

Communication Barriers in Distance Education: “Text-Based Internet-Enabled Online Courses”

Fahme Dabaj and Aytakin İşman

Abstract

With the rapid technological changes and the diverse people demands and conditions, traditional educational systems and institutions are forced to provide additional educational opportunities. A number of educational establishments are contributing to these conditions and demands by developing and offering distance education programs.

Distance education is a delivery system of teaching and learning, when the teacher and the student are separated by physical distance and time, using alternative media resources when students and instructors have difficulties of establishing face-to-face communication.

In distance education, instruction delivery between tutors and students is done using different delivery systems such as computer mediated communication systems, video tapes, printed material, cassettes, instructional television (Berge, 1998). With development of the Internet and the global network system, universities immediately took the advantage of the World Wide Web to deliver the instruction to almost any node in the world, regardless of physical distance and time.

The initial questions to be resolved by institutions offering distance education relate to how effective is the program taught by distance learning, and is it a sufficient replacement for traditional face-to-face education. The effectiveness of online instruction is measured by the level of interaction, how well it satisfies the students' needs, and how it eliminates communication barriers between the involved participants.

Communication barriers exist in any communication process. They are greater in distance education due to physical distance between members, insufficient technology skills, difficulties using media, need for more human interaction, time constraints and restrictions, and lack of experience with distance education. These problems make it hard to establish the distance education process and develop effective communication between members. The degree of these barriers differs from institution to institution, from one program to another, and for different systems used for delivery.

Introduction

Many universities offer online distance education courses with asynchronous, text-based, Internet-enabled instruction. This delivery system is asynchronous communication, based mainly on course materials on a website accessed by students through the Internet. This technique is widely used for high student enrollments rather than synchronous techniques. It is among the easiest and the cheapest methods for delivering instruction at a distance. Synchronous web-based methods of computer mediated education include online video conferencing. This is relatively expensive and needs advanced and well developed infrastructure to transfer huge amount of data, audio, and video streams simultaneously to students at a distance.

Text-based Internet-enabled instruction method involves many types of barriers as well as communication barriers preventing the process of information exchange between

instructors and students, and students with the other students enrolled in the distance education program.

Because it is most frequently used form of distance education, this study will concentrate on communication barriers involved in text-based Internet-enabled online instruction. It will explore the nature of communication barriers affecting online courses and whether these barriers are related to students' demographics and background.

Importance of the Research

Text-based Internet-enabled instruction in a distance education can be efficient if the website is developed and designed to meet course needs and requirements, satisfy student needs, and make it more interactive. These factors are important to overcome barriers raised by an asynchronous text-based Internet-enabled method of instruction. These barriers result in frustration, feelings of isolation and not belonging, and fear of technology. (Hara, 1998) These feelings impede student communication with the others in the same program.

Interactivity of the online course program is directly related to the amount of contact the student has with the instructor, with his peers, and with the course material Sherry (1996). This interactivity and with the role changing of the students and instructors to change the course from the traditional instructor-centered to learner-centered process, encourages the student to seek for his answers and build his own knowledge from his own experience. Interactivity and student involvement reduce communication barriers, frustration, and fear of technology faced in an online distance education environment.

Review of Related Research

There are frequent references in the literature to barriers in distance education related to faculty, organization, structure, etc. We should realize that some barriers directly affect and some indirectly affect the communication process between the members involved in the distance education program.

Galusha (1999) wrote that distance education gives people (students) the greatest possible control over time, place and pace in education; however, it is not without problems in such asynchronous delivery system. These problems are categorized as "barriers" into three main groups, student barriers, faculty barriers, and organizational barriers. Problems and barriers encountered by students are; costs and motivators, feedback and teacher contact, student support and services, alienation and isolation, lack of experience, and training. Barriers encountered by faculty are; lack of staff training, lack of support systems designed for distance learning, and inadequate methods for faculty selection and training. Barriers encountered at the organization level include infrastructure and technology problems, training, and management.

According to Berge (1998), impediments to online teaching and learning can be situational, epistemological, philosophical, psychological, pedagogical, technical, social, and/or cultural and include; faceless teaching, fear of the replacement of faculty by computers, diffusion of value traditionally placed on getting a degree, faculty culture, lack of an adequate time-frame to implement online courses, the more technologically advanced the learning system, the more to go wrong, resistance to change, and lack of technological assistance. The most critical barriers, as Berge found in his survey, appear

related to, person's resistance to or fear of the many changes that must occur at the individual and organizational level, lack support for the changing role of students and teachers, and barriers arise over difficulties in assessment.

Muilenburg and Berge (2001) in their exploratory factor-analysis research determined the underlying constructs that comprise barriers to distance education regarding faculty, staff and administrators. The ten factors found were administrative structure, organizational change, technical expertise, social interaction and quality, faculty compensation and time, threat of technology, legal issues, evaluation/effectiveness, access, and student support services. To construct these ten factors, they made a survey with sixty four different barrier items to 2054 members, and concluded that some barriers overlap one or more different factors.

