

THE STUDENTS' PERCEPTIONS ABOUT E-LEARNING IN A HIGHER  
EDUCATION INSTITUTION IN TURKEY

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THE STUDENTS' PERCEPTIONS ABOUT E-LEARNING IN A HIGHER  
EDUCATION INSTITUTION IN TURKEY

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**I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.**

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## **ABSTRACT**

### **THE STUDENTS' PERCEPTIONS ABOUT E-LEARNING IN A HIGHER EDUCATION INSTITUTION IN TURKEY**

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E-learning is one of the common education types in Turkey elsewhere in the world because it has been a necessity for higher and continuous education of people but what about its quality? There are a diverse number of factors which affect the quality of e-learning education but one of the most important factors is the student. Because students are at the center of education and all of the teaching-learning operations are performed for them, their impressions are very important to gain idea about the quality and improvement of education. In order to obtain information from students

about e-learning process, questionnaires applied to 267 students and 203 of them were used for this study. The results showed that students were not able to get adequate support from teachers and success rates of the students were affected negatively by lack of immediate feedback. It was also inferred that learning objectives of the course were shared at the beginning but they were not emphasized throughout the term therefore students did not have enough knowledge about them. Moreover, according to the students almost all of the e-learning courses have similar assessment methods and they were not selected according to the predetermined learning objectives. Lastly, students mentioned that e-learning courses they had taken were not more beneficial than traditional ones but they will continue preferring them in the future. This shows that although there are still problems related with e-learning, students still prefer it because of its advantages for the students.

Keywords: E-Learning Evaluation, Student Perceptions, Learning Objective, Assessment Method, Teacher Factor

## ÖZ

### TÜRKİYE’DE BİR YÜKSEKÖĞRETİM KURUMUNDAKİ E-ÖĞRENME HAKKINDA ÖĞRENCİ GÖRÜŞLERİ

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E-öğrenme tüm dünyada olduğu gibi Türkiye’de de yaygın olarak kullanılan bir eğitim tipidir çünkü e-öğrenme, insanların devamlı ve yükseköğretimi için bir zorunluluk haline gelmiştir fakat bu eğitim tipinin kalitesi sorgulanmalıdır. E-öğrenmenin kalitesini etkileyen çeşitli faktörler vardır fakat bunlardan en önemlisi öğrencidir. Öğrenciler eğitim-öğrenim faaliyetlerinin merkezinde oldukları için onların görüş ve düşünceleri, eğitim kalitesi hakkında bilgi almak ve kaliteyi

arttırmak için deęerlidir. E-öęrenme faaliyetleri hakkında öęrencilerden bilgi almak için 267 öęrenciye anket daęıtıldı ve bunlardan 203 tanesi bu çalıřma için kullanıldı. Öęrenci görüřlerinden elde edilen sonuçlar řunları gösterdi: öęrenciler öęretmenlerden yeteri kadar destek alamıyorlar ve geri dönütlerin ge gelmesinden dolayı öęrencilerin başarıları olumsuz yönde etkilenmektedir. Dersin öęrenme amaçları dönemin başında öęrencilere aktarılıyor fakat bu amaçlar sürekli olarak vurgulanıp öęrencilere hatırlatılmıyor bu yüzden öęrenciler öęrenme amaçları konusunda yeteri kadar bilgiye sahip deęiller. Öęrencilere göre hemen hemen bütün e-öęrenme derslerde benzer deęerlendirme yöntemleri kullanılıyor ve bu yöntemler daha önceden belirlenmiř olan öęrenme amaçlarına uygun olarak hazırlanmıyor. Son olarak, almıř oldukları e-öęrenme derslerinin, dięer eęitim tiplerindeki derslerden daha kaliteli olmadığını ama öęrencilere saęladığı faydalardan dolayı e-öęrenme derslerini seçmeye devam edeceklerini belirtmektedirler.

Anahtar Kelimeler: E-öęrenme Deęerlendirmesi, Öęrenci Görüřleri, Öęrenme Amaçları, Deęerlendirme Yöntemleri, Öęretmen Faktörü

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## **LIST OF ABBREVIATIONS AND ACRONYMS**

- METU** : Middle East Technical University
- ICT** : Information and Communications Technology
- EQF** : European Qualifications Framework
- IS** : Information Systems
- CEIT** : Computer Education and Instructional Technology
- ODTÜ** : Orta Doğu Teknik Üniversitesi
- CD** : Compact Disc
- ICT** : Information and Communication Technologies

## **CHAPTER 1**

### **INTRODUCTION**

E-learning has become an inseparable part of life because it has been almost a necessity for people to gather continuous education in order to be aware of changes, developments and innovations related with their jobs and life (Gallacher and Feutrie, 2003). People are not able to achieve this by attending traditional schools while they are working therefore they need an education type which does not necessitate fixed time and place (Chang, 2000). It is obvious that the solution for the problem of these people is e-learning therefore quality of it should be increased in order to serve for this aim properly. Although there are very important and crucial advantages of e-learning, it has also some deficiencies and problems. For example, teachers and students are apart from each other, teachers do not have the complete control over students (Tavukcu et al., 2011) and students are self-motivated (Coombs-Richardson, 2007; Parise, 2000; Sampson, 2003) consequently they may lose their concentration and self-discipline easily. Investment rate of e-learning courses may also be higher than the traditional one according to the tools used and technology dependence might be a problem for students and teachers because they may not be capable enough to use technological tools effectively and efficiently (Tavukcu et al., 2011). Moreover, lack of face-to-face communication (Keegan, 1986) might be a problem for students because this situation decreases peer to peer learning, social relationship (Leasure,

Davis, & Thievon, 2000; Roblyer, 1999; Yazon, Mayer-Smith, & Redfield, 2002), interaction and immediate feedback level (Kaya, 2002).

E-learning is a type of distance education therefore e-learning and distance education terms are used interchangeably throughout this study. E-learning is evaluated according to student perceptions throughout this study by examining the e-learning courses at different departments of Middle East Technical University (METU). These courses are arranged and organized by departments and university systematically, contents of it are prepared, management of it is performed, assessments are applied and coordination is controlled by teachers of these departments. Moreover, materials of these courses are distributed via internet to the students. Besides, assessment of students is performed via internet therefore some online exams are performed, homework and projects are distributed and studies of students are gathered back over internet. The structure of all courses evaluated in this study do not have same structure and when they were grouped, one of them was entirely online and but the other one was blended. This means, in entirely online course all of the activities, exams and homework are performed over the internet and students and teachers meet only one time every term but in other one students and teachers meet at class every two or three weeks and all of the activities, exams and homework are performed over the internet. Almost similar assessments methods are applied to both group like homework, exams, projects and participation rate to forum discussions which are performed via internet and with mostly computer technology.

E-learning courses are different from traditional ones in many perspectives therefore different tools and techniques should be used in order to increase quality. In addition, there are some other factors which are important for both education types to increase quality like determining learning objectives and relating assessment methods with them. Learning objectives show what the students are expected to know or will be able to do at the end of the course (Bowe and Fitzmaurice, 2004). These objectives are crucial for any type of course because they are determined at the beginning of the course and other methods, plans, exams, experiments and all other educational materials and techniques are determined and applied in order to help students to reach and achieve them. In addition, it is important to inform students about these

objectives at the beginning of the semester or year in order to help them to know what they will learn and what they are expected to do at the end. Knowing all these will increase students' motivation and success. Assessment methods are one of the techniques which should be determined and selected according to the predetermined learning outcomes (Wass et al., 2001). These methods are important measurement tools and they are used for determining whether students are able to achieve predetermined objectives and skills or not. Because of this reason, they should be related with learning outcomes in order to measure right skills and knowledge. Otherwise, assessment methods cannot give accurate results about success of students, quality of education and problems related with course.

Students are at the center of all education types because all of the teaching-learning processes are performed for their improvement and success but importance of student perspective is greater in e-learning as compared to traditional one because students are self-motivated and they do not have much face to face communication with teachers and other students (Kauffman, 2004). Due to this reason more effort should be paid for them to increase motivation and success. To achieve all these, students' ideas, perspectives and expectations will be a valuable guide for teachers and institutions to solve problems and increase quality because target group can know what is necessary for them. As mentioned above, relating assessment methods with learning objectives also affects teachers, institutions, material and method selection but these issues are not included in this study. If all these perspectives are examined in the scope of this study, it will not be possible to focus on the students who are at the center of this study. Due to this reason, it will be better and more beneficial to evaluate perspectives other than students in future studies.

It is certain that all of the education types and institutions are designed and arranged to foster teaching learning processes, help students to improve themselves and become successful but crucial issue at this point is how the arrangement is done. In general teachers, education specialists and institution managers decide on the courses, subjects, materials, tools, techniques, learning objectives and assessment methods which will be used during the semester or year and students only enroll those courses but the problem is that student ideas, expectations and opinions are not

gathered and put into consideration. In some cases, students are wanted to evaluate the course and teachers at the end of the semester but these evaluations are mostly too shallow and they do not change anything in the program and course. These occurrences show that student perspectives, ideas and opinions are mostly not considered while planning education processes. The aim of education is helping students to gain new skills, knowledge and improve themselves consequently important feedbacks and contributions should be gathered from them to increase education quality.

Students are at the center of e-learning (Xenos, 2004) like other education facilities in all education types as mentioned above but teacher factor is also very important and affects the whole teaching learning process because they perform all of the facilities and activities and they try to solve the problems of students all the time. Due to this reason, teachers have a big load related with the improvement and success of the students therefore they should be careful about fulfilling their duties. Students in a course or institution are different from each other in many perspectives like background information, abilities and communication skills therefore teachers should be aware of it and try to arrange and carry on courses according to this fact (Aytekin et al., 2004). The responsibility of the teachers increases in e-learning and online courses because they are separated from students in time and place, students are self-motivated and they need guidance and monitoring of the teachers (Rohfeld & Heimstra, 1995). In addition, whenever a student faces with a problem and cannot solve it in a short time because of lack of teacher assistance, they may feel disappointed, leave studying and lesson (Aytekin et al., 2004). Because teachers and students are separated from each other, teachers should always be in contact with students as they can, they should try to increase student-student and student-teacher interaction to increase communication, collaboration and information sharing. Moreover, teachers should always prepare up to date and current information and sources for students and they should provide immediate feedback whenever students need in order to improve and fasten their learning (Aytekin et al., 2004). With the help of immediate feedback gathered from teachers, students' understanding of the course content increases and they feel that teacher of the course is dealing with them (Chang, 2009).

It was mentioned that students' ideas and expectations are very important and they contribute a lot to improvement of education. Their opinions, expectations, ideas, problems and evaluations about e-learning process are examined in this study. Survey method is used to gather data from the sample group. While applying this method, necessary data was gathered from students with the help of questionnaires and this data was analyzed to infer necessary information. In first step, questionnaires were applied to a small group to learn about the problems and deficiencies of the questionnaire and they were corrected before the questionnaire was applied to the sample group. In addition, two different media were used to reach first small group and appropriate one is selected with the help of them. The results of this study will be beneficial for teachers and institutions to shape and organize education materials, methods, tools and techniques. Teachers will be able to gain idea about students' perspectives and expectations from them and make necessary changes in related areas to make improvements, increase quality and success of students. With the help of this study results, institutions will also have chance to learn what changes they should do, what type of tools, technologies and innovations they should have.

Similar studies and investigations have been made related with e-learning and they have provided different kinds of valuable information for students, teachers and institutions. However, majority of them did not directly focus on the students, their perspectives and expectations but they gave information about teachers, institutions, technology and students as a whole. In addition, some other studies focused on only one specific issue related with students like ideas of students about assessment methods, their satisfaction levels, feelings and attitudes related with e-learning course qualities and student resistance to e-learning courses. This study differs at this point from other ones because it completely gathered information from students, their expectations, problems and ideas. It gives information about how teachers should act towards students, problems that students face, their expectations from teachers and institutions, reason of e-learning selection, satisfaction from it and information about their future preference related with their education. Because students are at the center of the all teaching learning processes and all of the facilities are performed for their learning and improvement, students and their ideas should be

one of the important criterion for teachers, institutions and faculties while designing a course. With the help of information inferred from this study; teachers will be able to gain idea about what types of relations they should have with students, how they should arrange courses, contents and materials. Institutions will gain idea about how they should arrange teaching-learning environment and what kinds of opportunities it should provide for students and teachers. Due to these reasons, it is thought that this survey provides valuable information for these parties and it is important for improving the quality of e-learning courses.

This study is performed in order to learn about e-learning process in a higher education institution in Turkey and evaluate it in the view of students. While investigating this issue, answers of the following questions will be investigated according to the student responses:

- What is the teacher availability rate according to students at METU?
- What is the effect of teachers and their attitudes for students' success?
- At which phase of the course learning objectives are shared with students at METU?
- Which factors increase the awareness of students about predetermined learning objectives?
- How is the assessment methods selected at METU?
- What are the opinions of students about e-learning courses at METU?

In the following parts of the study readers will be able to find the following parts: In chapter 2, a detailed literature study is provided. It includes information about e-learning, e-learning students and teachers, the survey method used in this study, importance of assessment methods and defining learning objectives. In chapter 3, detailed information about the questionnaire applied, the target group age and characteristics and steps of survey method applied for this study are explained. In chapter 4, demographic results gathered from questionnaires, statistics related with the study and results about student feeling and expectations are given. In chapter 5,

readers will find a comparison between the thesis hypotheses and the findings of the study. Summary and conclusion of the study will be mentioned in chapter 6. Later, references are listed and lastly, ethics clearance and different versions of questionnaires are given in appendices section.

## **CHAPTER 2**

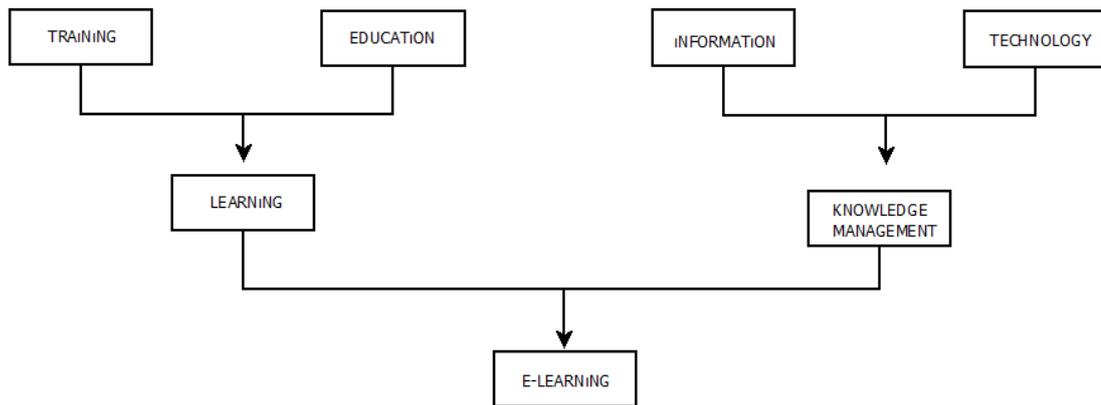
### **LITERATURE REVIEW**

In this part of the study detailed information and references about history, definition, advantages, problems and disadvantages of e-learning is given. In addition, details about the factors which affect the quality of the e-learning courses are also explained in this chapter. Moreover, role, importance and effect of teacher attitudes on e-learning and students explained. Significance of learning objectives and relating assessment methods with them is also emphasized. Besides, details about survey method which is used for collecting data in this study are also given. Lastly, examples of previous studies which have similar subject with this study and explanations about them are given in order to emphasize the importance of this study, why it is better than previous ones and why it is necessary.

