EVALUATING COMPUTER-MEDIATED COMMUNICATION OF STUDENTS EDUCATED IN SECONDARY HIGH SCHOOLS

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Introduction

Computer-Mediated Communication (CMC) creates a new communication environment between individuals. Mainly, the use of e-mails, simultaneous chat groups, and communication forums as billboards, discussion groups and mail groups, all as elements of computer-mediated communication take more and more part in our lives.

The number of internet users in Turkey reaches up to 7.2 million. This number refers to 10% of the whole population in Turkey. It is estimated that the campaigns, which are mounting in schools this year, for computer and internet use will increase this number and make computer and internet use more widespread among the young. Considering that the number of students in Turkey is 17 million, it is evident that a big development will be seen in the field of internet and computer-mediated communication.

The purpose of this study is to evaluate CMC skills of students who are educated in secondary high schools in Turkey. With this purpose in mind, the students' frequency and breadth of internet use are investigated. For this study a questionnaire is devised to be administered to a group of students who have computer and internet access.

Within this questionnaire, first of all, the students' internet use is questioned in terms of frequency and duration. Subsequently, the questions address the issues such as having an e-mail address, sending e-mails, content of the mails sent, access to chat rooms, the persons who they get into contact with in these chat rooms, topics and frequency of communication, kind of web sites visited, purpose for internet use, and membership to discussion lists or news groups.

The findings from this questionnaire devised for the present study will be statistically analyzed. Thus, a qualitative and quantitative evaluation of computer-mediated communication use that becomes more prevalent in Turkey among the young will have been performed.

This study aims not to generalize from its findings but to usefully provide indications regarding the characteristics of the establishment of computer-mediated communication by the young in Turkey. Furthermore, it is felt that this study will guide future research for mitigating undesirable consequences that may emerge or for achieving desirable results.

Definition of The Computer-Mediated Communication

The computer-mediated communication (CMC) is a form of interaction that has become extremely prevalent in many people's social lives. CMC is defined as a wide range of technologies that facililate both human communication and the interactive sharing of information through computer networks, including e-mail, discussion groups, newsgroups, chat, instant message and web pages (Barnes, 2002).

CMC is a technology, a communications medium and a space within which people form communities. The research in CMC systems reflects the changes in the technology, the populations using the technology, the uses made of those systems, and the contexts of those uses.

CMC has become a part of everyday life. If communication dominates internet use for a majority of its users, there is good reason to expect that the Internet will have a positive social impact, both in terms of its users' social integration in a network of family, friends and community and the benefits that flow from this integration.

Barnes states that (2002, 2) "behind all Internet communication is people communicating with others, either directly or through software design. Internet interactivity occurs as interpersonel interactivity, informational interactivity, and human-computer interaction". Human-computer interactivty is based on human communication and behavior patterns.

Computer-Mediated Communication Types

In general Computer Mediated Communication (CMC) is the kind of communication that takes place between human beings via the instrumentality of computers. CMC systems use computers and telecommunications networks to compose, store, deliver and process communication. CMC is any communication using computers. CMC continues to grow in use and popularity. Rice and Love (1987) claimed that "CMC systems are becoming alternative media for communication as organizations implement electronic mail, computer conferencing, computer bulletin board, videotex system, and related system".

This broad definition has been commonly refined to mean those communications that occur with the use of electronic media There are three basic types of computer-mediated communication systems: email, news, and chat programs (Reid, 1991):

1) "Email", or electronic mail, allows users of computer systems to send messages to each other.

2) "News" allows users to send messages to a database divided under subject headings, facilitating electronic mail between multiple users on diverse subjects.

3) "Chat programs" do not store messages but transmits one person's typing directly to the monitor of another person or group of people.

Computer-Mediated Communication and Communication Models

Internet communications brings together elements of both human and mass communication. Intenet is used to support interpersonel mediated communication bu transcending the limitations of time and space in interpersonel correespondence.

CMC creates media environments by enabling people to communicate with each other. When people are communicating with other people through a computer network, they are using the computer as a medium of communication (Barnes,2002). People use computers to connect to a network of other people to exchange information and ideas. And also CMC support the acquisition, creation and exchange of communication between individuals, groups and organization.

Interactivity is very important characteristic for CMC. The internet allows for interaction its communicatiors (Wood, 2004). The Internet also creates possibilities for interaction among people. These interactions lead some influences on social relationships, the distribution of social goods, and the structure of work (Renninger, 2002). The Internet is an interactive medium that supports two way communication and feedback. Feedback was added to the Shannon-Weaver model of communication, which uses five components: sender, transmitter, channel, reciver and destination. In human communication feedback enables senders and receivers of messages to interactively check to see if a message has been properly understood. And also Circular models more accurately describe the two –way human interaction communication process in which senders and receivers exchange position. CMC technologies support interactivity among users (Rafaeli&Sudweek, 1997). Different CMC types support different degrees of interactivity. Fully interactive media enable senders and receivers to exchange position. Many CMC types support full interactivity. According to Barnes (2002) e-mail, discussion lists and chat fall into the category interpersonal interactivity –two-way correspondence between people in which senders and receivers can exchange position and develop ongoing relationship.