Truman (1995) concluded in her study that the delivery system in distance education may not be so important, but the methods and techniques to accomplish learning will be most important, especially those that eliminate communication barriers for nontraditional learners and students. The important barriers discussed in her work regarding distance education were money, staff equipment, time, student perceptions to information, and their understanding how the technology itself shapes the information it carries to distinguish junk information from facts.

Pajo (2001) mentioned that the different roles of personal and attitudinal barriers to the prediction of current use and future intentions to adopt web-based technology, is an interesting finding in his study. Current use of the technology is most closely associated with personal barriers, those who feel that they lack the skills of using web-based delivery in their distance education. These personal barriers may prevent the individual from translating his/her intentions into behavior.

Leach and Walker (2000) argue that the instructor's feedback is essential to students in distance education for their self-evaluation, task orientation, instructor support, and flexibility. Also they indicated that the degree level of student's experience with technology is directly correlates to whether or not the technology used in distance education is a barrier. For a successful online education, technology concerns must be minimized, and programs used must be designed accordingly.

Cucek (2001) in the research study done on students who were enrolled in distance education at Boise State University, were asked questions to measure their satisfaction with their distance education classes, perceived access to support services, and differences in their "classroom" behaviors in distance education and traditional face-to-face classes. The students' answers concentrated upon main problems (barriers) to the successful completion of their distance education courses. Almost all responses were related to course issues, time issues, personal issues, administrative, and technical issues. Course related barriers were: lack of interaction, poorly structured courses, and difficulty in accessing resources. Time related barriers were: lack of time, competing personal commitments, and course work that requires an excessive amount of time. Personal issues concentrated on motivation and self discipline. Technical problems were related with the lack of expertise. Finally, administrative problems were cost, course availability, obtaining course materials, and administrative support.

As may be concluded from the literature review, there are barriers in establishing and maintaining distance education programs and communication barriers in using them. We may categorize the barriers of an online distance education into two categories;

problems related with the program creation and implementation as general barriers, while the problems related with the program usage as communication barriers.

To create and run an effective distance education program, it is important to be sure that the program supports the needs of learners in the best and efficient way. In part, this requires finding and adopting methods to reduce or eliminate communication barriers.

Research Methodology

The place where the research took place

The research focused on the students enrolled in the text-based Internet-enabled distance education online courses at Eastern Mediterranean University, Turkish Republic of Northern Cyprus. Students were selected randomly and they were asked to fill in an online questionnaire. Its aim was to evaluate student perceptions and attitudes toward distance education, and to find the nature and the degree of communication barriers involved in the online program.

Data of the Research

The data used in this research were obtained after the participants filled in the online questionnaire. It was given to 104 students enrolled in the online courses in the academic year 2002-2003.

The online questionnaire took into consideration these *independent* variables:

- Student's gender,
- Student's academic term,
- Whether the student has a computer and Internet access at home,
- The frequency of student Internet usage,
- Student's having Internet education,
- The period of studying in English language, and
- Whether the student had a distance education course before.

Dependent variables were:

- I have difficulty to access Internet in order to get resources.
- I have capability to use Internet but I have language problems to understand navigations.
- While I am writing e-mail, I believe that I can reflect my expressions easily.
- I need quick responding from my Instructors.
- I believe that communicating non-verbally is better than verbally.
- I can easily adapt the technical sides of distance education.
- One way communication is much quick according to two way communication in distance education.
- In order to get effective understanding, I need to realize the reactions, gestures of sender.
- I cannot be relax, spontaneous and willingness while I am engaging the distance education courses.
- I can easily access all facilities on web pages about e-learning.
- I could not find time and opportunity to catch the courses about the distance education.

Mostly, I face difficulty with the technical applications of e-learning.
There should be a team organization for technical support at the faculty.
I need meetings sequentially in order to express my opinions because of both language and technical problems.
It is easy to use software programs on distance education.
I live the sense of responsibility and self-development through distance education.
Communication or connection frequently is blocked by physical factors with instructors.
Frequently, I could not understand the questions that instructor send us.
In the team work studies, I get difficulty to design homework because of different interpretations in distance education.
Like classical learning process, it is normal to face barriers in distance education.
Even though there are more barriers in distance education, it creates more effective learning from classical one.
Self-esteem and self-development are easily created through distance education than intra-personal communication.
I feel my self alone and isolated because of being student in distance education.
I could not get adequate feedback and sharing in distance education.
I become motivated in distance education program.
There is no sense of culture and consciousness in faculty about distance education.
I think that I can easily manage all obstacles in distance education.
All barriers can be overcome through technical group organization.
I feel that I can control all activities at learning with my needs, expectations and interests.
I prefer to study on distance education because of immediate communication and self-learning.