#### **2.1 What is E-Learning**

Education is a necessity for people, their improvement, learning and survival therefore it has been an inseparable part of their life. There have been different education types in the past and the situation is same today but with the increase and development of information and communication technologies different kinds of opportunities provided people to explore and develop different education types. E-learning is one of this emerging education types. Although there is not a common definition of e-learning, it is defined as using telecommunication technologies in order to perform education and training of the people. Wu et al. (2012) mentioned

that education suppliers were able to find opportunities to explore new ways of delivering educational program with the help of ICTs. It is a type of learning facilitated and supported by information and communication technologies (LTSN, 2003). Sun et al. (2008) defines e-learning as delivery of information with the help of telecommunication technologies for education and training. According to Ozuorcun and Tabak (2012), e-learning is the delivery of teaching materials via electronic media like internet. Besides, according to some others e-learning is an online form of distance education. Martins et al. (2012) mention that e-learning is used as a type of distance education, online only and sometimes support classroom activities. Santos (2000) claims that e-learning is conducted through internet and it is another form of distance education. As a result, traditional learning was transformed into an e-learning which is more flexible for lifelong learning. Xiao and Gao (2005) assert that e-learning combines training and education, learning and knowledge and technology and information as shown on the figure 1 below. Like other education types, it has a specific content to learn and it is designed to deliver specific knowledge, abilities and skills. In this type of education, students and teachers exchange information without meeting physically and they are separated from each other by time and location. According to Pituch and Lee (2006), e-learning is becoming an inseparable part of teaching-learning processes because of the distance between teachers and students by time and space. Moreover, e-learning necessitates effective usage of software, technology and internet tools. E-learning can be performed with the effective use of software and internet tools (Nagi, 2008). E-learning is electronic form of learning delivery, training and education program. In order to provide training and material, it necessitates computer and some other electronic device usage (Maneschijn, 2005).

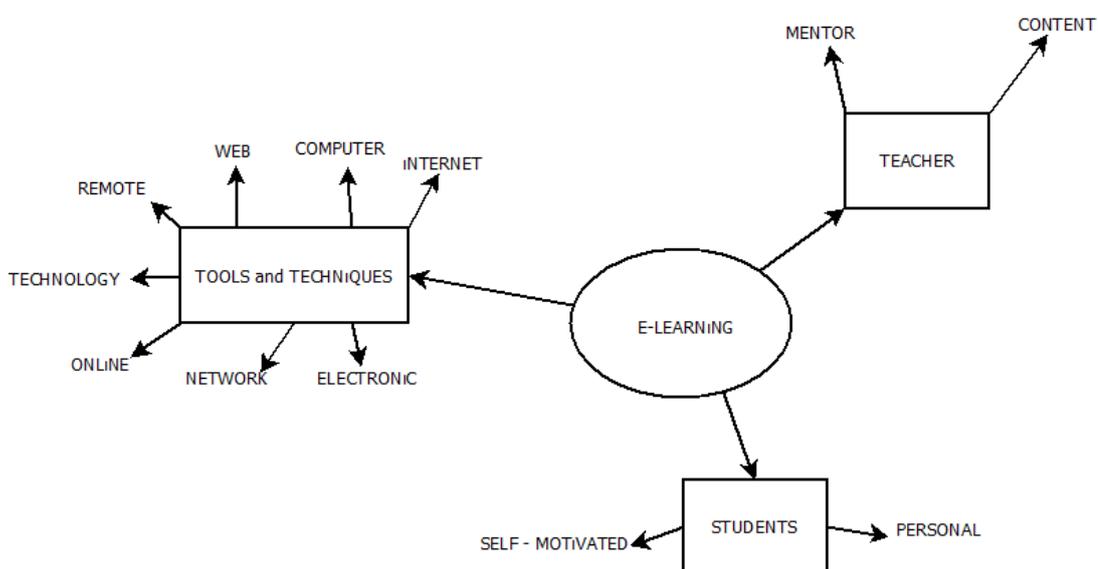


**Figure 1: Scope of E-Learning**

## 2.2 Advantages of E-Learning

There is a rapid social, economic and technological change around the world in our daily life and people need to follow and learn them. The emphasis on lifelong learning increases as a result of changing economic and working climate (Gallacher and Feutrie, 2003). Education is required to update knowledge and skills throughout lifelong learning rather than preparing people to working roles (Nyatanga, Foreman, and Fox 1998). Due to this reason, in order to improve the knowledge and skills of people e-learning can be used as a supportive alternative for traditional one or it can be used as a separate education type for lifelong learning. E-learning has perspectives different than traditional education as shown on the figure 2 below, it is an important part of today's education and in addition to supporting traditional education it helps for further and lifelong education of whole society (Liu, 2010). However, it is not possible for people to achieve lifelong learning by attending traditional schools regularly because they should survive their own life, work and earn money while they are continuing their education. E-learning has different kinds of attractions and flexibility of instruction. Remote and part time students are able to benefit from e-learning because teachers and students can be temporarily separated from each other while they still share information (Chang, 2000). Moreover, most of the times, there is not a fixed time schedule for students to attend classes and exams in the case that they can continue their education while they are working and they can take exams, lecture notes and activities when they have time. Morgan and Donald (1998) found

that 24% of the students who enrolled to US colleges and universities were part time students. Moreover they found that, there is not limitation related with enrollment for these students according to their age and occupation. As it is obvious, the solution for the continuous education problem of people is e-learning and people can continue learning with the help of it. It gains popularity and a wide range of usage area with the help of computer and related technologies. Chen et al. (2009) claims that e-learning has gained importance with the wide usage of the internet. With the help of Learning Management Systems, students are able to attend synchronous and asynchronous courses. Liu (2010) argues that the advent of information age made e-learning more attractive and successful with the help of network and multimedia.



**Figure 2: Structure of E-Learning**

Teachers and students are separated from each other in e-learning in case that it is more likely a student centered education and students should spend more effort on their own. According to Kauffman (2004), e-learning course students should be highly self-motivated otherwise it is not easy for them to be effective and successful. Since there is a distance between students and teachers in it, different tools and techniques are used to facilitate communication and interaction among them.

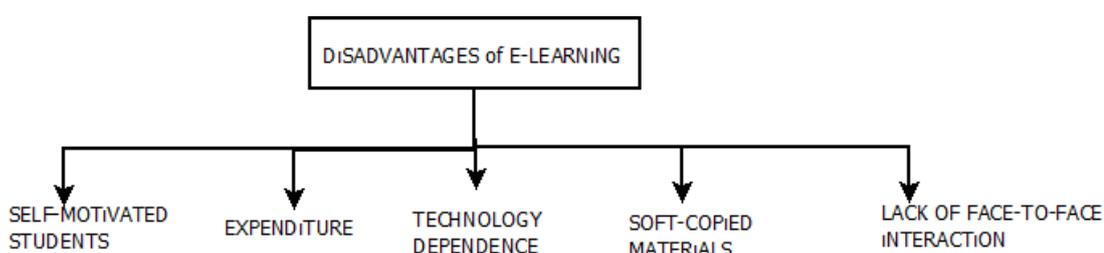
*A form of education in which there is normally a separation between teacher and learner and thus one in which other means the printed and written word,*

*the telephone, computer conferencing or teleconferencing, for example are used to bridge the physical gap (Mugridge, 1991, 315).*

Due to these types of benefits, number of people who prefer e-learning rather than traditional education increases continuously therefore it gains popularity and prevalence among people. Junyong and Yumei, (2010) argue that e-learning grows faster than traditional education. They (2010) also claim that because e-learning is flexible, it attracts attention of people according to whom balancing work is important provided that more people prefer this learning type.

### **2.3 Disadvantages and Problems of E-Learning**

There are important benefits of e-learning for people and students as mentioned above but there are still disadvantages and problems related with it as shown on the figure 3 below.

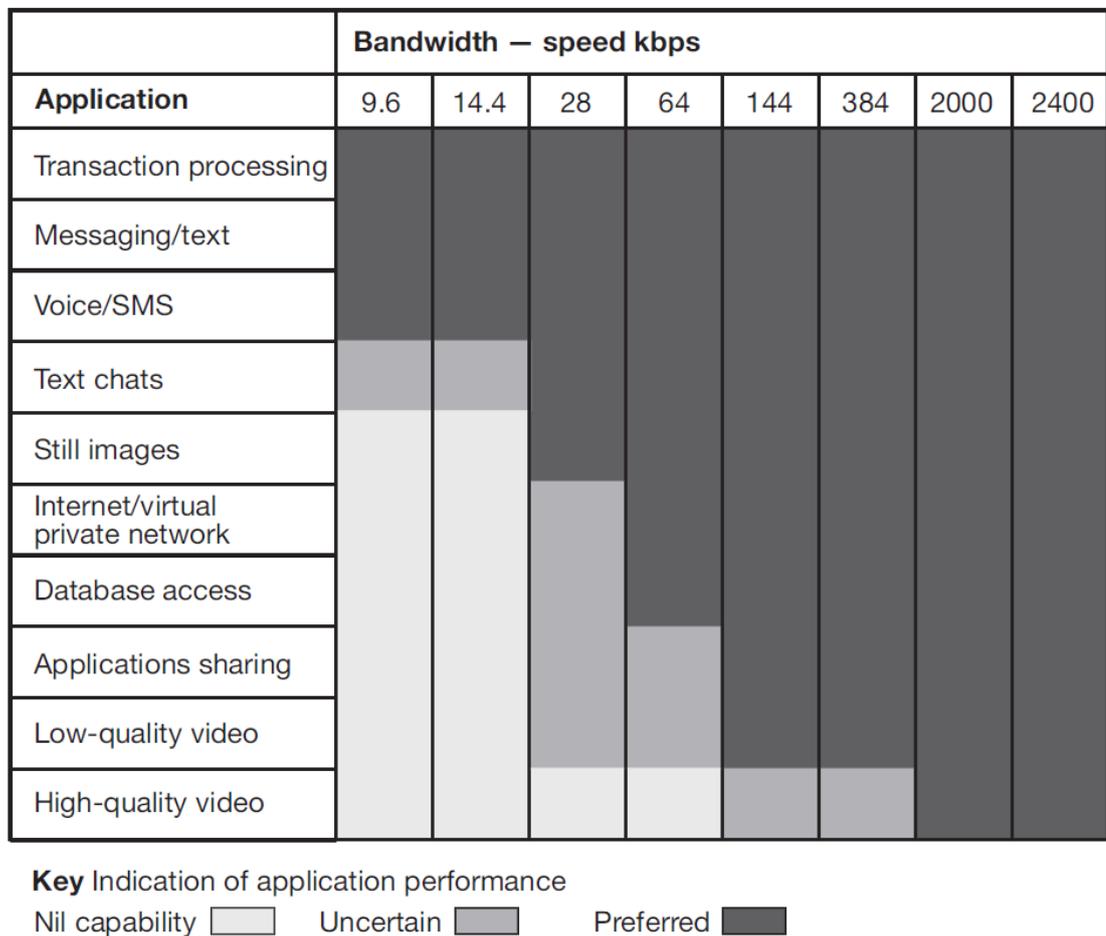


**Figure 3: Disadvantages and Problems of E-Learning**

First of all, as mentioned above students are self-motivated in this type of education and they should have their own responsibility to be successful. In order to be successful e-learning course students need self-discipline and high level of motivation as compared to traditional education students (Coombs-Richardson, 2007; Parise, 2000; Sampson, 2003). Tavukcu et al. (2011) asserts that e-learning courses are not appropriate for students who do not have independent study habit. Daneshdoust and Hang (2012) mentions that all of the students might have different types of motivation therefore their learning level might change in e-learning courses because in this type of education teachers are not able to control and deal with all of the students at the same time and students may deal with different activities other

than lesson content. Investment rate is one of the disadvantages of it because development cost is higher as compared to traditional education. According to Tavukcu et al. (2011), cost of e-learning can be higher according to the technology used. Moreover, technology dependence may be another disadvantage because adaptation of the technology to the e-learning course and students' and teachers' technology usage ability might be a problem. An example to technology dependence is bandwidth of the internet as shown on the figure 4 below. Guohong et al. (2012) claims that teacher is the expert about the content of the e-learning course but another person who is expert about multimedia converts these materials to digital form in order that the quality of the content may decrease and content may be changed throughout this process. Tavukcu et al. (2011) says that dependence of e-learning to access facilities and communication technologies is an important limitation for it. Technology dependence may also result in problem if institution or country may not serve its students and teachers with necessary internet network and tools. According to Ozuorcun and Tabak (2012) students and teachers should have computer and enough knowledge about computer usage in e-learning courses. Minou (2010) asserts that one of the problems of e-learning educational system in Iran is insufficient level of communication infrastructure and weak internet networks. Furthermore, materials of the e-learning courses are mostly soft copy and this might be a disadvantage for students because people still prefer printed materials and soft copied materials are not a rival for it. In addition, reduced rate of face to face interaction between students and teachers is another disadvantage of e-learning courses because it decreases the body language rate and peer to peer learning. It has been defined that geographical isolation is one of the problems of e-learning students (Meacham and Evans 1989). Keegan (1986) says that separation of teachers and students from each other results in the removal of connection link among them. According to Minou (2010), virtual communication established in e-learning is not an alternative for face to face communication because social relationship is not fully established in it and students are not able to share many things. In an online course, students and instructors miss the social and face to face interaction which occurs in traditional one (Leasure, Davis, & Thievon, 2000; Roblyer, 1999; Yazon, Mayer-Smith, & Redfield, 2002). Students are mostly isolated from each other and

individualized in e-learning courses (Parise, 2000; Sampson, 2003). Tavukcu et al. (2011) claims that e-learning have limitations in face to face communications due to excess number of students. Daneshdoust and Hang (2012) claims that during face to face communication, if students have problems in understanding an issue, they are able to solve it with the help of body language, facial expressions and other methods. The communication and interaction gap in e-learning is also results in late return of feedbacks in e-learning courses. Kaya (2002) says that lack of immediate feedback is one of the limitations of e-learning.



**Figure 4: Bandwidth and E-learning Applications**

## **2.4 Factors Affecting Quality of E-Learning**

It is true that e-learning has an increasing popularity but what about the quality. The important issue is whether it is able to serve students with valuable and qualified education like traditional one or not. Because it is different from traditional education in face to face communication, interaction and immediate feedback, it should be planned more systematically and different technologies should be used to close gaps. Liu (2010) asserts that because students are apart from teachers in time and space and teachers are not able to monitor students in face to face manner, students should be proactive, self-motivated and self-controlled. It is mentioned that the feedback process in online education needs to be more explicit than in face-to face education in order to achieve similar educational effects in online education such as enhanced learning experiences, and more in-depth learning (Rovai, Ponton, Derrick, and Davis, 2006). Shih (2002) says that with the help of internet, instructor and students communicate, perform e-learning and efficiency of knowledge transfer increases whether it is synchronous or asynchronous. Assessment is also an inseparable part of e-learning courses like other traditional education courses and it is used for gaining information about student knowledge, success, improvement and performance. According to Rovai (2000) assessment is one of the inseparable parts of teaching and learning and it gives information about learner performance. It also supports learning of the students and gives continuous information about the improvements of them. Black (1998) argues that assessments have three major purposes which are supporting learning, reporting student achievements and satisfying demands for public accountability. Continuous evaluation of students is important for an e-learning course because it provides valuable information about the quality of the education and helps it to be improved. Liu (2010) mentions that whole learning processes of the learners should be monitored to measure the effectiveness and quality of whole e-learning operations. In addition to different technologies, teaching and assessment methods such as online discussion, online exam, oral presentation and etc. should also be arranged in a planned and organized manner in order to increase quality of e-learning processes. Stenlund (2009) says that assessments provide correct and relevant information to decision makers which are also important for the learning about the quality of the assessment. Xenos (2004) argues that

assessing students' behavior is inseparable part of open and e-learning courses. However, there are still problems related with the evaluation of students in an e-learning course in order reach correct results and success of the students. Liu (2000) says that constructing scientific objective and effective assessment system is still one of the important problems of e-learning. Assessment methods and procedures do not only give valuable information about success of the students but also provide information about problems related with education so as to solve them and as a result increase the quality of education.