The advent of the internet has fundamentally altered human communication. In particular, the Internet has made computer-mediated communication (CMC) prevalent-so much so that it now pervades many aspects of human interactions.

The Research Method

This work has been made, to ascertain the communication habits through computer usage of the young who have access to computer in a period when the works to expand computer usage have become widespread in Turkey. Within this work, it has been appraised which types of CMC the young use, their usage frequency and the expansion. Since the majority of the computer usage concentrated on e-mails and chat rooms the work results have been given as descriptive statistical analyses about these usage.

In the work, it has been questioned whether the young have got e-mail addresses, how often and to whom they send and receive e- mails; what their attitudes are about using e- mails; whether they join to the chat rooms; how often and in which times they join to the chat rooms, with whom they have chat; what their attitudes are about those people, if any, whom they just meet in the chat rooms, and about the usage of the chat rooms in general; whether they are the members of the news groups.

A questionnaire has been prepared in order to evaluate the young people's communication skills through computer. This questionnaire has been applied to a group of young people who are thought to have access to the computer. For this reason, the questionnaire has been made in Anadolu Liseleri, Fen Liseleri and Private Schools, since those are supposed to have the best technical facilities. This questionnaire was applied between the dates 20'th of September- 10'th of October 2005 to last year high school students so that it would be possible to catch the highest point of the young's possible computer usage skills. Eskiflehir has been chosen as the sample city and 9 Anadolu, Fen and Private Schools have been decided. The questionnaire has been applied 348 (% 40) last year students, among the total number of 874 last year students.

Apart from the questions, which evaluate the communication habits through computer usage of young, by using fivefold Likert scale, the students' attitudes about CMC have also been evaluated. The statistical consequences have been attained out of the data taken from this questionnaire. Since the exemplar does not represent the whole universe, obtained analyses does not reflect Turkey in general. When we consider the estimation on increasing computer usage among young people in Turkey, it has been though that the consequences would constitute a guide and would be supported with the other examples. The data has been analyzed by taking into consideration with the CMC types.

The Computer Use Habits

First of all, the young people's computer usage tired to be figured out by asking questions about whether they have computers, in which environment they use computers and how often they connect to the internet. 56% of those students filled the questionnaire were boys and %44 of them were girls. The average computer usage years of the young are 13 years (all of the students answered the questionnaire was the last year students.)

88.5 % of the young answered the questionnaire have got computers in their home and 56 % of those have access to the Internet in their home. They have also Internet access out of their home. The percentage of the students, who say that they connect to the Internet in any place, is 92%. When we evaluate in which places the young have access to the Internet, we see that 64% of the students say that they "every time" and "very often" use their own computers. The percentage of the students who say that they use the computers belongs to one of the family members every time and very often is 8.4%, the percentage of those who say that they never use the computers is 59.9%

The percentage of the students who mentions that they use the computer in the school laboratories very often is 3.3%, while the percentage of those who say that they don't use the computer laboratories at all is 59.1%. While the percentage of the students who say that they use every time and very often the computers in the Internet cafes is 16.6%, the percentage of those who say that they never use the Internet cafes is 36%. These data shows us that the young people usually prefer to use their own computers, and the ones who doesn't have the

computers either prefers to go to the Internet cafes or use the computers belong to one of the family members. Even though there are computer laboratories in the schools where we send out the questionnaire, the students either do not prefer to use these laboratories, or they do not have access to the Internet there.

When we look at the computer use frequency of the young (Table 1.), we see that 12.8% of the students use the computer everyday, 30.7% use the computer once in every two days. This shows that the computer use habit among the young is not very common.

Table 1. The Frequency of the Computer Use among the Young

Duration	Frequency	Percent
Every day	43	12,8 %
Eery two days	103	30,7 %
Every four days	45	13,4 %
Once a week	76	22,6 %
Once a forthnight	28	8,3 %
Once a mounth	41	12,2 %
Total	336	100,0 %

In addition to the computer use frequency among the young, when we look at that how much average time they spend in front of the computer we see that 67.4% of the students spend 1 to 3 hours in front of the computer (Table 2). This shows that the young people do not prefer to spend too much time in front of the computer.