Statistical Method for this Research

Frequencies, percentages, cross tabulations were found, and t-test and One-Way ANOVA were applied to find the significance differences between the variables using the statistical program (SPSS).

The Demography of the participating students

The research revealed the demographic structure of the participants.
The gender of the students filling in the questionnaire was 64.4% male and 35.6% female. The class level of the respondents were 5.8% were freshmen, 32.7% sophomore, 20.2% junior, and the remaining 41.3% were senior.

75.0% of the students had computer at home, and 25.0% answered no to this question. 42.3% of these students who have computers at home have Internet connection and 57.7% had no Internet connection.

Answers to the question of the frequent usage of the Internet indicated that 69.2% of the respondents use the Internet everyday, 26.9% use the Internet once a week, and 3.8% of them use the Internet once a month.

The answers to the question of having education on Internet showed that, 43.3% of the students had an Internet education, and 56.7% did not have an Internet education.

How long have you been learning in English question, had answers of 22.1% of the students have been learning from one to three years, 34.6% between 4 to seven years, and 43.3% having English learning between eight to 11 years.

And finally, 30.8% of the students responded yes to the question “Have you ever educated on distance education?” while 69.2% did not have a distance education course before.

Result of the research

The results received at the end of this research depended on the questions answered in the questionnaire and on the statistics done to get the percentages. The questions (dependent variables) had five alternative answers:

- Strongly Disagree
- Disagree
- Undecided
- Agree
- Strongly Agree

The frequencies and percentages obtained from the answers are shown in table (9).

Statistical Analysis

After the questionnaire was completed and the percentages were taken, it was important to see if the results showed any significant variations due to the asked independent variables. Therefore, t-test and one-way ANOVA were applied to find the differences. While doing so, the value of alpha (α) was accepted as 0.05. All comparative analysis was made according to this value.

Frequency Analysis

The frequency analysis (Table 9), showed important results regarding to student-to-student communication. 31.7% of students felt the isolation in the distance education program and 46.2% said it is important to see the gestures and reactions of the other communicated person.

Other results related to student-to-instructor communication were: 32.7% of students said that in online courses there is no adequate feedback and sharing, 46.2% said it is important to see gestures and reactions of the other communicated person, 31.7% said that verbal communication is better than non-verbal communication, and 41.3% asked for a quick response from their instructors.

Student-to-content barriers were 42.3% said that in online courses they need help in language and 36.5% need help in technical applications of e-learning.

While the problems related with the web site of the online course itself were 42.3% said that they need help in technical problems, 39.4% of the students said that there should be a team organization for technical support at the faculty, and 43.3 said that all barriers can overcome with the help of technical group organization.

t-test analysis and their Results

Some of the questions analyzed (Table 10) showed results greater than that of alpha. In such questions, there were no notable differences due to gender, computer at home, Internet connection at home, having Internet education, and having distance education course before.

Besides these questions, there were those which showed values less than that of alpha, revealing that there is a notable difference between the questions and the tested independent variables. These questions and the related independent variables are as follows:

The questions and their results related to gender were as follows:

I cannot be relaxed, spontaneous, and willing while I am engaging the distance education course - calculated value 0.015

I could not find time and opportunity to catch the courses about the distance education - calculated value 0.011

Like classical learning process, it is normal to face barriers in distance education – calculated value 0.046

From the cross tabulation analysis between the questions and gender difference, it was clearly shown that, the male are more comfortable with online education courses, they have more control over the time in distance education courses, and they less face the barriers in distance education than the female students who are enrolled in text-based Internet-enabled online courses.

The questions and their results related to Internet availability at home were as follows:

§ Mostly, I face difficulty with the technical applications of e-learning – calculated value 0.038

§ From the cross tabulation analysis between the questions and Internet availability at home, it was clearly shown that Internet availability at home helps students who are enrolled in text-based Internet-enabled online courses to be familiar with the technology more than the students who do not have Internet at home.

The questions and their results related to having Internet education before starting online courses were as follows:

§ I can easily adapt the technical sides of distance education – calculated value 0.038

§ I live the sense of responsibility and self-development through distance education – calculated value 0.041

- § Self-esteem and self-development are easily created through distance education than intra-personal communication – calculated value 0.010
- § All barriers can be overcome through technical group organization – calculated value 0.009

From the cross tabulation analysis between the questions and having Internet education before starting their distance education, it was clearly shown that students who had no Internet education before starting their online distance education courses; can adapt to the technical sides of the distance education course easier, can access the web page facilities easier, can sense responsibility and self-development in distance education more, can create self-esteem or self-development in distance education easier, and believe that the barriers can be overcome by a technical group organization, rather than the students, enrolled in a text-based Internet-enabled online courses, who had Internet education before.