*Even more, one needs a way to assess a reached state, to evaluate student performance taking into account differences and to locate the reasons that are causing problems in the educational process, so as to be able to make corrective administrative decisions (Xenos, 2004, 350).*

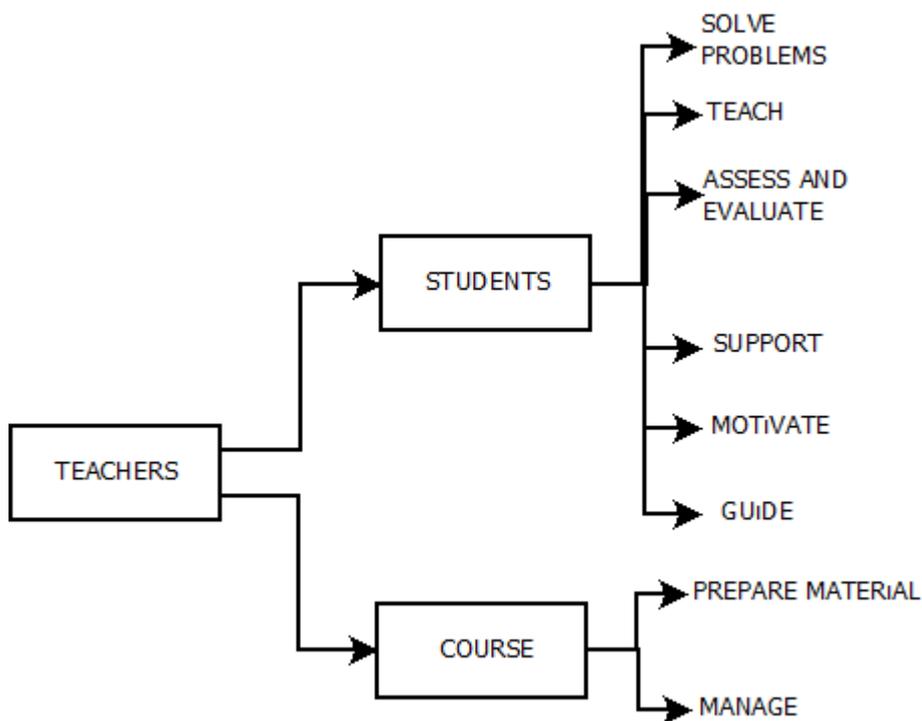
It is certain that assessment methods are important for all of the education types but they should be arranged in a different way from the traditional one in an e-learning course. Stenlund (2009) asserts that it is a key policy in European countries and world to learn about what adults have learned with the help of assessments. Assessment plays an important role in every learning and teaching activity (Lazarinis et al., 2010). Because of lack of face to face communication, on-site supervision, summative evaluation and eye contact, students should be observed continuously, workload and time schedule should be well designed, assessment should be continuous and feedback should be at maximum level. These actions will be a guide for the students and they will be able to know about their improvements, what to do in order to improve learning with the help of these guides. Otherwise they may feel isolated and may not concentrate on the course. Wang (2007) claims that e-learning does not limit students with time and space and students are provided with self-directed learning. However, they are deprived of teacher supervision on this account they may feel isolated and disconnected.

*The assessment results, the way results are reported, feedback, etc., have an influence on the conceptions of different participants such as the assessor and the assessed (Stenlund, 2009, p.16).*

Liu (2010) asserts that students are able to learn about their learning and improvement with the help of feedbacks and they are able to adjust their learning strategies to improve their learning. These are general concepts but what about details and content. As everybody knows, it is almost a rule for teachers and institutions to define goals and objectives of the course at the beginning of the semester. This is an important rule because teachers define their teaching methods, experiments, students' needs, tools and materials, guide students according to these objectives and students are able to know what they are expected to learn and achieve. According to Xenos (2004) in e-learning programs, role of the tutor is monitoring student needs and abilities and helping them to make right choices and decisions. As can be understood from here, instructors teach according to predefined objectives and learning is shaped according to them too. Assessments should be designed according to the usage area of the results because assessment designs should be arranged according to the purpose (Newton, 2007). Because learning occurs in the guidance of lesson objectives, assessment methods should also be arranged compatible to them. Stenlund (2009) mentions that assessment methods of the educational program should be arranged according to the purpose of it. Liu (2010) asserts that the first step is to define specific goals of assessment to implement assessment successfully. Otherwise, teachers cannot evaluate the success of students, they cannot know whether the students were able to reach the desired goals and they cannot measure the quality of education.

## **2.5 Teacher Factor**

Teachers are also important factor in e-learning similar to other education types therefore teachers have a big role and responsibility for students' success and improvement. The reason of this situation is that teachers perform almost all of the facilities and activities of e-learning courses and try to resolve the problems that students face with as shown on the figure 5 below.



**Figure 5: Teacher Role**

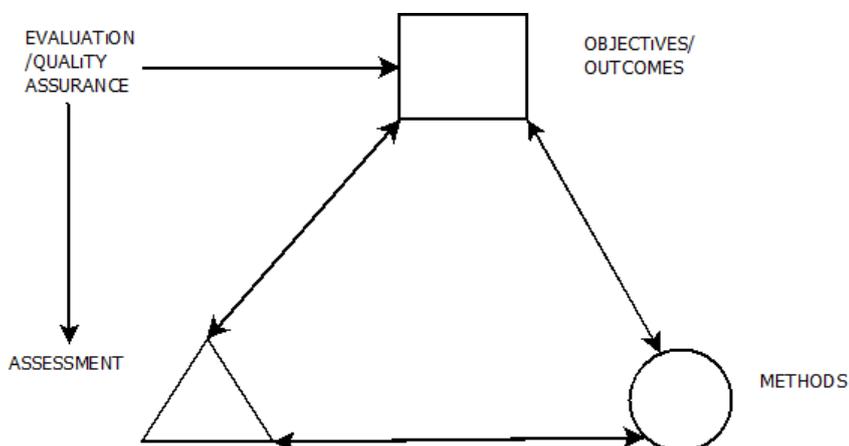
Willis (1993) claims that teachers have the responsibility of managing exams, solving technological problems, prepare and distribute course materials, prepare assignments, collect and evaluate them. Moreover, they try to learn about students' interest, motivation and performance in order to increase their success and improvement. In addition, teachers should be aware of their students' independence, differences among them and respect their ideas and expectations. According to Aytekin et al. (2004), it is important for teachers to know about students' thoughts, being aware of individual differences and their autonomy. Moreover, educators should know the prerequisite skills of the students, arrange courses according to them, provide effective communication among students, enhance collaborative learning, guide and manage their interaction which is very important for students. Rovai (2002) found that, students satisfy a lot and their motivation increase when they feel that they belong to a community and this situation increase their learning. Rohfeld & Heimstra (1995) says that teacher plays an important role in collaborative learning therefore they should manage interaction and collaboration, maintain group harmony and help students to work in groups. Baker et al. (1990) asserts that rather

than becoming an authority, students expect teachers to be a facilitator and communicator. Palloff and Pratt (1999) suggest that once the educator prepares the course and content for students, they should monitor and guide them. Aytekin et al. (2004) claim that teachers should be aware of prerequisite skills and learning styles of students. They should also establish communication among students to enhance group work and collaborative learning. Furthermore, current information and sources should be served to students and appropriate and immediate feedback should be provided students to foster their learning and improvement. Aytekin et al. (2004) says that in order to help students to gather present information to use in their daily and future life teachers should provide current sources and information for students and give them immediate feedback when necessary. Riffell and Sibley (2003) claims that quick and detailed feedback improves students' understanding of the course materials and content. Chang (2009) found that feedback from instructors has good effect on students because they feel that teacher is dealing with them and the course.

## **2.6 Importance of Learning Objectives and Assessment Methods**

Learning objectives are the statement of what the students are expected to do at the end of the course with the help of knowledge and skills they have gained. Bowe and Fitxmaurice (2004) defines learning objective as a statement of what learners will be able to do, know and understand at the end of a course. As mentioned before, it is important to relate assessment methods with learning objectives as shown on the figure 6 below in case that defining learning objectives has big importance because it is the first part of the chain. If they are not illustrated clearly and correctly, tools and techniques used by the instructors and assessment methods applied cannot be successful and improve the quality of education. Learning objectives are defined by saying "On successful completion of this course, students will:" and this sentence is completed by expected abilities, skills, knowledge and understanding like "be able to define problems of e-learning programs and propose solutions". As can be understood from here, important part in learning objectives is the learning but not teaching provided that there is not any definition related with tools and techniques that will be used, how and when teachers will teach students, what are the rules and etc. It is mentioned in EQF that qualification of an education is described with the

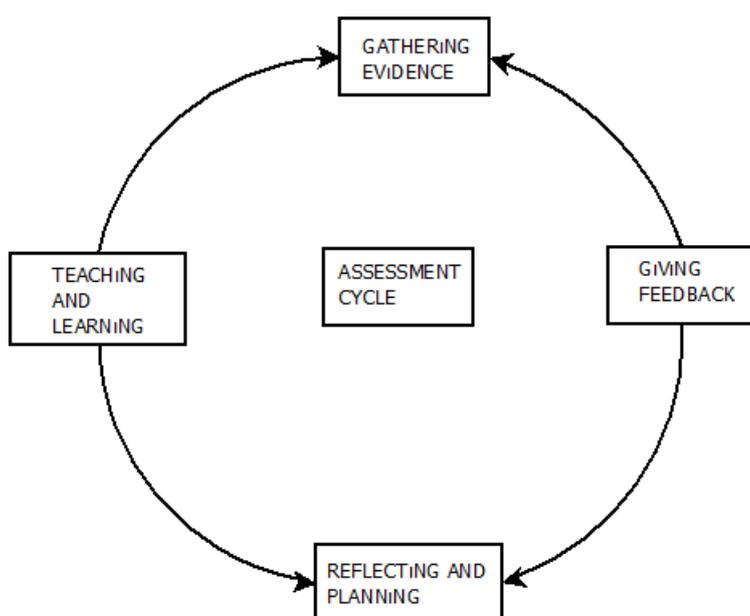
help of learning objectives and assessment methods which are used to measure whether objectives are achieved by students or not.



**Figure 6: Learning Objective - Assessment Method Relation**

European Qualifications Framework also works for continuous education and give importance to the relation of objectives and assessment methods. It is mentioned in EQF that lifelong learning has become a necessity for people because of daily changes in economy, science, technology and etc. and they achieve this continuous education with the help of e-learning which is widespread in all around the world. E-learning is commonly being used in all countries but there should be standardization among them related with the quality in order to increase transparency and EQF tries to achieve this. Maria (2010) asserts that in order to achieve the mobility within European region, levels of the universities should be compared and this comparison can be achieved in best way with the help of high standards in learning assessments. If qualifications of different e-learning institutions are close to each other, they will be more transparent to each other and people will not face with any problems when they pass one country to other one. Maria (2010) mentions that assessment gives information about the quality of education courses and provides a framework for the student and academics exchange opportunity. As a solution to this issue EQF states that in order to increase the quality of education of different countries' and relate them with each other, objective should be defined at the beginning and assessment methods should be applied to evaluate whether they are reached or not.

It is mentioned that minimum requirements expected from the students are determined with the help of learning outcomes. After this step, outline of the teaching-learning processes, tools and strategies are determined with the help of predetermined objectives to support students' learning. At last, assessment methods and criteria determine whether the intended objectives are attained or not by the students as shown on the figure 7 below. According to the Holmes (2002), relation of teaching-learning-assessment is very important but the more important thing is starting point. Which one is the best? Starting from teaching that teachers do or learning that learners do or assessment that students show what they have learned. Jolliffe (1997), Holmes (2002) and Wakeford (2003) found that effectiveness of the assessment method can be understood if it reflects the content of the course, becomes valid, reliable and fair. Due to this reason, learning outcomes and assessments should be aligned to each other in order to measure whether students are able to reach to the desired goals. According to Wass et al. (2001), because students try to do their best to meet the assessment requirement in order to be successful, assessment is completely related with the curriculum. Otherwise, it cannot be understood whether students have increased their knowledge and skills and the course is qualified enough or not.



**Figure 7: Assessment Cycle**

E-learning is almost completely different from traditional education because huge amounts of students can enroll to the course and students should spend more effort on their own to learn. Chang (2000) asserts that there are differences between virtual and traditional education related with lecture delivery. All of the students may reach sources and continue learning every time but teachers cannot be online all the time in order to support them. Chen et al. (2009) found that teachers should not be online, guide students and give feedback every time but students can learn anytime and anywhere. Because these education types are different from each other in different ways, evaluation processes and methods cannot be same. Chen et al. (2009) says that new technologies and learning strategies are provided by e-learning. For instance, written exams can be an effective way to evaluate students in traditional education because teachers can observe them during the exam but the situation is not the same in e-learning. While students are taking an online written exam, teachers are not able to observe any of them in order that students may cheat and get high grades but these grades do not reflect their success. Chang (2000) asserts that it is more difficult to assess students in a virtual university than a traditional one because teachers cannot be sure about that whether students are answering the questions or not in an online test. This does not mean that similar assessment methods like written exams cannot be applied in e-learning courses but it is not enough on their own and it should be supported with other methods in order to gain correct results. According to Chang (2000), important and difficult part of e-learning is assessment. Student learning evaluation tools should be improved enough to avoid unbiased assessment. As it is obvious, students and teachers necessitate collaboration of different assessment methods in e-learning courses like online presentation, group project, peer assessment, essay, paper and etc. Rovai (2000) found that it is not enough to apply only one or two types of assessment methods in e-learning courses to assess what students have learned and what they can do. Different types of tasks should be completed by students like essays, projects and portfolios.

Teachers should not try to evaluate students by applying only one type of assessment method because it cannot be enough for the whole teaching learning process in e-learning. Rovai (2000) mentions that effective assessment strategy should not include only one method but it should consist of multiple measurements in an e-learning

course. Lazarinis et al. (2010) found that in an e-learning course it is important to know what will be assessed and how it will be done. Assessment of students should be achieved with collaboration of different methods and they should be selected according to the teaching processes, tools and especially learning outcomes. For example, when teachers want to assess the theoretical knowledge of the students, they can apply written exams but they should give group project in order to evaluate their technical skills and successes in group works. It is clear that relating assessment methods with learning objectives may not be enough to gather correct results about student success and education quality. Due to this reason, teachers put into consideration whether they will measure a skill, theoretical knowledge, group work, writing skill and etc. and they should select the most appropriate method for it. Otherwise, students may not be successful and reflect their knowledge on this account assessment results cannot show the correct results about learning and quality. Moreover, technology is a facilitator for teachers to be able to select different methods in e-learning different from traditional education. Television was the most preferred technology in the past but number of alternatives increased with the advent of internet. According to Chen et al. (2009), with the help of e-learning, usage of technology has increased to support reflection and reflection is increased with the help of peer assessment. Video conferencing, online discussion, forums and similar technologies give teachers different opportunities in selecting teaching and assessment methods and tools.

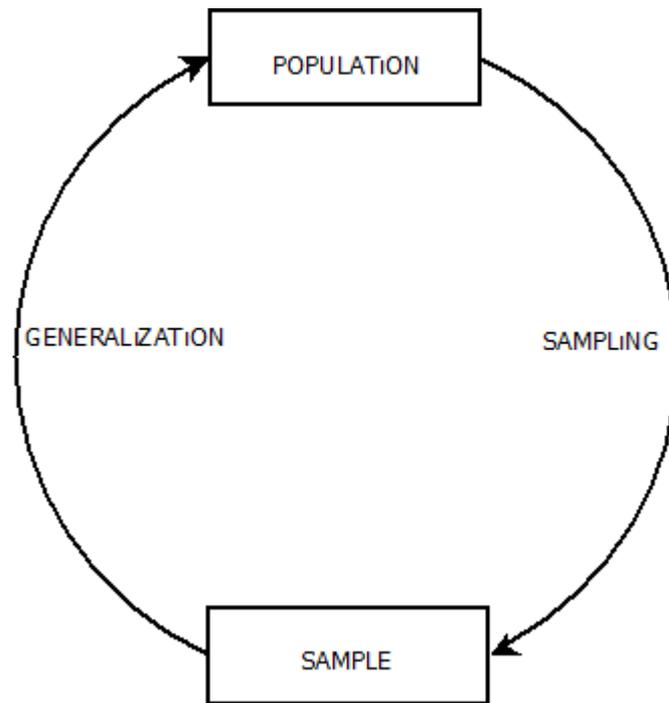
Students are at the center of the e-learning programs similar to all other courses of different education types. All of the teaching learning processes, sources, investments and efforts are spent to improve students' knowledge and learning. Weinstein and Mayer (1986) asserts that learning strategies can be defined as thoughts and behaviors intended to influence the learner's ability to select, acquire, organize, and integrate new knowledge. Jonassen (1985) found that learning strategies are designed to teach learners how to learn. Due to this reason importance should be given to students and one type of showing this importance is selecting appropriate learning objectives and assessment methods and sharing them with students at the beginning of the semester. It is important for students to know this information because if they are aware of it, they will be able to know what to focus

and concentrate on, set their personal long term and short term goals and define strategies. Otherwise, they will be unaware of the content, what to learn and what they are expected to achieve provided that their motivation will decrease. Paul and Amy (2009) mention that goals keep students on target. If students do not set goals, they may not be sure whether they have achieved something or not. Students should have both personal long term and short term goals in mind. Absolute information about these issues can be gathered from the students because these points are directly related with them. It is certain that students want to be informed about the details of the course in order to be successful at the end of the semester.

