45 percent of the group used the Internet to research for products and services, 30.6 percent and 29.7 percent of respondents used it to download images and music, respectively. In addition, only 20 percent of the respondents did actually bought products online.

TABLE 2. What Do They Use the Internet For?

Use Internet For....	**Sample (%)**
E-Mail	64.4
Research for Homework	58
Chat	56.8
Read News and Sports Information	60.6
Download Music	29.7
Buy Products Online	20
Research for Products and Services	45.6
Play Games	26.3
Download Images	30.6

Impact of Internet

As mentioned above, the students use the Internet for a number of activities ranging from e-mail to buying products online. Regarding impact of the Internet, the results show that 40.6 % of the students agree and strongly agree that they read less because of Internet, compared to 46.5 % who disagree or strongly disagree and 12.9 % who are neutral (Table 3). Obviously, this might cause some problems in cultural and literary development of these students. Less than half of the respondents also indicate that they watch less television now because of their online involvement. This might be good or bad depending that one talks to. However, it is definitely bad news for television advertisers! It is sometimes argued that Internet negatively impacts the socialization process and reduces interaction with friends or family members (Reisberg, 2000; Anderson, 2001). Others argue that Internet actually facilitates interactions and people keep in touch with friends or family members via e-mail or chat. One might even make friends online. 46.2 percent of the respondents indicated that they made new friends while in chat rooms.

TABLE 3. The Impact of the Internet on Student Behavior

Comments/Statements	Str. Agree-Agree	Neutral	Disagree-Str.disagree
I read less because of the Internet	20.3-20.3	12.9	21.9-24.6
I watch less television because of the Internet	18.6-23.9	18.6	20.6-18.3
I have acquired new friends while in chat rooms	18.6-27.6	19.6	21-13.1
Access to the Internet at home improves my GPA	16-19.4	15.1	30.7-18.8
I am on the Internet more than I should be	14.6-23.6	7.8	32.8-21.3

About 25 percent of the respondents indicated that access to Internet at home improved their grade-point-average while 49.5 percent of the respondents did not feel that way. There were some gender differences here. a larger proportion of the males (38 percent of females versus 27 percent of the males) indicated that Internet access improved their GPAs.

In spite of very favorable attitudes towards Internet, students also worry that they might be spending too much time on the Web. A large share, 37 percent of the students indicated, "they are on the Internet more than they should be."

Favorite Sites

In an open-ended question, the respondents were asked to provide the top three Web sites that they use most often. E-Mail sites (Hotmail, Yahoo, Mynet, MSN) topped the list followed by News/Sports Information sites, and search engines. Entertainment, music, cinema, arts, banking, and health sites were also frequently mentioned.

The Future of the Internet

According to a recent study, over 80 percent of faculty at North American colleges and universities believe that web-based technology is a key contributor to student success (McGraw-Hill, 2002). It was also noted that 62 percent of faculty the United States and Canada, use the Internet to prepare coursework, 56 percent use the Web to supplement textbooks, while 51 percent use it to ensure up-to-date course content. A large number of professors in the United States now place lecture outlines, course requirements, homework, required reading and guidelines on the Web using software such as the Blackboard or WebCT. They also communicate with their students via e-mail quite often. Thus, having access to the Internet at home is a big advantage for the American students.

The respondents in this study also confirmed positive expectations. The comments made were overwhelmingly positive and many remarked that their lives would be much improved at work and at home due to their ability to access the Internet. They felt that they would be a lot more productive because of the Net and some even mentioned that "they can't imagine spending a day in the future without being online to communicate with friends, family and colleagues, read news and sports, listen to music, view videos, and to shop online." Some concerns were as well. These mainly revolved around privacy and security online that they expected will be solved in the near future.

Feeling about Online Education Activities

Quantitative research methods (descriptive statistics,mean and standard deviatin; Independent sample t-test for equality of means under the assumption of equal variances) were used in order to investigate the feelings of respondents. All questions in this section of the survey were prepared a five-point scale Likert type scale anchored at 1=''strongly agree,'' 2=''somewhat agree,'' 3=''neutral,'' 4='' somewhat disagree,'' and 5='' strongly disagree.'' According to Independent Samples Test results (Table 4), sig. (2-tailed) values of each questions were greater than □=0.05. This indicate that means are not significantly different.