The questions and their results related to having distance education courses before were as follows:

While I am writing e-mail, I believe that I can reflect my expressions easily – calculated value 0.034

It is easy to use software programs on distance education – calculated value 0.002

From the cross tabulation analysis between the questions and having distance education courses before, it was clearly shown that, having text-based Internet-enabled online courses before did not help the students to reflect their expressions more easily while they write e-mails, and did not give them enough experience of using programs in distance education.

One-Way-ANOVA Analysis and Results

Some of the questions analyzed (table 11) showed results greater than that of alpha. In such questions, there were no notable differences due to student's academic term, daily Internet Usage, and the period of learning in English.

Besides these questions, there were those which showed values less than that of alpha, revealing that there is a notable difference between the questions and the tested independent variables. These questions and the related independent variables are as follows:

Questions and their results related to student's academic term were:

- § I can easily adapt the technical sides of distance education – calculated value 0.043
- § Self-esteem and self-development are easily created through distance education than intra-personal communication – calculated value 0.001
- § I could not get adequate feedback and sharing in distance education – calculated value 0.002

From the cross tabulation analysis between the questions and student's academic term, it was clearly shown that, freshman and sophomore students enrolled in text-based Internet-

enabled online courses have more difficulty to access Internet in order to get resources than the students of higher classes. Freshman level students have more difficulties in, adaptation to technical sides of the text-based Internet-enabled online courses, creation self-esteem and self-development. High level class students expressed concern that they were not getting adequate feedback and sharing in text-based Internet-enabled online courses.

Questions and their results related to student's Internet usage frequency were:

I have capability to use Internet but I have language problems to understand navigations – calculated value 0.034

Communication or connection frequently is blocked by physical factors with instructors – calculated value 0.037

I feel myself alone and isolated because of being student in distance education – calculated value 0.002

I could not get adequate feedback and sharing in distance education – calculated value 0.036

From the cross tabulation analysis between the questions and student's academic term, it was clearly shown that, students who are using the Internet once a week or once a month complain from having; language problems to understand navigations, connection block with instructors, feel themselves alone and isolated, and not having an adequate feedback and sharing in their text-based Internet-enabled online courses.

The questions and their results related to student's period of learning in English were as follows:

§ I have capability to use Internet but I have language problems to understand navigations – calculated value 0.000

From the cross tabulation analysis between the questions and student's academic term, it was clearly shown that, students who are learning in English more than seven years can express themselves better while writing e-mails.

Conclusion and Recommendations

As observed from the analysis, text-based Internet-enabled distance education program is not a sufficient method to use and does not provide the students with any training with its usage.

Text-based Internet enabled distance education programs can be easily modified to support students' use and to give the students more chance of communication with the other parts of the process.

Students, who are engaged in distance education through Internet for the first time, carry the feeling of fear from this new concept and lack of experience, which decreases the communication process between the participants. To encourage the students and make them more comfortable with the new environment, the institution could start by organizing a term beginning orientation designed in a very simple way to give the students a brief explanation of distance education concept, description of the website

structure, methods on how the student can organize his work, the course timetable and assessment criteria. Once the student feels more relaxed with the website and feels more confident with the new environment, the student is positively motivated to proceed with the course.

The students' feeling of isolation can be reduced by creating a group mail address, where all students and the instructor can share their opinions, questions, and knowledge, and make the students feel that they belong to a group and that they are not alone in this program. It may be appropriate if the instructor can divide the students of the course to sub-groups with different mail addresses for each, which gives students a sense of group identity and motivation to produce better work.

Another way student-to-student connections can be utilized is to periodically arrange chat groups for students to communicate online, which gives students a sense of closeness and friendship.

The relations of student-to-content in this type of distance education programs can be maximized by enrolling the student in the teaching and learning process, and give them the ability to access to the instructional resources, which encourages the students to visit the course site more frequently and make the students feel that they have a share in their knowledge's building.

In conclusion, text-based Internet-enabled distance education is more effective if communication barriers are minimized. This is achieved by improved access to the internet, training and experience with the communication system, and greater interactivity to stimulate student-to-student, student-to-instructor, and student-to-content interactions.