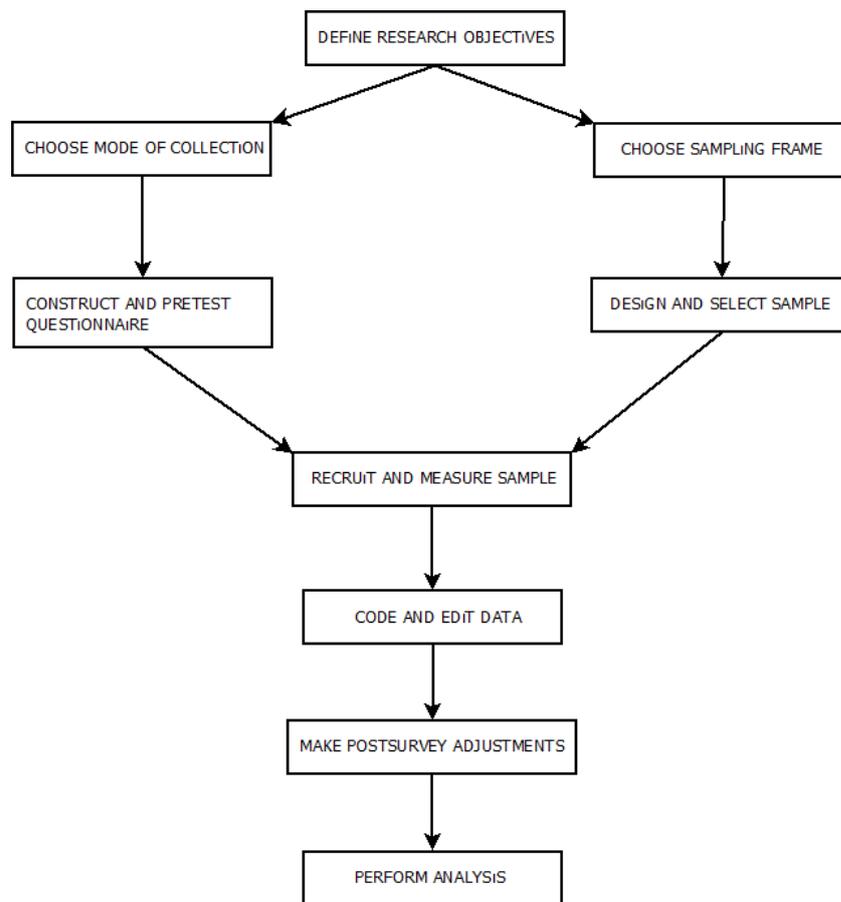
## **2.7 Method Used**

Survey method is a data collection method and this collection is made from a small number of people who belong to a larger population to learn about whole population. Data is gathered from a sample group to gather quantitative results about a larger population that sample group belong as shown on the figure 8 and figure 9 below. Because the necessary data is collected from people, the results of survey method are subjective. As a result of these inquiries, attributes and characteristics of small and large groups are gathered. Enanoria (2005) mentions that to describe the attributes of a larger population, survey method gathers data from a sample of people who belong to that population. Kraemer (1991) mentions that survey method gives quantitative results about a population, findings of the survey are subjective because they are gathered from people and results of the survey can be generalized to a larger population. Survey is defined by Pinsonneault and Kraemer (1993) as a tool for gathering information about large group of people related with their characteristics, actions or opinions. Necessary information can be gathered by census rather than sampling but it is more expensive and more time-consuming. Moreover, more accurate information about the entire society can be obtained by sampling but it is hard to achieve by census. Retzer (2003) claims that sampling by using survey methods is less expensive, less time-consuming, more accurate and information about entire society. Survey method has some strength as follows: It does not necessitate much expenditure, helps to gather information that cannot be gathered by observation method, it serves users with variety of variables and results of survey can

be generalized. Bell (1996) mentions that different types of variables can be examined in survey method, it requires minimum investment and is easy to generalize to whole society. According to McIntyre (1999), information about attitudes can be gathered with the help of survey method otherwise they cannot be gathered by observation. Survey method has also some weaknesses as follows: survey method serves people with estimation about target population gathered from sample group but not exact information, it does not provide information for historical events and quality of the survey result changes according to the responses of the target group given. Pinsonneault and Kraemer (1993) claims that survey results are not suitable for historical events. According to observations of Bell (1996), lack of responses gathered from participants or accuracy of the responses may result in biases related with the survey result. Designation of the survey has two steps namely sampling plan and making population estimation from sample group data. Sampling plan includes defining the sample group that the survey will be applied, determining appropriate number of sample group members and selecting the media which will be used to collect data from survey participants. While making the larger population estimation, it should be clearly examined whether the results are reliable and response rate is enough. Levy and Lemeshow (1999) mentions that a sampling plan should be made in a sampling design which is selecting a sample group from a larger population. According to Salant & Dillman (1994), telephone and face to face interviews, postal or electronic mail are examples of survey method data collection media. Population estimates are done identifying and evaluating the response rate and accuracy level.



**Figure 8: Selecting Sample Representative of the Population**



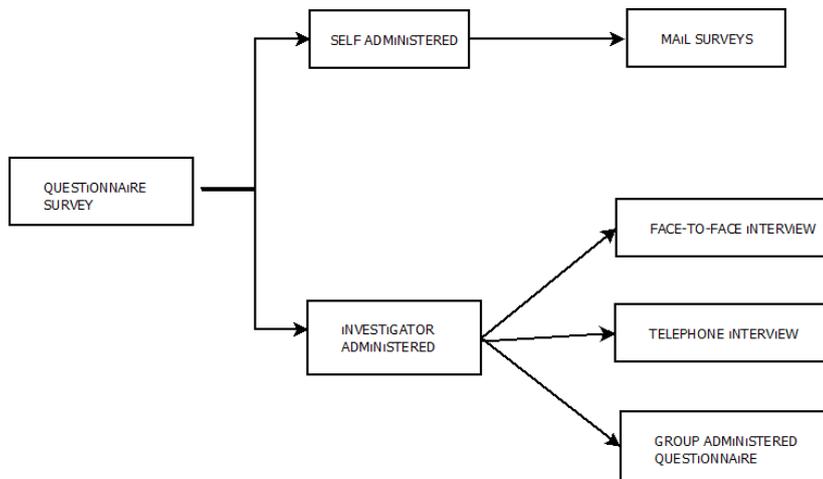
**Figure 9: Flow of Survey Process**

Medium of a survey is determined according to the source type namely written sources, verbal sources and mixed ones and all these methods serve in different manner and they are used to gather different types of information. Salant and Dillman (1994) support this idea by saying that selection of media is affected by available source. Written surveys can be distributed via postal, electronic mail or face to face. This type of survey is appropriate for confidential information, it has low cost, there is not direct contact with target group and immediate results can be gained with the help of it. According to the Salant and Dillman (1994), there is not a direct contact with target group in written surveys therefore error rate of interviewer and respondent is lower. Participants have complete freedom related with pace and sequence of response. However, some people like disabled humans may not respond questions, attendants may not give their exact feelings and ideas and users may skip some of the questions because they are not controlled strictly. Glasow (2005) asserts

that because they are prepared personally, written surveys are more prone to errors and biases. Isaac and Michael (1997) mentions that researchers may not be able to gain response from less educated, illiterate and disabled people. Verbal surveys are performed by face to face or telephone communications and this method is more useful when target group is not able to respond written questions. Salant and Dillman (1994) argues that it is more appropriate to use face to face interviews when target population is not exactly determined and they are unlikely to answer written surveys. Throughout this communication process, interviewers are able to gain more than responses with the help of body language of participants. Isaac and Michael (1997) say that interviewer is able to gain additional data by observing the body language of the respondents. Although verbal survey is beneficial in many circumstances, it is more time, effort and expenditure consuming, it is hard to analyze and erroneous results might be gathered because of the inexperienced interviewers. According to Salant and Dillman (1994), untrained interviewers may result in errors in measurement. In mixed mode surveys, the method which has higher response rate is used at first step and other method is used to increase the response rate in the second step. Salant and Dillman (1994) say that different media is combined in mixed mode and highest response rate is gathered in this method as compared to other ones. At first step in this method, the survey which necessitates lowest cost, provide highest rate of response is used and generally written surveys are used for this purpose. In the second step, other method is used to increase response rate and gain more information.

Source type is an important factor in media selection and survey may gain some advantages and disadvantages because of the selected source as mentioned before in this study. However, media selection has also some advantages and disadvantages on their own. In face to face interviews participation rate is high, longer questionnaires can be applied, quality of responses increases and interviewers can gain more data than the responses with the help of body language. On the other hand, this method is costly, data collection necessitates more time and interviewer should deal with the whole process. Another example for media is telephone interviewing and it is less expensive, response rate is high and data collection time is shorter as compared to face to face communications. However, response rate may not be high enough to

satisfy and it is not easy to manage questionnaire and help interviewees about complex topics. Mail can also be used as a media for data collections. This media necessitates lowest cost and interviewees have enough time to evaluate questions and response. Nevertheless, requires more time for data collection, it is hard to cooperate with target population, participants should be self-motivated and it is hard to administer them as shown on the figure 10 below. Owens (2002) summarizes the advantages and disadvantages of all these media in the table 1 below.



**Figure 10: Data Collection Methods by Using a Questionnaire**

**Table 1: Comparison of Data Collection Methods**

<b>COMPARISON OF DATA COLLECTION METHODS</b>			
<b>Variable</b>	<b>Mail</b>	<b>Phone</b>	<b>F/F</b>
Cost	Cheapest	Moderate	Costly
Speed	Moderate	Fast	Slow
Response rate	Low to moderate	Moderate	High
Sampling need	Address	Telephone number	Address
Burden on respondent	High	Moderate	Low
Control participation of others	Unknown	High	Variable
Length of questionnaire	Short	Moderate	Low
Sensitive question	Best	Moderate	Poor
Lengthy answer choices	Poor	Good	Best
Open-ended responses	Poor	Good	Best
Complexity of questionnaire	Poor	Good	Best
Possibility of interviewer bias	None	Moderate	High

Different types of questions can be prepared for the interviewee in survey method namely open-ended and close-ended questions. In questionnaires which include open-ended questions, participants are not served with specific response options and they need to give answer with their own words. While answering open-ended questions, interviewees are able to give responses with their personal sentences and they are not limited to select predetermined answers. Due to this reason, completion of this type of survey takes more time and evaluation and analysis of them are more

difficult as compared to the surveys which includes close-ended questions. Although it is hard to analyze, deeper information can be gathered with the help of detailed answers of people. Salant and Dillman (1994) mention that interviewees are able to response open-ended questions by using their own words and this type of surveys may necessitate more time. They also claim that researchers are able to gain more information than they want with the help of these responses but it is not easy for them to analyze those responses. In contrast to open-ended questions, responders are limited to select their answers among a list of choices. McIntyre (1999) says that respondents need to select their responses among different options in close-ended questions. In a survey which includes close-ended question, choices of them may be related with each other and interviewees should examine all of them or they may have no relation with each other.

## **2.8 Previous Studies**

There have been different studies similar to this one and they have been made to learn about perceptions, ideas of students related with e-learning and their expectations from it to contribute the improvement of e-learning process. Some of the studies have been made to gather information about the ideas of students related with assessment methods used in e-learning courses. Henckell (2007) made a study to gather necessary information from students to help institutions in selecting and applying right evaluation methods to gather exact information about students' success and improvement level. It was examined whether traditional education assessment methods can be used for web based ones according to students, how should be the appropriate assessment methods, what kind of and when additional evaluation methods should be used and what kind of media should be used to apply all these assessment methods. Some previous studies provided information about the student satisfaction level related with e-learning courses and how to increase it. Sahin and Shelley (2008) focused on the student satisfaction and concentration in an e-learning course and made a research related with this issue. According to them, student satisfaction increases as their success according to their computer and technology knowledge and perceptions. Due to this reason, they claim that institution should design different facilities to increase the computer and technology literate of

the e-learning course students as a result increase their enjoyment and attention and usefulness of distance education. Some researchers have studied about student feelings related with e-learning. Işık, Karakış and Güler (2010) examined the student attitudes towards distance learning and found that majority of students especially females feel themselves comfortable with e-learning courses because they are able to express themselves more easily and in general they think that e-learning is more efficient than traditional one. However some of the students feel studying from the web boring. Some of the studies gave information about student groups who have resistance to e-learning courses. Ciftci, Gunes and Ustundag (2010) tried to find whether students' resistance level to web based learning is related with age, gender, applied program and grade level. The results of their study showed that the resistance level of students is related with their grade level and the program they are attending but it is not related with their age and gender. They also advised that, future studies should try to find how to solve such kinds of problems of students. Research of Horzum and Cakir (2012) has been made to measure the willingness and anxiety level of high school students. The results of the study showed that willingness level of these students was lower than the average level and their anxiety level is on the average level. Due to these reasons, they advise that students should be provided with more information about e-learning and different types of applications should be carried out in order to decrease their anxiety and increase their willingness.

## **CHAPTER 3**

### **METHODOLOGY**

Survey method is used in this study in order to collect data from students related with e-learning because this is one of the effective methods used to gather data from a sample group process it and in the end describe the attributes of larger population with the help of this information. Questions of the questionnaire were arranged to gather information about experiences of students about e-learning, participation and success rates of students to the lessons, learning objectives and assessment methods of the courses taken at that semester, teacher attitudes towards students and student opinions about quality of e-learning courses. Details about how this method was applied are given in this chapter.

#### **3.1 Target Group Selection**

Sample group of this method in this study was the e-learning program students of METU who had taken e-learning courses at different departments of this school. Sample group was preferred to be from METU because e-learning is used widely in this university and students from other universities and all around the country are able to enroll these courses. Having members from all around the country is an advantage for this study because it supports survey method to infer attributes of larger population from the studied subset group. In addition, students were not selected from only one course or one department to increase the accuracy of the gathered information and make the result reliable to generalize to larger population.

The departments from which the information gathered were Department of Information Systems (IS) of Informatics Institute and Department of Computer Education and Instructional Technology (CEIT) of Faculty of Education. The reason of this was that these departments serve students with various e-learning courses and a great number of students enroll these courses. The technology used by these departments to distribute materials, perform activities and assessments, distribute homework and activities and gather them back was internet and the tool is mostly computer. Besides, structure of the courses were different in that students and teachers meet approximately every two or three weeks in one group of courses but in other one they only meet once in a semester therefore one group has face to face interaction. Moreover, homework, exams, projects and participation rate to forum discussions are used as assessment methods in both groups and all of these are performed via internet and computer.

Survey method serves with different types of data collection methods like interview, observation and questionnaire but the last one was used in this study. Interview method is not preferred because it is very time consuming and costly to meet all of the students. Moreover, it is not possible to interview with all of the students in the same environmental conditions in case that some of them will be met at home, some others at work and some others at school. As a result because of the condition diversity, their responses may vary and results may not be accurate. Moreover, writing is easier than talking for people most of the time and they may not feel comfortable during the interview and mention their own feelings about sensitive topics therefore interviewers may not gather exactly what they want. Observation method was also not appropriate for this study because it is mostly observer dependent and ideas, opinions and expectations of students cannot be gathered completely which is most important part of this study. In addition, if observers are not able to capture all off the necessary and right points, the results may be different. Questionnaire is at the center of the collecting qualified data in order that it is used as a data collection method in this study. In this method, all the questions are written on paper, they are all certain and clear to understand. Students were all on their own while answering to the questions provided that there is no pressure on them, they were comfortable and free to give whatever answer they want. As a result, quality of

the answers will increase, more correct and results will be gathered. The biggest problem related with questionnaire method is selecting questions and arranging them in a logical order. In order to overcome this problem, questionnaire of the study were prepared together with experts.

All of the questionnaires were applied to students who had just taken an e-learning course during that semester because it was preferred that experiences of students were fresh and they were able to give more accurate and valuable information about the courses. If this study were carried out with teachers to gather data, it would not be much important to select teachers whose experience were fresh because teachers have all the details about their courses and they can give relevant information for all time. All of the questionnaire questions do not necessitate fresh information because they were asked to learn general opinions of students about e-learning courses but students needed fresh information about the course they have taken at that semester to answer detailed questions. If selected student sample did not have recent information their response rate and reliability of their answers might have decreased and as a result the study was not able to fulfill its objectives.