Table 2. The time the Young Spend in front of the Computer

Duration	Frequency	Percent
Less than one hour	66	19,3 %
Between 1 hour–3 hours	232	67,4 %
Between 3 hours–6 hours	33	9,6 %
More than 6 hours	13	3,8 %
Total	344	100,0 %

When we evaluate which skills the students use through computer, we came to reach these results. (Table 3):

By looking of these data, we see that the most of the students communicate through the computers. It is

Table 3. CMC Types Used by The Young

Internet Frequency	Percent
Visiting web sites	88,4 %
Having an e-mail accont	76,5 %
Joining to on-line	63,6 %
Member of newsgroups	35,1 %

seen that the young have the surfing habit in the web pages. It has been evaluated below the e- mail account usage, the frequencies and web page usage habits and the features of the chat rooms' usage.

Since the three third of the students who replied the questionnaire are the members of the news groups, this CMC type has been left out of the evaluation, and only the the e- mailing and joining chat rooms attitudes and the habits have been analyzed.

The Use of The Chat Rooms
When we take into consideration the fact that 63.6% of the students who replied the questionnaire (Table 3) join to the chat rooms, it has been assessed the frequency of the students' joining chat rooms, their joining hours, and the habits related to the people they have chat with. Besides, it has been asked by using fivefold Likert scale their attitudes related to the people they have just met through chatting, and about common chat rooms. In this way it has been analyzed in which extend they use the chat rooms.

Almost the one five of the young who answered the questionnaire state that they join to the chat rooms every single day (Table 4). Besides one five of the young state that they join to the chat rooms once in a month.

Table 4. The Frequency of The Young's Online Chat Use

Duration	Frequency	Percent
Every day	49	22,1 %
Eery two days	26	11,7 %
Every four days	18	8,1 %
Once a week	30	13,5 %
Only weekend	30	13,5 %
Once a forthnight	26	11,7 %
Once a mounth	43	19,4 %
Total	222	100,0 %

It has been examined which hours the young prefer to join to the chat rooms so that it would be possible to learn if their joining habits are based on certain routines. When it is assessed the answers we see that 40.3% join to the chat rooms in different hours, 39.8% of those say that they join to the chat rooms between 18:00- 24:00 hours. We see that only 4.5% of the young join to the chat rooms after 24:00. This shows us that almost half of the young have a regular online chat habits, whereas half of the others do not join to the chat rooms regularly.

It has also been analyzed with whom the young, who answers the questionnaire, communicate.

The percentage of the young who declares that they have online chat with the friends they also see face to face is 45%; the percentage of the young who have chat with the friends whom they know but not see very often since they live in far places is 35%; the percentage of the young who says that they have chat with the family members and relatives whom they have chance to see face to face is 14%; the percentage of the young who have chat with family members and relatives living in far places is 19%; the percentage of the young who have chat with the people whom they have met in the chat rooms is 40%. This shows us that the young prefer to have chat with the friends rather than the relatives no matter live in neighborhood or in far places.

The attitudes about the chat rooms of those who say that they have chat with the people, whom they have met in the chat rooms, have also been assessed. It has been used fivefold Likert scale as; "I totally agree", "I agree", "unstable", "I don't agree", "I don't agree at all" and the results have been reached are as follows:

- The percentage of those who say "totally agree" to the idea that "I don't never lie to the people I met in the chat rooms" is almost 40.4%
- The percentage of those who mentions that "I totally agree" and "I agree" about the idea that "I don't give true information about my real age" is almost 41.9%
- The percentage of those who mentions that "I totally agree" and "I agree" about the idea that "I don't ever tell my real name" is almost 44%.

- The percentage of those who mentions that "I totally agree" and "I agree" about "I don't give true information on my sexuality" is almost 14.7%.

- The percentage of those who mentions that "I totally agree" and "I agree" about the idea that "I hide that I am a student" is almost 13.3%.

- The percentage of those who mentions that "I totally agree" and "I agree" about the idea that "I lie about my physical describes" is almost 11,7%.

- The percentage of those who mentions that "I totally agree" and "I agree" about the idea that "I like environment of the formal conservation" is almost 24,1%.

- The percentage of those who mentions that "I totally agree" and "I agree" about the idea that "I like environment of the informal conservation" is almost 81,9%.

- The percentage of those who mentions that "I totally agree" and "I agree" about the idea that "I would like to dial up them later" is almost 36,8%.

- The percentage of those who mentions that "I totally agree" and "I agree" about the idea that "I would like to communicate face-to-face later" is almost 40,8%.

- The percentage of those who mentions that "I totally agree" and "I agree" about the idea that "I don't ever communicate outside the online chat" is almost 29,7%.

These data shows that almost half of the young who answer the questionnaire is not honest enough to tell about their ages and names, whereas they are inclined to tell the truth about their sexuality, physical appearances and student identities.