References

- Berge, Zane L. (1998). Barriers to Online Teaching in Post-Secondary Institutions: Can Policy Changes Fix It? *Online Journal of Distance Learning Administration*. 1(2).
- Cucek, Mira (2001). Student Perceptions of Their Distance Education Courses. Research Report 2001-04. Available online <http://www2.boisestate.edu/iassess/Reports/RR%202001-04.pdf>
- Galusha, Jill M. (1997). Barriers to Learning in Distance Education. University of Southern Mississippi. Available on line [http://www.tcom.ohiou.edu/ouln/Barriers to Learning in Distance Education.htm](http://www.tcom.ohiou.edu/ouln/Barriers%20to%20Learning%20in%20Distance%20Education.htm)
- Hara, Noriko (1998). Students' Perspectives in a Web-Based Distance Education Course. Indiana University. Available online <http://php.ucs.indiana.edu/~nhara/paper/mwera98.htm>
- Leach, Karen and Walker Scott (2000). Internet-Based Distance Education: Barriers, Models, and New Research. Available online http://itouch.net/~swalker/smec/internet_based_distance_education.pdf
- Mulilenburg, Lin and Berge Zane L. (2001). Barriers to Distance Education: A Factor Analytic Study. *The American Journal of Distance Education*. 15(2): 7-22.
- Pajo, Karl (2001). Barriers to the Uptake of Web-based Technology by University Teachers. *Journal of Distance Education*. 16(1).
- Sherry, L. (1996). Issues in Distance Learning. *International Journal of Educational Telecommunications*, 1 (4), 337-365.
- Truman, Barbara E. (1995). Distance Education in Post Secondary Institutions and Business. Paper presented for an Instructional Technology Graduate Class,

Statistical Data Tables

Frequencies (f) and Percentage (%) of the independent variables:

Table (1) Gender

Gender	f	%
Male	67	64.4
Female	37	35.6
Total	104	100.0

Table (2) Student's academic term

Which academic term are you following?	f	%
Freshman	6	5.8
Sophomore	34	32.7
Jonior	21	20.2
Senior	43	41.3
Total	104	100

Table (3) Availability of Compter at home

Do you have a computer at home?	f	%
Yes	78	75.0
No	26	25.0
Total	104	100

Table (4) Availability of Internet at home

Do you have Internet Access at your home?	f	%
Yes	44	42.3
No	60	57.7
Total	104	100

Table (5) Frequency of using the Internet

How often do you use Internet?	f	%
Everyday	72	69.2
Once a week	28	26.9
Once a Month	4	3.8
Total	104	100

Table (6) Whether the Student had Internet Education

Have you ever get Internet education?	f	%
Yes	45	43.3
No	59	56.7
Total	104	100

Table (7) Time period of learning in English

How long have you been learning in English?	f	%
1 - 3 Years	23	22.1
4 - 7 Years	36	34.6
8 - 11 Years	45	43.3
Total	104	100

Table (8) Whether the student had online courses before

Did you have online courses before?	f	%
Yes	32	30.8
No	72	69.2
Total	104	100

Frequencies (f) and Percentage (%) of the dependent variables:

Table (9) Frequencies & percentages of the dependent variables

	Strongly Disagree		Disagree		Undecided		Agree		Strongly Agree	
	f	%	f	%	f	%	f	%	f	%
I have difficulty to access Internet in order to get resources.	25	24.0	44	42.3	7	6.7	22	21.2	6	5.8
I have capability to use Internet but I have language problems to understand navigations.	30	28.8	43	41.3	11	10.6	18	17.3	2	1.9
While I am writing e-mail, I believe that I can reflect my expressions easily.	11	10.6	18	17.3	16	15.4	50	48.1	9	8.7
I need quick responding from my Instructors.	11	10.6	20	19.2	16	15.4	43	41.3	14	13.5
I believe that communicating non-verbally is better than verbally.	19	18.3	33	31.7	23	22.1	27	26.0	2	1.9
I can easily adapt the technical sides of distance education.	12	11.5	19	18.3	13	12.5	42	40.4	18	17.3
One way communication is much quick according to two way communication in distance education.	13	12.5	28	26.9	17	16.3	40	38.5	6	5.8
In order to get effective understanding, I need to realize the reactions, gestures of sender.	9	8.7	23	22.1	16	15.4	48	46.2	8	7.7
I cannot be relax, spontaneous and willingness while I am engaging the distance education courses.	16	15.4	37	35.6	15	14.4	29	27.9	7	6.7
I can easily access all facilities on web pages about e-learning.	10	9.6	19	18.3	18	17.3	47	45.2	10	9.6
I could not find time and opportunity to catch the courses about the distance education.	14	13.5	33	31.7	21	20.2	33	31.7	3	2.9
Mostly, I face difficulty with the technical applications of e-learning.	13	12.5	26	25.0	24	23.1	38	36.5	3	2.9