According to mean values of the questions, most of the respondents strongly agree on "Lecture notes can also be on the web", "Exam results should be demonstrated on the web page of the Faculty.", "Answer keys of midterms, assignments and final should be demonsrated on the web page.", "I have to access content and use communication tools such as discussion boards, on-line.", " On-line Quizzes have to be avalible on the web page.", "Lecture notes are on my faculty web page.", "İnternet has to be used for supporting education.", "Registration of a course can also be on-line.", "I have enough face to face contact with my lecturers in my faculty."and "In the future, web based education will take place of school based education.", but, however, they generally disagree on "Exam results are announced on my faculty web page". Most of the students feel that they

will have performed on the Internet better than they would have done under a more traditional approach and also web based education will be alternative for school based education.

TABLE 4. Independent Samples Test

	Levene's Test for Equality of Variances		.t-test for Equalityof Means (95% Conf. Int. of the Diff)			Descriptive Stat.	
	F	Sig.	t	df	Sig.2-tailed	Mean	St. Var.
Lecture notes can also be on the web.	2,378	,123	-,281	718	,779	1,52	,543
Exam results should be demonstrated on the web page of the Faculty.	,133	,715	,894	718	,372	1,56	,542
Answer keys of midterms, assignments and final should be demonsrated on the web page.	1,248	,264	,045	718	,964	1,53	,534
I have to access content and use communication tools such as discussion boards, on-line.	1,215	,271	-1,241	718	,215	1,55	,540
On-line Quizzes have to be avalible on the web page.	,733	,392	-,085	718	,932	1,55	,538
Exam results are announced on my faculty web page	7,512	,006	-1,304	718	,193	2,70	,457
Lecture notes are on my faculty web page.	13,470	,000	-1,766	718	,078	1,85	,356
İnternet has to be used for supporting education.	6,532	,011	-1,233	718	,218	1,71	,464
Registration of a course can also be on-line.	,173	,678	-,150	718	,880	1,54	,542
Do you think you will have performed better than, as well as or poorer than you would have done under a more traditional approach?.	3,517	,061	,076	718	,940	2,15	1,13
I have enough face to face contact with my lecturers in my faculty.	7,168	,008	1,294	718	,196	1,21	,404
In the future, web based education will take place of school based education.	,364	,546	,223	718	,824	2,45	1,31
I have Internet education.	16,179	,000	-1,935	718	,053	1,88	,331
My feelings about Internet in the future.	,009	,924	-,072	718	,943	1,21	,02
My feelings about web based education in the future.	,486	,486	-,633	718	,527	1,32	,127

SUMMARY AND CONCLUSIONS

The use of Internet has shown a rapid growth during the recent years. Students are heavy users of the Internet throughout the whole world. Since they often serve as opinion leaders in technology products, it is important to investigate their online behavior. In this study, students from Marmara University were surveyed to find out more about their online activities and perceived impact of Internet on social behavior and their feelings about online education activities. The following are some of the basic conclusions obtained after a detailed analysis of student responses: The Internet has also become an integral part of college life and its usage is approaching 100 percent among students. It is expected that they will keep on using the Net after graduation. Thus, the future looks very bright for Internet. The problems faced by the older generations due to the introduction of new computer/Internet technology will not be a problem for this segment. Access from school was much for the sample and home access was a lot more prevalent. 36 percent of the students spent 1-10 hours per week on the Internet. In terms of activities online, sending/receiving e-mail topped the list followed by read news and sports informations, research for school-related work, chat, research for products and services, download images and musicand buy products online, respectively.

Because of their online activities, students read less and watch less television now. A significant number of students also worry that they online more than they should be. These have some educational and marketing implications. 36 percent of the students believe that Internet access at home improves their grade-point-averages (GPAs).

In addition to the above conclusions, an analysis of the open-ended comments indicates that students view the future of the Internet in a very positive manner. These students, as they enter the workforce, will continue to use the Internet as their main mode of communication, job-related activities, and for fun. Some years from now, education via Internet will takes place of of traditional education. It also appears from the responses that they will be using the Internet in the future mostly in education base.

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