### **3.2 Stages of Method**

It was not an easy and simple process to select data collection method, sample group, apply the method to collect data and process them to reach results. Different processes were performed on different steps of survey method as follows: first of all, objectives of the research were defined to direct the whole study and this part was very important. Objective of the study was to examine the problems, opinions and expectations of students from an e-learning course in a higher education institution in Turkey. If this part was not well defined, it was not possible to know what to do in whole study, which method to use, which target group to examine and what type of tools to use. After defining the objectives, it was clear what will be searched and in the second step the target society and collection method was selected according to the objectives. The target society was e-learning course students in a higher education institution in Turkey and the collection method was questionnaire which was appropriate for this study. After this step, the pilot study group was defined and first version of questionnaire questions was constructed to apply to this target group.

This questionnaire was a pilot study and it would be redesigned after feedbacks gathered from the pilot group about it. In the next step, questionnaires filled by the pilot group were examined and some of the questions were redesigned because it was observed that some of the questions were not answered and response of some others were not appropriate for the questions provided that it was understood that these questions were complex or misunderstood by students. Later on, redesigned questionnaire were applied to the sample group and necessary data were gathered from them. After that, the data was examined and analyzed in detail to gather the information necessary for this study. The questions were grouped in questionnaire to gather information about different points and examination of them were done according to the aim that they were asked for. In the last step, analysis of the questionnaire was performed and results were found. While doing the analysis, cross comparisons were made among the questions in order to learn whether answers students were affected from another factor related with them and e-learning facilities.

### **3.3 Method Application**

The questionnaire of this study includes 23 questions and these questions were grouped according to the information that was aimed to gain from students. 1st, 2nd and 3rd questions were related with demographic information about the participants therefore age, gender and education level of them were gathered with the help of these questions. The 4th and 5th questions were related with the job and company of the students if they have and these questions were asked to learn whether their job and company is related with e-learning or not. The 6th and 7th questions were related with the computer and internet literate level of the target group. This information was very important because almost all of the e-learning facilities were performed via computer and internet therefore these questions together with following questions will provide information about that whether the problems that students face with due to their lack of knowledge or not. The 8th, 9th, 10th and 11th questions were related with the experience of the students related with e-learning courses, their grades and their participation rate to the lesson they had taken at that semester. Results of these questions showed that whether the results of questionnaire were gathered from experienced and successful people or not. The 12th, 13th, 14th, 15th, 16th and 17th

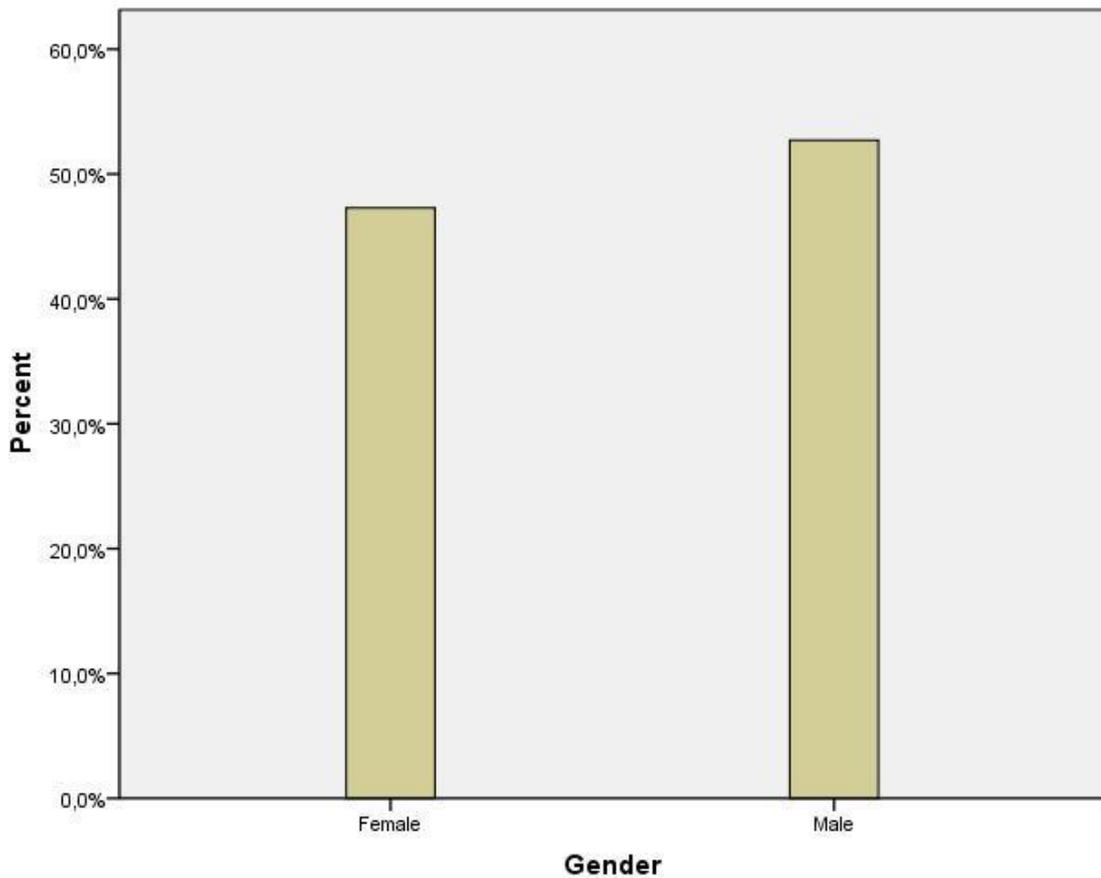
questions were related with whether students were aware of the learning objectives of the course taken at that semester and whether the assessment methods were arranged according to these objectives or not. Relating these two points are important for all education types because learning objectives are defined at the beginning of the course and assessment methods evaluate whether these objectives are reached or not therefore they should be strictly related with each other. The 18th, 19th, 20th and 21th questions were related with the feedbacks and response rate of the teachers to the students when they faced with problems. With the help of these questions, the problems of the students were able to be gathered and solutions to them can be advised to teachers. The 22th and 23th questions were asked to learn whether students are happy with e-learning courses or they think the traditional education is better. With the help of these questions, it was learned that students still prefer e-learning courses rather than traditional ones in spite of the problems they faced with.

Questionnaire of this study was applied to a 20 student pilot group as a pilot study at the beginning of the research as mentioned above. This pilot study was very important because it helped to avoid some problems which can occur when questionnaire is applied to the whole sample group. This small group of students was in many respects similar to the sample group and their ideas and suggestions provided valuable clues for questionnaire development. Moreover, valuable information was gathered with the help of this pilot study like order of the questions, sufficiency of the spaces necessary for the responses and understandability of questions. For example, rate of unanswered questions were high, some of the questions were answered in a wrong manner and some others were shallow. One of the reasons of this situation was type of questions. Due to this reason, revisions were made to some questions such as number of multiple choice questions were increased and hints were added to questions in order to guide students to know what type of answers they should give. In addition to questionnaire questions, data distribution and collection methods were also changed after pilot study. At the beginning, some of the questionnaires were distributed via e-mail (computer assisted) and some others personally (paper and pencil) during face to face meetings in a classroom. However, some of the questionnaires distributed via e-mail were not returned back. Moreover, when the answers of questionnaires distributed by both methods were

examined, it was observed that response rates to questions and quality of the given answers were lower in e-mail version. As a result of these findings, it was observed that distributing questionnaires by hand during face to face meetings and gathering the results at that moment will be more beneficial for this study. Target group selection is another point which was also changed with the help of this pilot study. Some of the students of the sample group who were used in pilot study had just taken an e-learning course but others were not. As a result, some of the students had fresh knowledge about the e-learning but some others did not. When the answers of both student groups were evaluated, it was observed that more detailed and qualified answers were gathered from the student group who had just taken an e-learning course. Hence, it was decided to study with this group which have fresh knowledge about e-learning and course.

Throughout this study, questionnaires were applied to 267 students including the pilot study students who had taken an e-learning course at different departments of METU. 107 of these students were from CEIT and the rest were from IS department. All of these students were between 24 and 35 years old and approximately 45% of this sample group was female and the rest was male as shown on the figure 11 below. All of the attendants were post graduate students and most of them had just taken an e-learning course provided that their knowledge and experience was fresh. At the beginning, pilot study was performed with 20 students, 12 of them gathered questionnaires via e-mail and 8 of them gathered during face to face meetings. 8 of the students to whom the questionnaire was given during face to face meeting filled the questionnaire and returned them back however; only 5 of the students who had gathered questionnaire via mail returned back the filled questionnaire. The success of data collection method via e-mail was approximately 24% but other one had 100% success rate. In total, 13 questionnaires were returned from students but only 6 of them were qualified and used. These results showed that quality of the answers given to questionnaire questions together with the success rate of data collection method would be 46% if research had been performed in this way. Due to this reason, it was understood that revisions should be made on questionnaire. Moreover, return rates from students who had gathered questionnaire via e-mail were very low therefore it was understood that distribution and collection method should be changed in order to

increase this rate. After the questionnaire was redesigned and developed it was distributed to 247 students only during the face to face meetings in classroom environment but e-mail distribution was not used any more. In order to equalize the environmental conditions for all students, classroom environment were selected. With the help of this action, students were able to fill the questionnaires in same conditions with their groups. 230 of the questionnaires were gathered back from students, 203 of them were qualified to use for the study, 98 of these students were from CEIT and the rest were from IS department. Return rate from students was approximately 93% and rate of questionnaires which were filled in a good manner was approximately 88%.



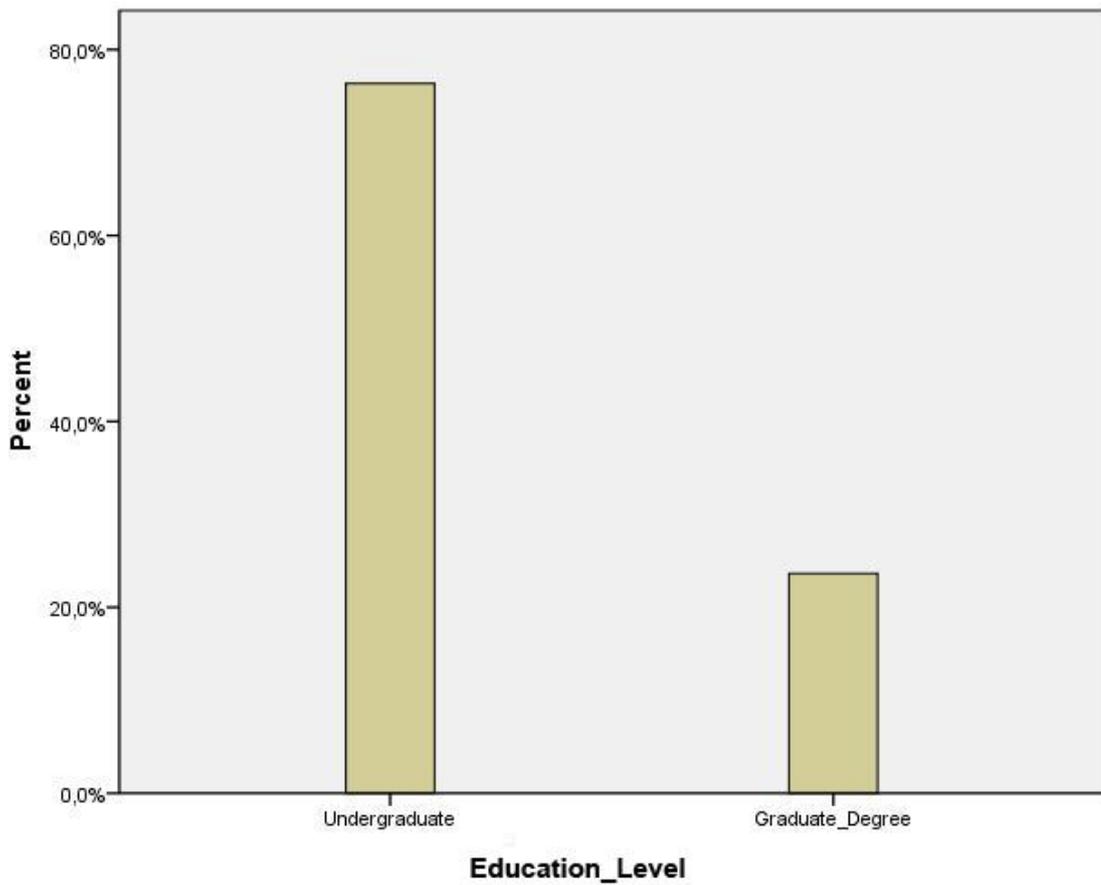
**Figure 11: Gender of the Students**

## **CHAPTER 4**

### **RESULTS AND FINDINGS**

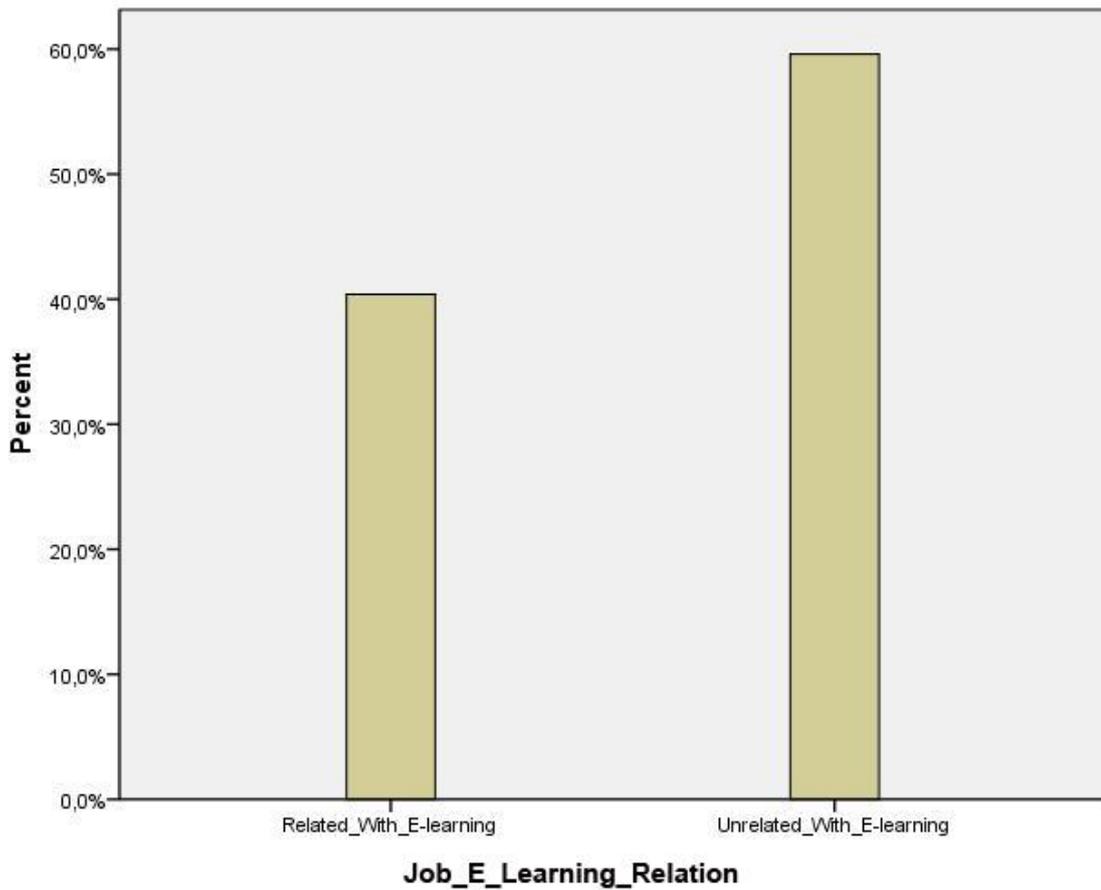
#### 4.1 General Information about Participants

Results of this study have shown that all of the students who had filled the questionnaire were at least undergraduate students and their ages were between 24 and 35. Approximately 77% of the participants were undergraduate students and others' level of education was graduate degree as shown on the figure 12 below.