There should be a team organization for technical support at the faculty.	12	11.5	16	15.4	15	14.4	41	39.4	20	19.2
I need meetings sequentially in order to express my opinions because of both language and technical problems.	12	11.5	21	20.2	17	16.3	44	42.3	10	9.6
It is easy to use software programs on distance education.	9	8.7	17	16.3	20	19.2	44	42.3	14	13.5
I live the sense of responsibility and self-development through distance education.	9	8.7	19	18.3	18	17.3	47	45.2	11	10.6
Communication or connection frequently is blocked by physical factors with instructors.	10	9.6	27	26.0	26	25.0	41	39.4	0	0.0
Frequently, I could not understand the questions that instructor send us.	16	15.4	39	37.5	15	14.4	28	26.9	6	5.8
In the team work studies, I get difficulty to design homework because of different interpretations in distance education.	10	9.6	24	23.1	24	23.1	38	36.5	8	7.7
Like classical learning process, it is normal to face barriers in distance education.	7	6.7	18	17.3	21	20.2	51	49.0	7	6.7
Even though there are more barriers in distance education, it creates more effective learning from classical one.	10	9.6	31	29.8	22	21.2	35	33.7	6	5.8
Self-esteem and self-development are easily created through distance education than intra-personal communication.	11	10.6	20	19.2	30	28.8	40	38.5	3	2.9
I feel my self alone and isolated because of being student in distance education.	14	13.5	32	30.8	18	17.3	33	31.7	7	6.7
I could not get adequate feedback and sharing in distance education.	8	7.7	22	21.2	29	27.9	34	32.7	11	10.6
I become motivated in distance education program.	14	13.5	25	24.0	21	20.2	37	35.6	7	6.7
There is no sense of culture and consciousness in faculty about distance education.	9	8.7	18	17.3	28	26.9	42	40.4	7	6.7
I think that I can easily manage all obstacles in distance education.	7	6.7	30	28.8	23	22.1	41	39.4	3	2.9
All barriers can be overcome through technical group organization.	9	8.7	18	17.3	26	25.0	45	43.3	6	5.8
I feel that I can control all activities at learning with my needs, expectations and interests.	7	6.7	30	28.8	22	21.2	36	34.6	9	8.7
I prefer to study on distance education because of immediate communication and self-learning.	12	11.5	22	21.2	20	19.2	43	41.3	7	6.7

t-test analysis & the significant values:

Table (10)

Independent Samples Test (t-test)	Significance				
	Gender	Computer at Home?	Internet at Home?	Internet Education?	Had online courses before?
I have difficulty to access Internet in order to get resources.	0.579	0.359	0.060	0.427	0.552
I have capability to use Internet but I have language problems to understand navigations.	0.881	0.879	0.229	0.209	0.714
While I am writing e-mail, I believe that I can reflect my expressions easily.	0.219	0.052	0.094	0.059	0.034
I need quick responding from my Instructors.	0.345	0.153	0.182	0.089	0.123
I believe that communicating non-verbally is better than verbally.	0.685	0.420	0.472	0.316	0.954
I can easily adapt the technical sides of distance education.	0.806	0.070	0.666	0.002	0.199
One way communication is much quick according to two way communication in distance education.	0.247	0.634	0.599	0.850	0.336
In order to get effective understanding, I need to realize the reactions, gestures of sender.	0.222	0.961	0.460	0.393	0.347
I cannot be relax, spontaneous and willingness while I am engaging the distance education courses.	0.015	0.781	0.329	0.777	0.862
I can easily access all facilities on web pages about e-learning.	0.295	0.119	0.063	0.038	0.115
I could not find time and opportunity to catch the courses about the distance education.	0.011	0.616	0.903	0.541	0.425
Mostly, I face difficulty with the technical applications of e-learning.	0.149	0.223	0.038	0.531	0.770
There should be a team organization for technical support at the faculty.	0.882	0.122	0.958	0.674	0.111
I need meetings sequentially in order to express my opinions because of both language and technical problems.	0.421	0.375	0.739	0.491	0.882
It is easy to use software programs on distance education.	0.231	0.089	0.571	0.236	0.002
I live the sense of responsibility and self-development through distance education.	0.775	0.239	0.100	0.041	0.373
Communication or connection frequently is blocked by physical factors with instructors.	0.103	0.151	0.291	0.068	0.138
Frequently, I could not understand the questions that instructor send us.	0.084	0.671	0.853	0.946	0.924

In the team work studies, I get difficulty to design homework because of different interpretations in distance education.	0.538	0.921	0.631	0.525	0.721
Like classical learning process, it is normal to face barriers in distance education.	0.046	0.709	0.450	0.121	0.528
Even though there are more barriers in distance education, it creates more effective learning from classical one.	0.661	1.000	0.957	0.355	0.965
Self-esteem and self-development are easily created through distance education than intra-personal communication.	0.762	0.054	0.151	0.010	0.657
I feel my self alone and isolated because of being student in distance education.	0.431	0.742	0.680	0.790	0.480
I could not get adequate feedback and sharing in distance education.	0.165	0.054	0.776	0.400	0.931
I become motivated in distance education program.	0.770	0.777	0.422	0.605	0.189
There is no sense of culture and consciousness in faculty about distance education.	0.357	0.143	0.415	0.077	0.822
I think that I can easily manage all obstacles in distance education.	0.989	0.174	0.417	0.315	0.227
All barriers can be overcome through technical group organization.	0.299	0.958	0.279	0.009	0.774
I feel that I can control all activities at learning with my needs, expectations and interests.	0.118	0.268	0.356	0.099	0.338
I prefer to study on distance education because of immediate communication and self-learning.	0.738	0.885	0.653	0.526	0.802