We also see that the young prefer to chat friendly rather than talking officially, and they prefer to use these chat rooms for social purposes. Only the one third of the young have a desire to see the people they have met in the chat rooms. Almost half of the students want to talk face to face or on the phone with those people they have met through chat rooms. Hence, the young treats the chats rooms as a place where they can make new friendships.

When we evaluate the attitudes of the young who join to the chat rooms, the percentage of the young who declare their opinions is almost 60%. The opinions of the young have been evaluated by using fivefold Likert scale:

- The percentage of those who say "I totally agree" and "I agree" about the idea that "I can get the support from the others" is almost 56. 5%

- The percentage of those who say "I totally agree" and "I agree" about the idea that "I can find some people to talk in the chat rooms" is almost 85.6%

- The percentage of those who say "I totally agree" and "I agree" about the idea that "I like to be a member of a group" is almost 56.5%

- The percentage of those who say "I totally agree" and "I agree" about the idea that "I can find the people I share the same opinions" is almost 72.7%

- The percentage of those who say "I totally agree" and "I agree" about the idea that "I can find the people who similar to me" is almost 62.9%

- The percentage of those who say "I totally agree" and "I agree" about the idea that "I can help another people" is almost 56.5%

- The percentage of those who say "I totally agree" and "I agree" about the idea that "It save me from boredom" is almost 63.9%

- The percentage of those who say "I totally agree" and "I agree" about the idea that "I can spend time" is almost 80.4%

All these data put forward that the young, who answer the questionnaire, use the chat rooms for a socializing purposes. In addition, more than two thirds of the young declare that they join to the chat rooms out of boredom and waste time, so it means the young spend their free times in the chat rooms.

E- mail Usage
It is seen that 76.5% of the young who answer the questionnaire (Table 3) have got an e- mail account. Following this consequence, the analysis has been made to know about the issues such as the e- mail accounts the young have, the frequency of the young's e- mail check, send- receive, to whom they usually send the e- mails. Besides, their attitudes about the e-mail usage have been analyzed. When it is analyzed of the young who declare that they have got the e- mail account; we see that 24.65 of these students have got one single e- mail account, 34.7% of these students have got 2 e- mail accounts and 20.9 of these students have got 3 e- mail accounts.

274 young people who answer the questionnaire declare that 24.1% of them everyday, 23.4% of them once in a week check their e- mails. 11.7 of the young declare that they check their e- mails once in a month. When we evaluate how often 271 young people receive the e- mails, we see that 38.7% of them less than 5 times in a week, 8.5% of them more than 41 times in a week receive e- mails. When we analyzed how often 276 young people send the e-mails, we see that 60.9% of them less than 5 times in a week, 4% of them more than 41 times in a week send e- mails.

When we evaluate the young's e- mailing habits, we also look at with whom they e- mailing. Among 166 young people, who answer the questionnaire, 84.3% of them e- mailing with their friend circle. We conclude that the young is e- mailing with their friends but not very often.

Among almost 278 young people, the percentage of those who says "I totally agree" and "I agree" about the move " I send the received interesting e- mails to the others" is 72.5%; the percentage of those who agree with the idea that "e – mailing is a cheap communication way" is 71.5%; the percentage of those who agree with the idea that "e – mailing is a fast communication way" is 85.4%; the percentage of those who agree with the idea that "e – mailing is a secure communication way" is 39.2%; The percentage of those who agree with the idea that "it is an uneasy thing not to know whether the e- mails read by the people whom it is send" is 64.7%.

These data shows that one third of the young believe that the e- mail use is fast and cheap communication means but they are not sure about its security. It is also seen that the young have uneasiness about whether the e- mail they send reach to the other party or not.

Conclusion

The campaigns to support to the computer-based education in Turkey will develop the computer usage in the schools. This will provide a new communication domain for the young. It has been crucial to know how the young use this new communication domain. Even though this new communication domain, that is, computer- based education would serve to the schools, it would also be useful for the interpersonel communication. Within the framework of this work, it has been aimed to determine the young's communication structures based on the computer.

It has been seen in this work, which is made on the young who have chance to use computer, that the young use their computer skills mostly to have interpersonel communication.

According to data taken in this work, the young usually prefer first, e- mailing and then participation to the chat rooms among CMC types. It has also been observed that the young don't prefer to join to the news groups. Besides the young prefer these means with the friends with whom they have chance to meet face to face. The young join specifically to the chat rooms to have new friends.

The gathered data shows that the young use both synchronous (chat rooms) and asynchronous (e- mail) interaction methods together. This attitude of the young about the CMC also collapses the argument that the computer usage makes the young be asocial. It seems that a new communication means is added in interpersonal communication.

This work aims to point out that the computer must be evaluated not only as an education means but also as a communication way. It must be taken into consideration the fact that the young would have more chances in the future so these works must be evaluated more intensely and from different points of views.

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