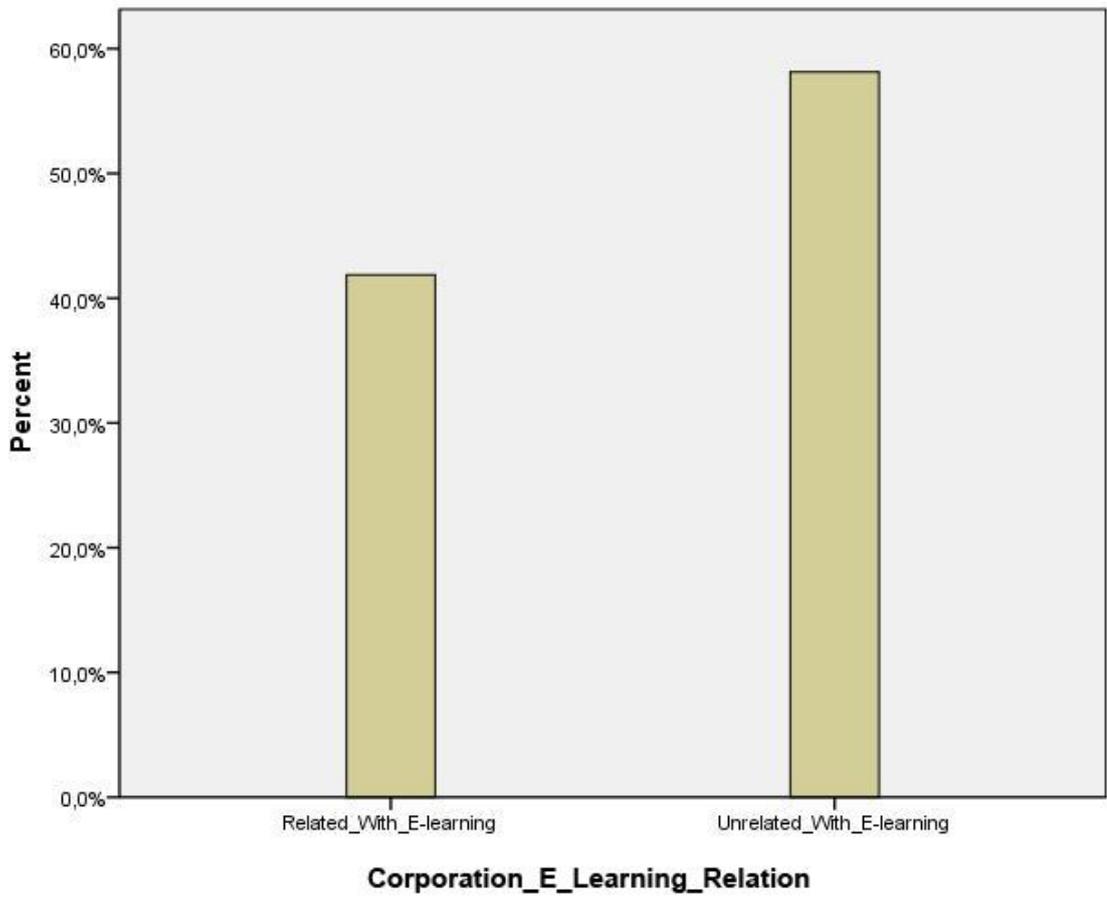


**Figure 12: Education Level of Students**

Almost 41% of the students were graduated from a department related with e-learning as shown on the figure 13 and approximately 43% of the students had also dealt with e-learning in their social life because their job was related with e-learning as shown on the figure 14 below.



**Figure 13: Relation of Student Jobs with E-Learning**



**Figure 14: Relation of Student Corporations with E-Learning**

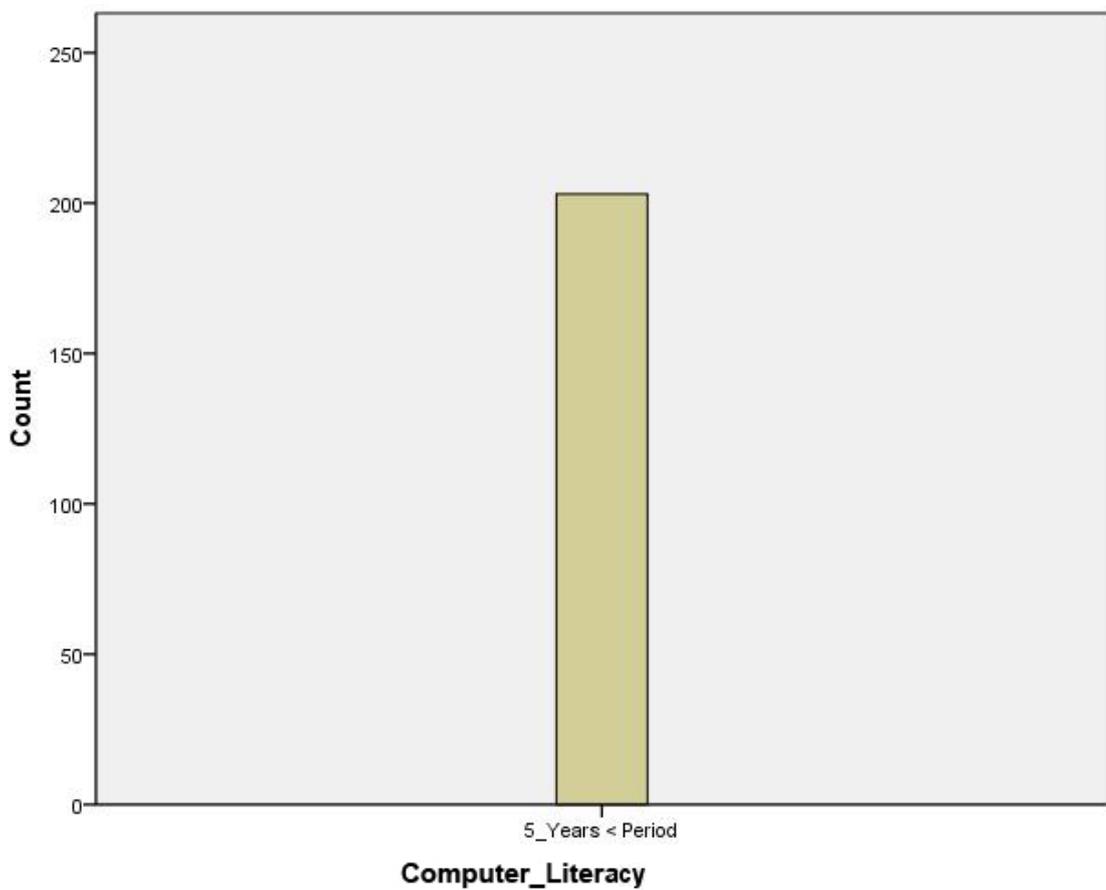
Approximately 20% (25) of the students whose job is not related with e-learning deals with it with the help of their company as shown on the table 2 below.

**Table 2: Job - Corporation Comparison**

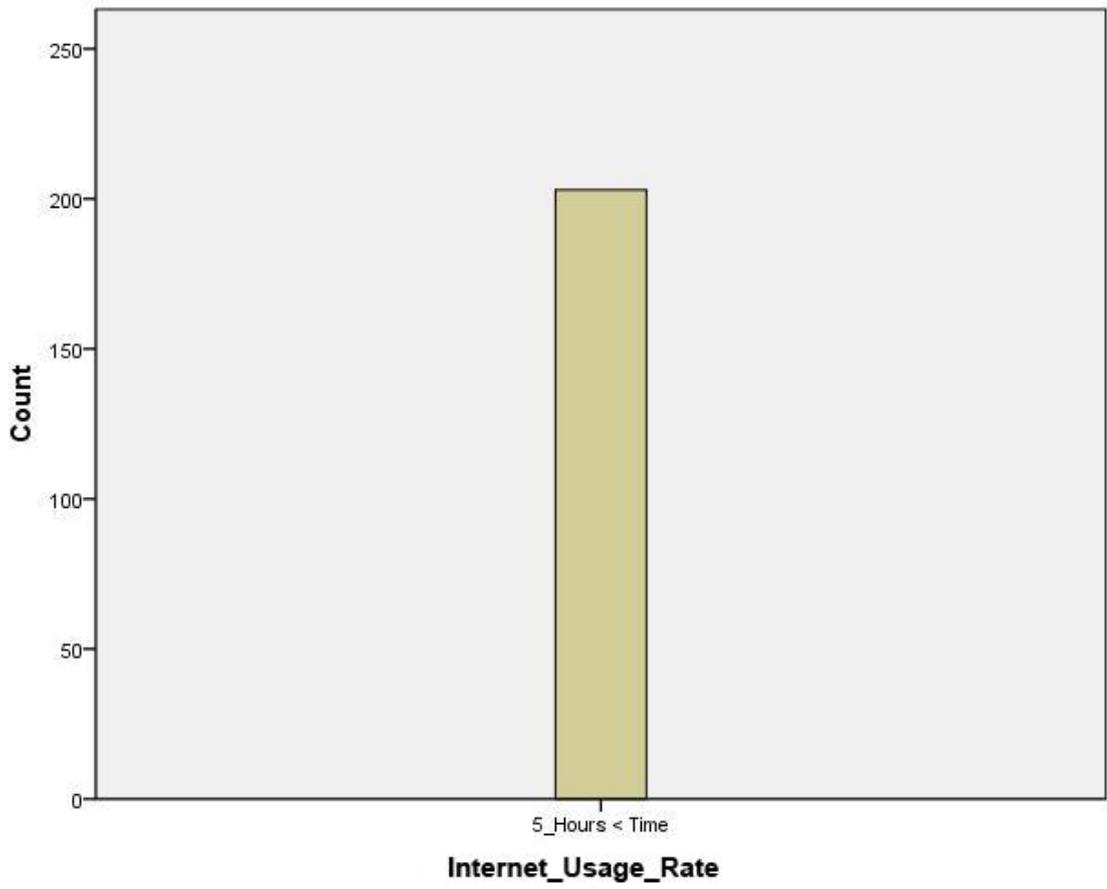
			Learning Objective Number Given		Total
			Related with E-Learning	Unrelated with E-Learning	
Job	Related with E-Learning	Count	60	15	75
		% within Learning Objective Information	80.0%	20.0%	100.0%
	Unrelated with E-Learning	Count	<b>25</b>	103	128
		% within Learning Objective Information	<b>19.5%</b>	80.5%	100.0%
Total		Count	85	118	203
		% within Learning Objective Information	41.9%	58.1%	100.0%

## 4.2 Experiences of Participants

100% of the students who had attended to this study mentioned that they had been using computer for about more than 5 years as shown on the figure 15 on this account it can be inferred that they were familiar with computer usage. Moreover, all of the students had been using internet for about more than 5 hours in every week as shown on the figure 16 therefore it can be said that they were accustomed to using internet and know how to benefit from it.

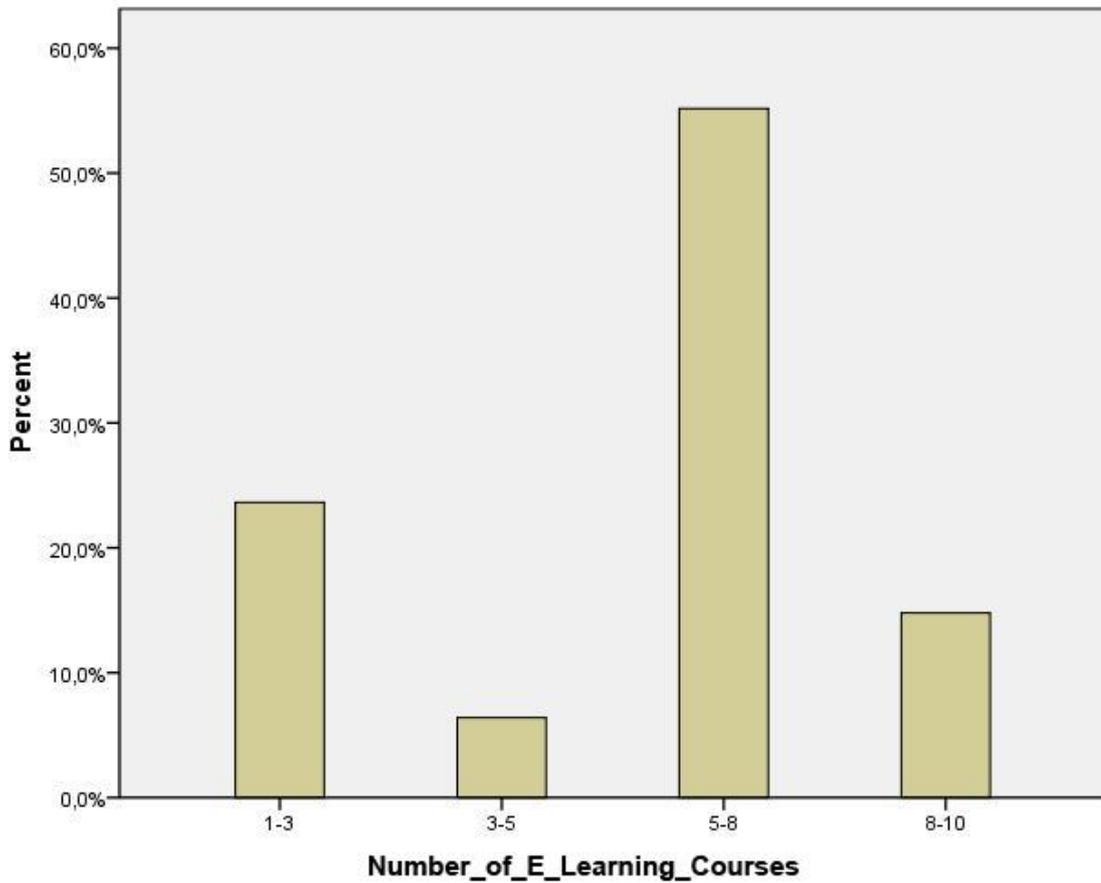


**Figure 15: How Long Do Students Use Computer**



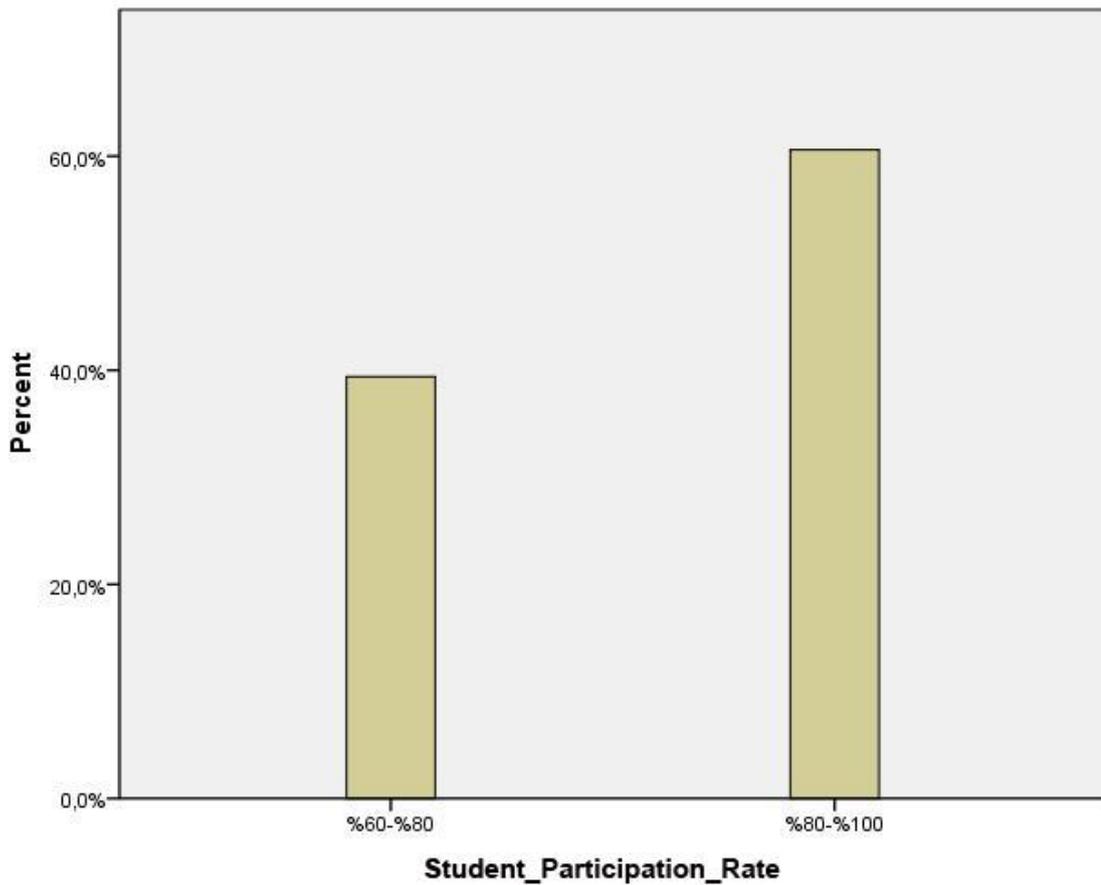
**Figure 16: Weekly Internet Usage Rate of Students**

Participants of the questionnaire had taken at least 1-3 e-learning courses and 75% of them had taken 5 or more e-learning courses throughout their lives as shown on the figure 17 below.