One-Way-ANOVA analysis & the significant values:

Table (11)

Independent Samples Test (One-Way-ANOVA)	Significance		
	Academic term?	Internet Usage?	Learning in English?
I have difficulty to access Internet in order to get resources.	0.029	0.130	0.663
I have capability to use Internet but I have language problems to understand navigations.	0.284	0.034	0.000
While I am writing e-mail, I believe that I can reflect my expressions easily.	0.176	0.897	0.083
I need quick responding from my Instructors.	0.185	0.349	0.885
I believe that communicating non-verbally is better than verbally.	0.839	0.493	0.310
I can easily adapt the technical sides of distance education.	0.043	0.967	0.846
One way communication is much quick according to two way communication in distance education.	0.099	0.958	0.124
In order to get effective understanding, I need to realize the reactions, gestures of sender.	0.074	0.730	0.381
I cannot be relax, spontaneous and willingness while I am engaging the	0.439	0.132	0.683

distance education courses.			
I can easily access all facilities on web pages about e-learning.	0.200	0.874	0.204
I could not find time and opportunity to catch the courses about the distance education.	0.118	0.480	0.324
Mostly, I face difficulty with the technical applications of e-learning.	0.177	0.169	0.504
There should be a team organization for technical support at the faculty.	0.186	0.749	0.844
I need meetings sequentially in order to express my opinions because of both language and technical problems.	0.083	0.449	0.088
It is easy to use software programs on distance education.	0.427	0.915	0.795
I live the sense of responsibility and self-development through distance education.	0.185	0.744	0.679
Communication or connection frequently is blocked by physical factors with instructors.	0.310	0.037	0.457
Frequently, I could not understand the questions that instructor send us.	0.922	0.244	0.146
In the team work studies, I get difficulty to design homework because of different interpretations in distance education.	0.372	0.273	0.543
Like classical learning process, it is normal to face barriers in distance education.	0.306	0.532	0.108
Even though there are more barriers in distance education, it creates more effective learning from classical one.	0.449	0.600	0.254
Self-esteem and self-development are easily created through distance education than intra-personal communication.	0.033	0.649	0.235
I feel my self alone and isolated because of being student in distance education.	0.061	0.002	0.424
I could not get adequate feedback and sharing in distance education.	0.001	0.036	0.669
I become motivated in distance education program.	0.123	0.631	0.155
There is no sense of culture and consciousness in faculty about distance education.	0.530	0.831	0.497
I think that I can easily manage all obstacles in distance education.	0.909	0.969	0.563
All barriers can be overcome through technical group organization.	0.601	0.852	0.852
I feel that I can control all activities at learning with my needs, expectations and interests.	0.112	0.807	0.438
I prefer to study on distance education because of immediate communication and self-learning.	0.207	0.551	0.467

Cross Tabulation:

Table (12)

		I cannot be relax, spontaneous and willingness while I am engaging the distance education courses.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Gender	Male	13	25	12	14	3	67
	Female	3	12	3	15	4	37
Total		16	37	15	29	7	104

Table (13)

		I could not find time and opportunity to catch the courses about the distance education.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Gender	Male	11	24	16	14	2	67
	Female	3	9	5	19	1	37

Total	14	33	21	33	3	104
-------	----	----	----	----	---	-----

Table (14)

		Like classical learning process, it is normal face barriers in distance education.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Gender	Male	7	13	14	28	5	67
	Female	0	5	7	23	2	37
Total		7	18	21	51	7	104

Table (15)

		Mostly, I face difficulty with the technical applications of e-learning.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Do you have Internet Access at your home?	Yes	7	15	8	14	0	44
	No	6	11	16	24	3	60
Total		13	26	24	38	3	104

Table (16)

		I can easily adapt the technical sides of distance education.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Have you ever get Internet education?	Yes	10	11	4	14	6	45
	No	2	8	9	28	12	59
Total		12	19	13	42	18	104

Table (17)

		I can easily access all facilities on web pages about e-learning.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Have you ever get Internet education?	Yes	9	8	6	18	4	45
	No	1	11	12	29	6	59
Total		10	19	18	47	10	104

Table (18)

		I live the sense of responsibility and self-development through distance education.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Have you ever get Internet education?	Yes	7	10	7	16	5	45
	No	2	9	11	31	6	59
Total		9	19	18	47	11	104

Table (19)

		Self-esteem and self-development are easily created through distance education than intra-personal communication.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Have you ever get Internet education?	Yes	9	10	10	16	0	45
	No	2	10	20	24	3	59
Total		11	20	30	40	3	104

Table (20)

		All barriers can be overcome through technical group organization.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Have you ever get Internet education?	Yes	8	11	6	18	2	45
	No	1	7	20	27	4	59
Total		9	18	26	45	6	104

Table (21)

		While I am writing e-mail, I believe that I can reflect my expressions easily.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Did you have online courses before?	Yes	4	11	4	10	3	32
	No	7	7	12	40	6	72
Total		11	18	16	50	9	104

Table (22)

		It is easy to use software programs on distance education.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Did you have online courses before?	Yes	5	8	6	13	0	32
	No	4	9	14	31	14	72
Total		9	17	20	44	14	104

Table (23)

		I have difficulty to access Internet in order to get resources.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Which academic term are you following?	Freshman	3	1	1	0	1	6
	Sophomore	12	16	3	2	1	34
	Junior	2	10	1	8	0	21
	Senior	8	17	2	12	4	43
Total		25	44	7	22	6	104

Table (24)

		I can easily adapt the technical sides of distance education.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Which academic term are you following?	Freshman	3	1	0	2	0	6
	Sophomore	3	6	3	14	8	34
	Junior	4	5	2	7	3	21
	Senior	2	7	8	19	7	43
Total		12	19	13	42	18	104

Table (25)

		Self-esteem and self-development are easily created through distance education than intra-personal communication.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Which academic term are you following?	Freshman	3	1	2	0	0	6
	Sophomore	3	9	7	13	2	34
	Junior	2	3	8	8	0	21
	Senior	3	7	13	19	1	43
Total		11	20	30	40	3	104

Table (26)

		I could not get adequate feedback and sharing in distance education.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Which academic term are you following?	Freshman	2	2	2	0	0	6
	Sophomore	2	10	10	10	2	34
	Junior	0	1	5	10	5	21
	Senior	4	9	12	14	4	43
Total		8	22	29	34	11	104

Table (27)

		I have capability to use Internet but I have language problems to understand navigations.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
How often do you use Internet?	Everyday	26	29	7	8	2	72
	Once a week	4	12	4	8	0	28
	Once a Month	0	2	0	2	0	4
Total		30	43	11	18	2	104

Table (28)

		Communication or connection frequently is blocked by physical factors with instructors.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
How often do you use Internet?	Everyday	9	21	19	23	0	72
	Once a week	1	5	5	17	0	28
	Once a	0	1	2	1	0	4

	Month						
Total		10	27	26	41	0	104

Table (29)

		I feel my self alone and isolated because of being student in distance education.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
How often do you use Internet?	Everyday	13	27	11	17	4	72
	Once a week	1	4	5	15	3	28
	Once a Month	0	1	2	1	0	4
Total		14	32	18	33	7	104

Table (30)

		I could not get adequate feedback and sharing in distance education.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
How often do you use Internet?	Everyday	7	19	21	18	7	72
	Once a week	1	3	6	14	4	28
	Once a Month	0	0	2	2	0	4
Total		8	22	29	34	11	104

Table (31)

		While I am writing e-mail, believe that I can reflect my expressions easily.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
How long have you been learning in English?	1 - 3 Years	2	7	1	12	1	23
	4 - 7 Years	5	7	8	15	1	36
	8 - 11 Years	4	4	7	23	7	45
Total		11	18	16	50	9	104

About the Authors

Aytekin İşman is an Associate Professor in computer and educational technology lecturing in the Department of Educational Sciences of the Faculty of Education at the Eastern Mediterranean University. He received a B.A. in educational measurement and evaluation from the Hacettepe University, Turkey, and M.A. degree in educational communication and technology from the New York University, USA, and Ph.D. degree in instructional technology from the Ohio University, USA. His current research interests are in education, in particular, educational technology and distance education.

Contact Aytekin İşman at: Eastern Mediterranean University, Faculty of Education
Gazimagosa – KKTC, Mersin 10 - Turkey
Tel: +90 392 630 2429 Fax: +90 392 630 4044
aytekin.isman@emu.edu.tr <http://www.emu.edu.tr>

Fahme Dabaj is a lecturer in the Department of Educational Sciences of the Faculty of Education at the Eastern Mediterranean University. He received a B.A. in Civil Engineering from the Eastern Mediterranean University, M.Sc. degree in Computer Science from the same University, and currently he is a Ph.D. student in the field of communication barriers in distance education. His current research interests are in education, in particular distance education and educational technology.

Contact Fahme Dabaj at: Eastern Mediterranean University, Faculty of Education
Gazimagosa – KKTC, Mersin 10 - Turkey
Tel: +90 392 630 2295 Fax: +90 392 630 4044
fahme.dabaj@emu.edu.tr <http://www.emu.edu.tr>