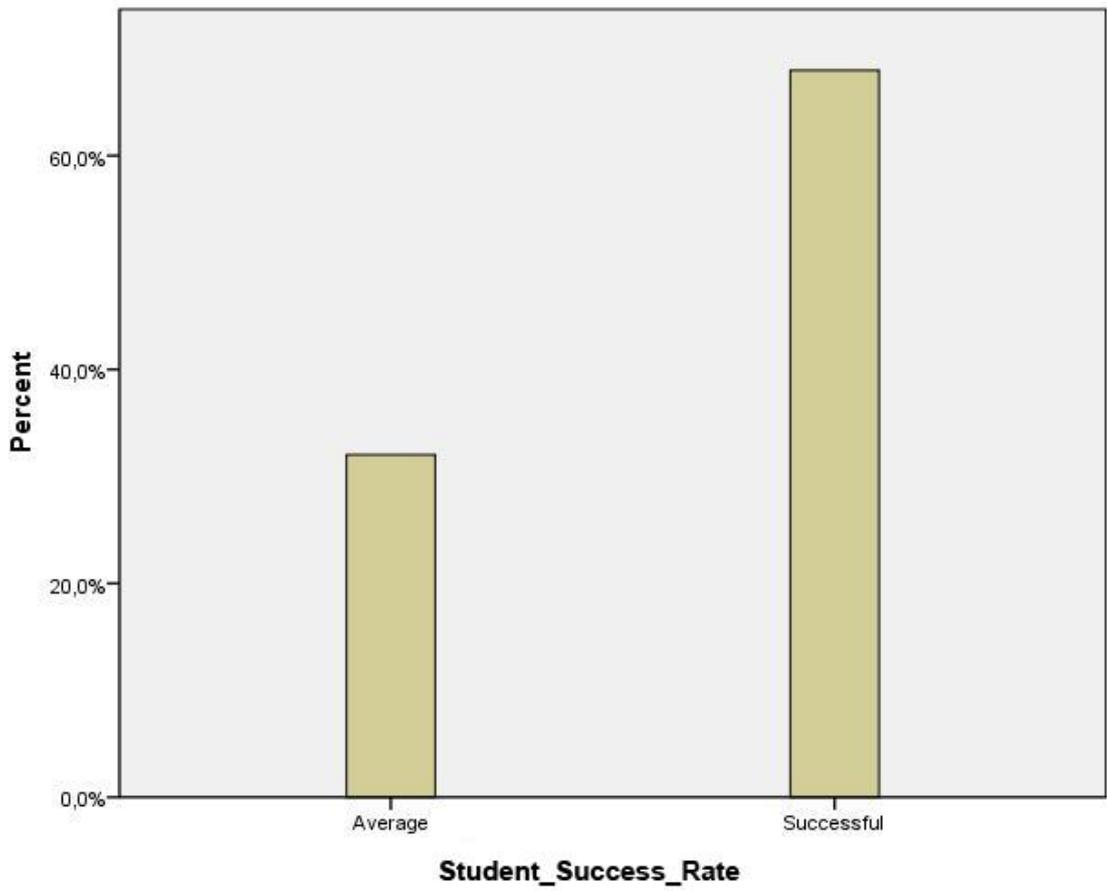


**Figure 17: Number of E-Learning Courses Taken by Students**

61% of the students' participation rates to the lessons, activities, homework and exams were between 80-100% and the rest were between 60-80% as shown on the figure 18 below. Moreover, grades of approximately 67% of the students were high and the rest were average as shown on the figure 19 below.

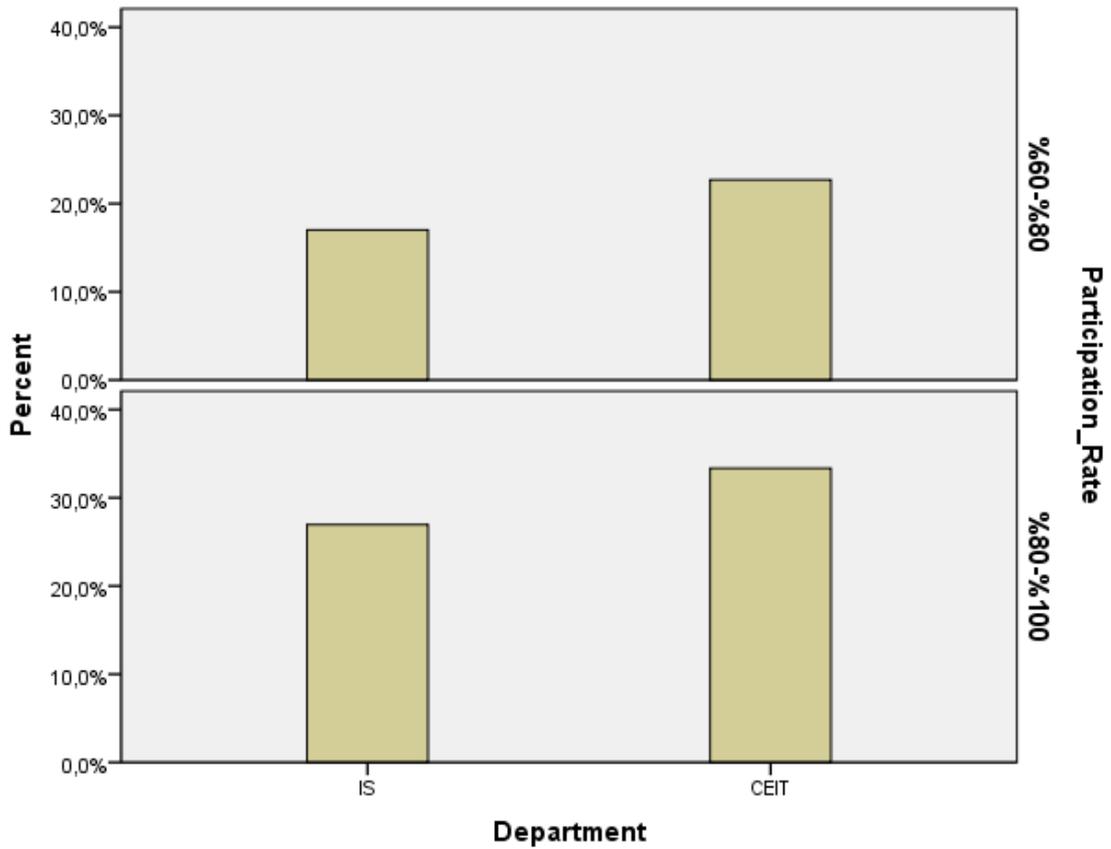


**Figure 18: Student Participation Rates to the Lessons**



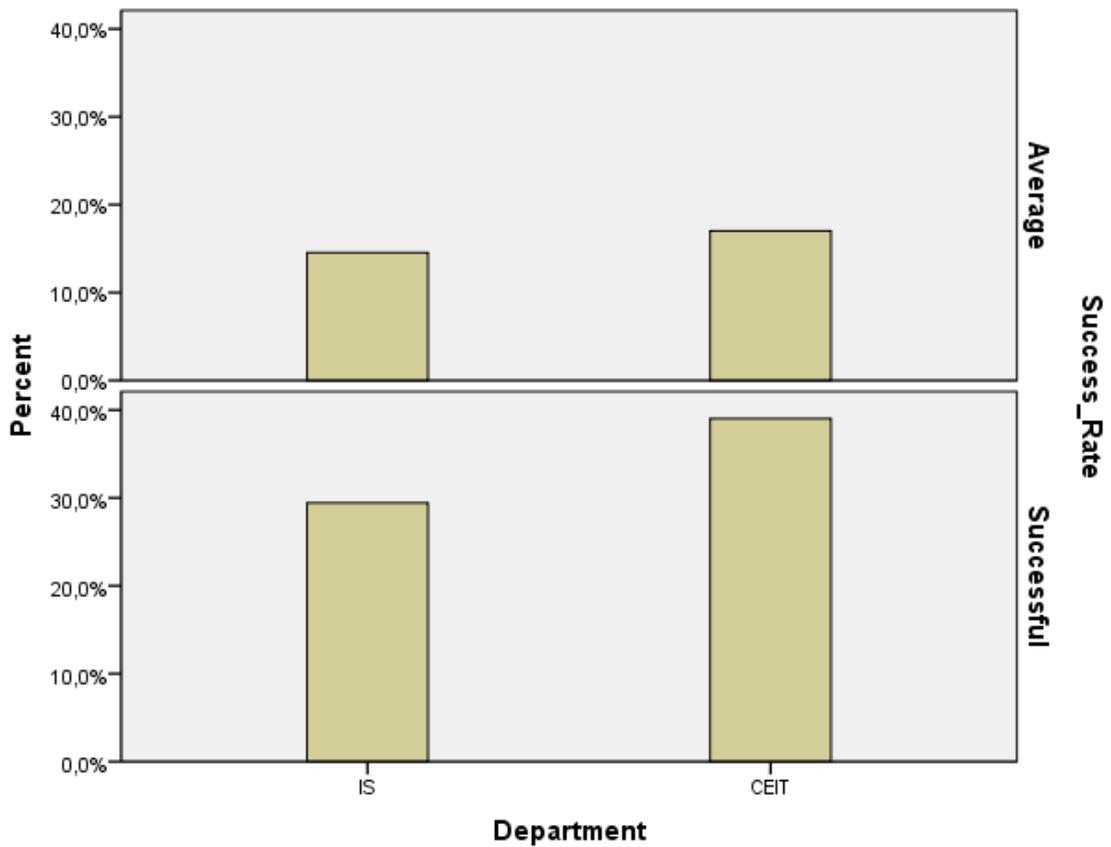
**Figure 19: Success Rate of Students**

Results of department analysis showed that number of the students whose participation rate was between 80% - 100% was higher than the others whose participation rate were between 60% - 80%for both departments as shown on the figure 20 below. Therefore, there was not a significant difference among the results gathered from both departments.



**Figure 20: Student Participation Rates to the Lessons According to Departments**

Results of department analysis showed that number of the students who were successful was higher than the others whose grades were average for both departments as shown on the figure 21 below. Therefore, there was not a significant difference among the results gathered from both departments.



**Figure 21: Success Rate of Students According to Departments**

A comparison related with the students' success rate and getting immediate feedback from teachers is shown on table 3 below.

An independent-samples t test was conducted to evaluate the hypothesis that success rate of the students who mentioned that they were able to gather immediate feedback from teachers were higher than others who mentioned opposite. The test was significant,  $t(73.44) = -1.18$ ,  $p = 0.5$ . Success rates of the students who mentioned that they were able to gather immediate feedback ( $M = 3.75$ ,  $SD = 0.44$ ) were higher than the others who mentioned the opposite ( $M = 3.66$ ,  $SD = 0.48$ ). The 95% confidence interval for the difference in means was quite wide, ranging from -0.24 to 0.06. The eta square index indicated that 0.01 of the variance of the success rate variable was accounted for by whether student was able to gather immediate feedback or not.

**Table 3: Teachers' Immediate Feedback and Students' Success Rate Comparison**

**Group Statistics**

Immediate Feedback		N	Mean	Std. Deviation	
Success Rate	No	159	<b>3,66</b>	0,475	0,038
	Yes	44	<b>3,75</b>	0,438	0,066

**Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Success Rate	Equal Variances Assumed	6,54	<b>0,01</b>	-1,126	201	<b>0,262</b>	-0,09	0,08	-0,247	0,067
	Equal Variances not Assumed			-1,179	73,435	<b>0,242</b>	-0,09	0,076	-0,241	0,062

A comparison related with the success rate of the students and teachers availability rates are shown on the table 4 below.

An independent-samples t test was conducted to evaluate the hypothesis that success rate of the students who mentioned that teachers were available for them were higher than others who mentioned opposite. The test was not significant. Success rates of the students who mentioned that teachers were available for them ( $M = 3.53$ ,  $SD = 0.51$ ) were lower than the others who mentioned the opposite ( $M = 3.72$ ,  $SD = 0.45$ ).

**Table 4: Comparison of Students' Success Rate and Teachers' Availability Rate**

**Group Statistics**

Teacher Availability Rate		N	Mean	Std. Deviation	
Success Rate	No	165	<b>3, 72</b>	0, 453	0,035
	Yes	38	<b>3, 53</b>	0, 506	0,082

**Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Success Rate	Equal Variances Assumed	8,261	<b>0,004</b>	2,267	201	<b>0,024</b>
	Equal Variances not Assumed			2,114	51,504	<b>0,39</b>

A comparison related with the success rate of the students and teachers' response rates for student problems are shown on the table 5 below.

An independent-samples t test was conducted to evaluate the hypothesis that success rate of the students who mentioned that teachers responded their problems whenever they need were lower than others who mentioned opposite. The test was not significant. Success rates of the students who mentioned that teachers responded their problems whenever they need ( $M = 3.00$ ,  $SD = 0.00$ ) were lower than the others who mentioned the opposite ( $M = 3.81$ ,  $SD = 0.40$ ).

**Table 5: Comparison of Students' Success Rate and Teachers' Response Rate for Student Problems**

**Group Statistics**

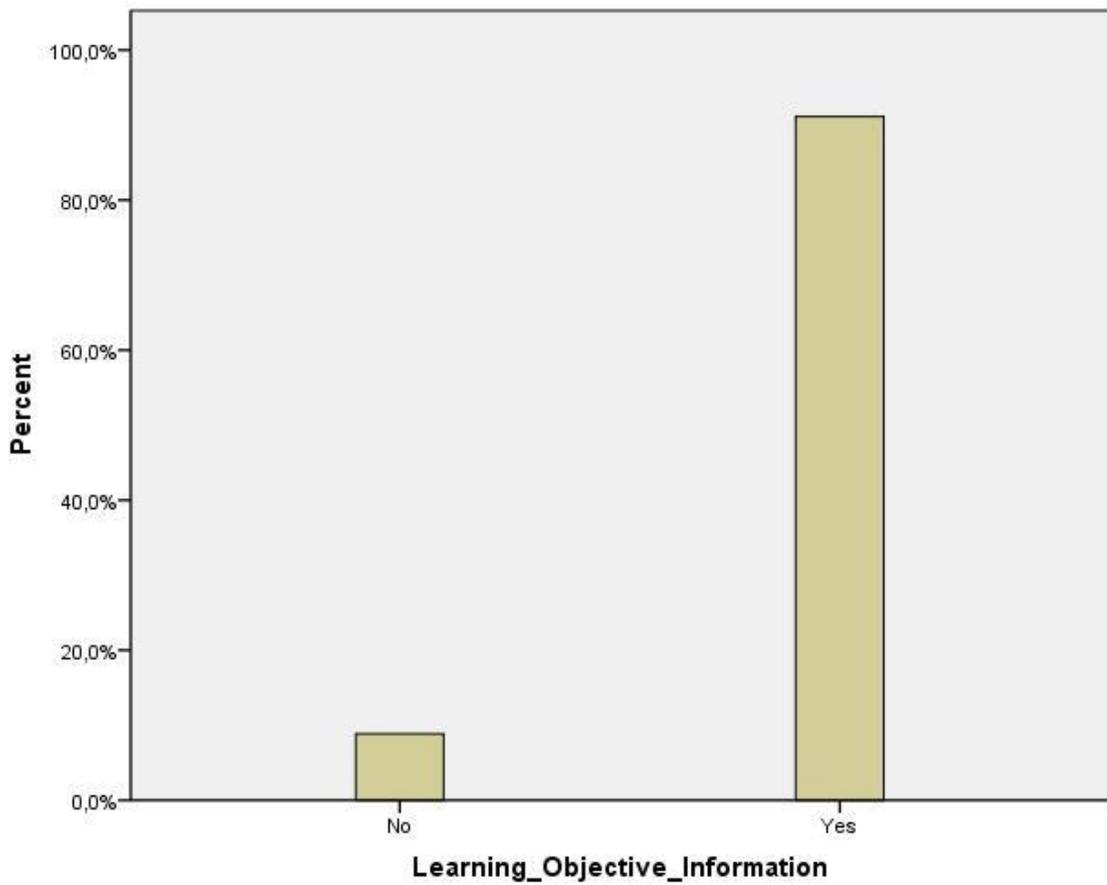
Teacher Responses to Problems		N	Mean	Std. Deviation	
Success Rate	No	171	<b>3, 81</b>	0, 396	0,03
	Yes	32	<b>3, 00</b>	0, 000	0, 000

**Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Success Rate	Equal Variances Assumed	52,351	<b>0, 000</b>	11,511	201	<b>0, 000</b>
	Equal Variances not Assumed			26,663	170,000	<b>0, 000</b>

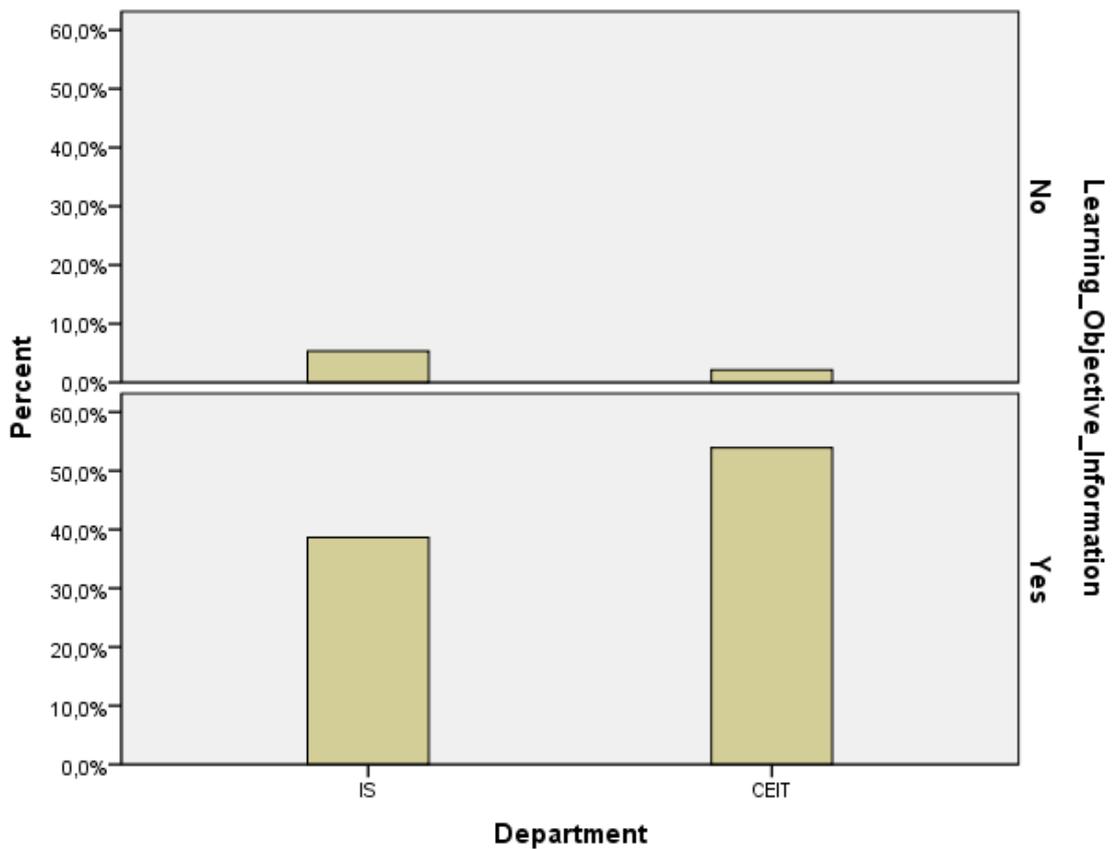
### 4.3 Details about the Course

91% of the students mentioned that learning objectives of the lesson taken at that semester were mentioned by the teacher at the beginning of the lesson as shown on the figure 22.



**Figure 22: Learning Objectives were Given to Students or Not**

Results of department analysis showed that number of the students who mentioned that learning objectives were given to them at the beginning of the term was higher than the others who mentioned the opposite for both departments as shown on the figure 23 below. Therefore, there was not a significant difference among the results gathered from both departments.



**Figure 23: Learning Objective were Given to Students or Not According to Departments**

A comparison related with the students' participation rate and being aware of that the learning objectives were mentioned at the beginning of the term shown on the table 6 below.

An independent-samples t test was conducted to evaluate the hypothesis that participation rate of the students who mentioned that learning objectives were shared with them at the beginning of the term were higher than others who mentioned opposite. The test was not significant,  $t(24.86) = -6.47, p = 0.5$ . Participation rates of the students who mentioned that learning objectives were shared with them at the beginning of the term ( $M = 4.65, SD = 0.48$ ) were higher than the others who mentioned the opposite ( $M = 4.11, SD = 0.32$ ).

**Table 6: Comparison of Students' Awareness about Learning Objectives and Participation Rates to Lessons**

**Group Statistics**

Learning Objective Information		N	Mean	Std. Deviation	
Participation Rate	No	18	<b>4, 11</b>	0, 323	0,076
	Yes	185	<b>4, 65</b>	0, 477	0, 035

**Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Participation Rate	Equal Variances Assumed	42,464	<b>0, 000</b>	-4,72	201	<b>0, 000</b>
	Equal Variances not Assumed			-6,471	24, 855	<b>0, 000</b>

A comparison related with the number of e-learning course had taken (their experience) by students and their awareness about learning objectives of the course are shown on the table 7 below.

An independent-samples t test was conducted to evaluate the hypothesis that number of the taken courses by the students who mentioned that learning objectives were given to them at the beginning of the term were lower than others who mentioned opposite. The test was not significant. Number of the taken courses by the students who mentioned that learning objectives were given to them at the beginning of the term ( $M = 2.59$ ,  $SD = 1.03$ ) were lower than the others who mentioned the opposite ( $M = 2.78$ ,  $SD = 0.65$ ).

**Table 7: Comparison of Students' Awareness of Learning Objectives and the Number of E-Learning Courses They Had Taken**

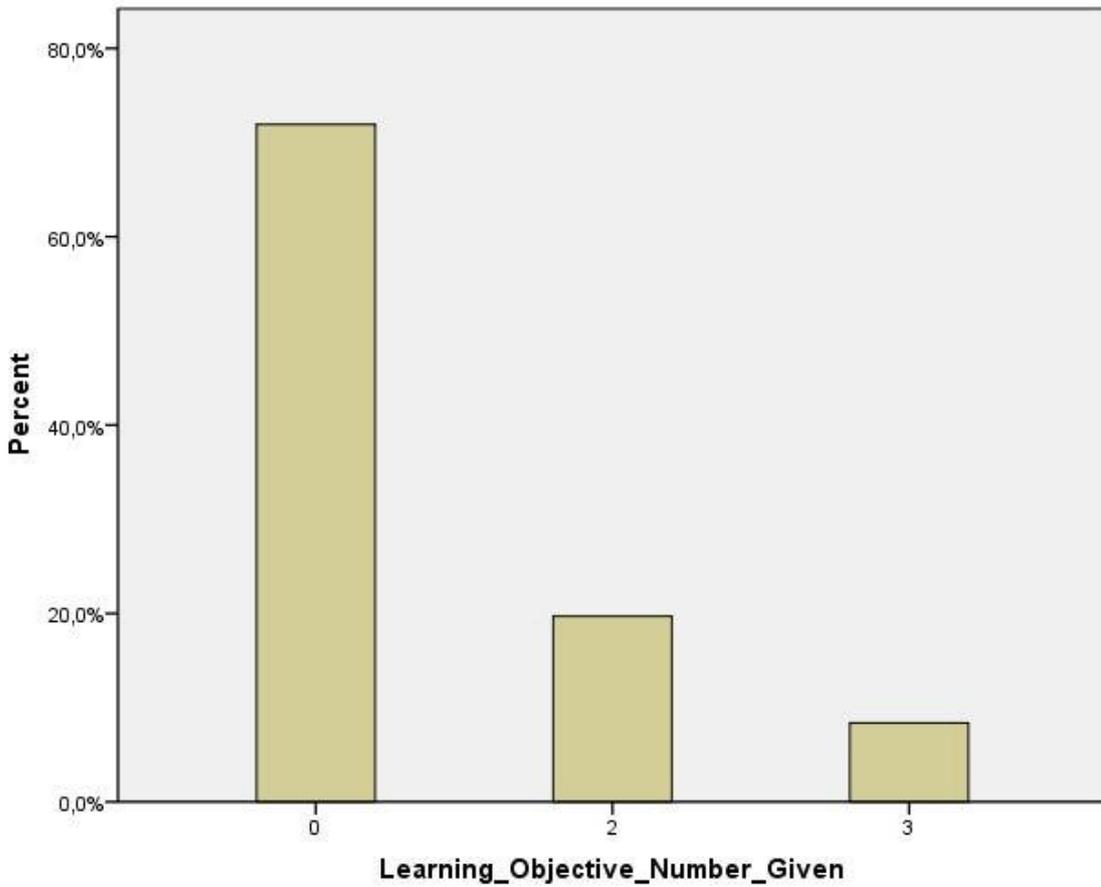
**Group Statistics**

Learning Objective Information		N	Mean	Std. Deviation	
Number of Courses	No	18	<b>2, 78</b>	0, 647	0,152
	Yes	185	<b>2, 59</b>	1, 034	0, 076

**Independent Samples Test**

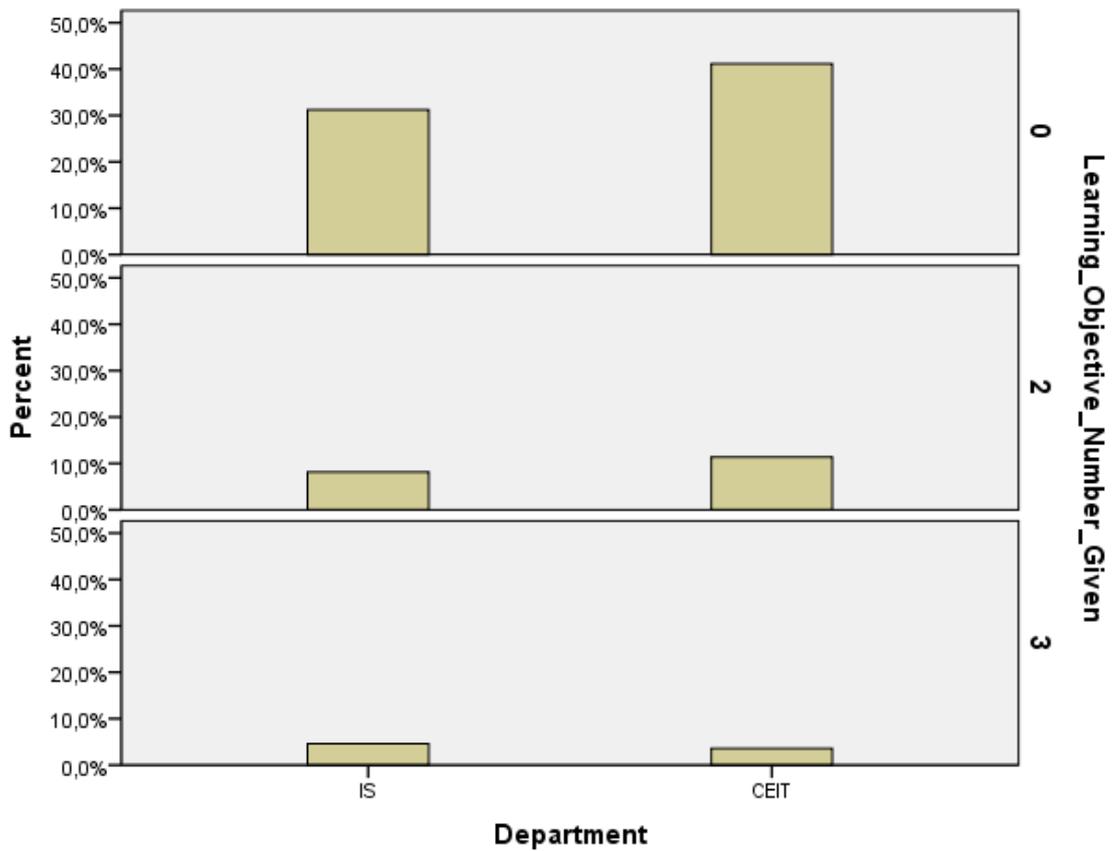
		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Number of Courses	Equal Variances Assumed	13, 010	<b>0, 000</b>	0, 737	201	<b>0, 462</b>
	Equal Variances not Assumed			1,075	26, 249	<b>0, 292</b>

71% of the students who mentioned that learning objectives were shared with them at the beginning of the term were not able to list any of the objectives in the questionnaire and the rest were able to list only two or three of the objectives shown on the figure 24.



**Figure 24: Number of Learning Objectives Given by Students**

Results of department analysis showed that number of the students who were not able to list any of the learning objectives at the end of the term was higher than the others who were able to list some of them for both departments as shown on the figure 25 below. Therefore, there was not a significant difference among the results gathered from both departments.



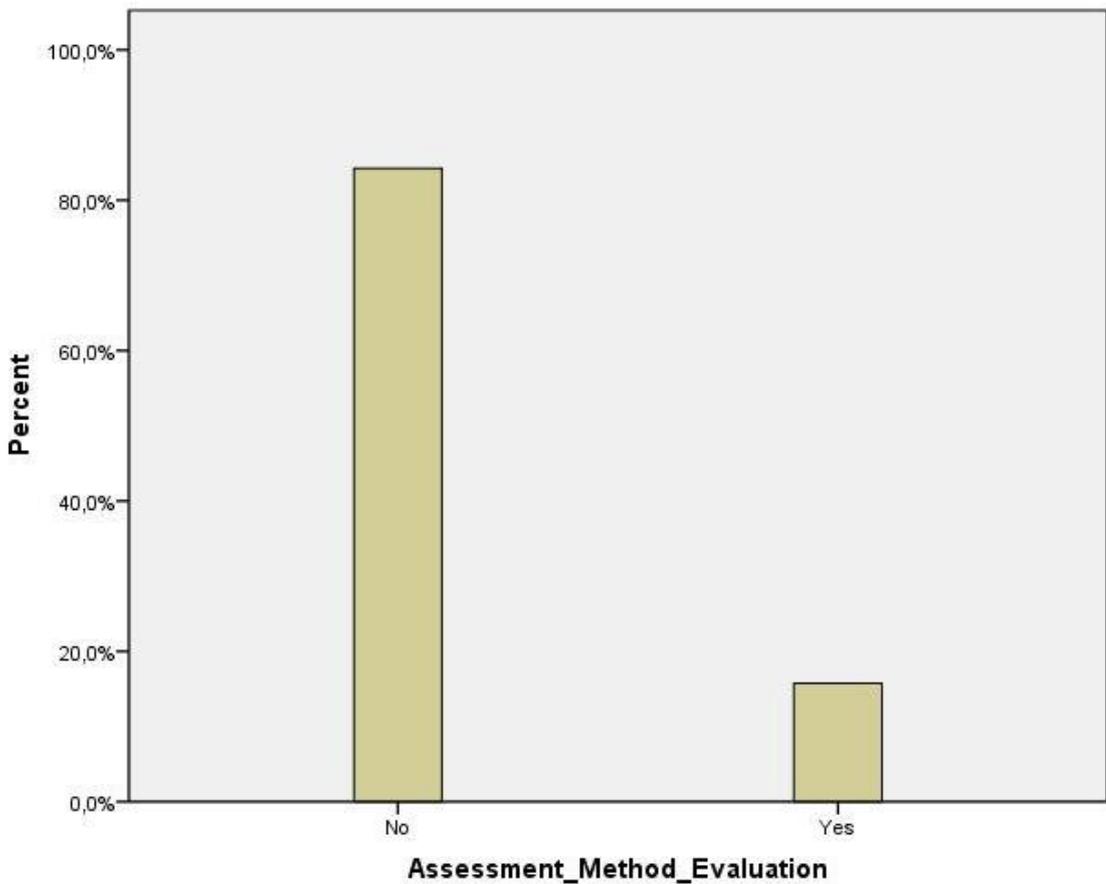
**Figure 25: Number of Learning Objectives Given by Students According to Department**

Approximately 9% (18) of the students mentioned that learning objectives were not shared with them at the beginning of the course and they did not give any example to the objectives of the course. Similar situation was gathered from the students who mentioned that learning objectives were given to them because 63% (128) of them were not able to list any of the learning objectives and the rest were not able to list all of the objectives as shown on the table 8 below.

**Table 8: Comparison of Whether Learning Objectives Provided to Students or not and Number of Learning Objectives Listed by Students**

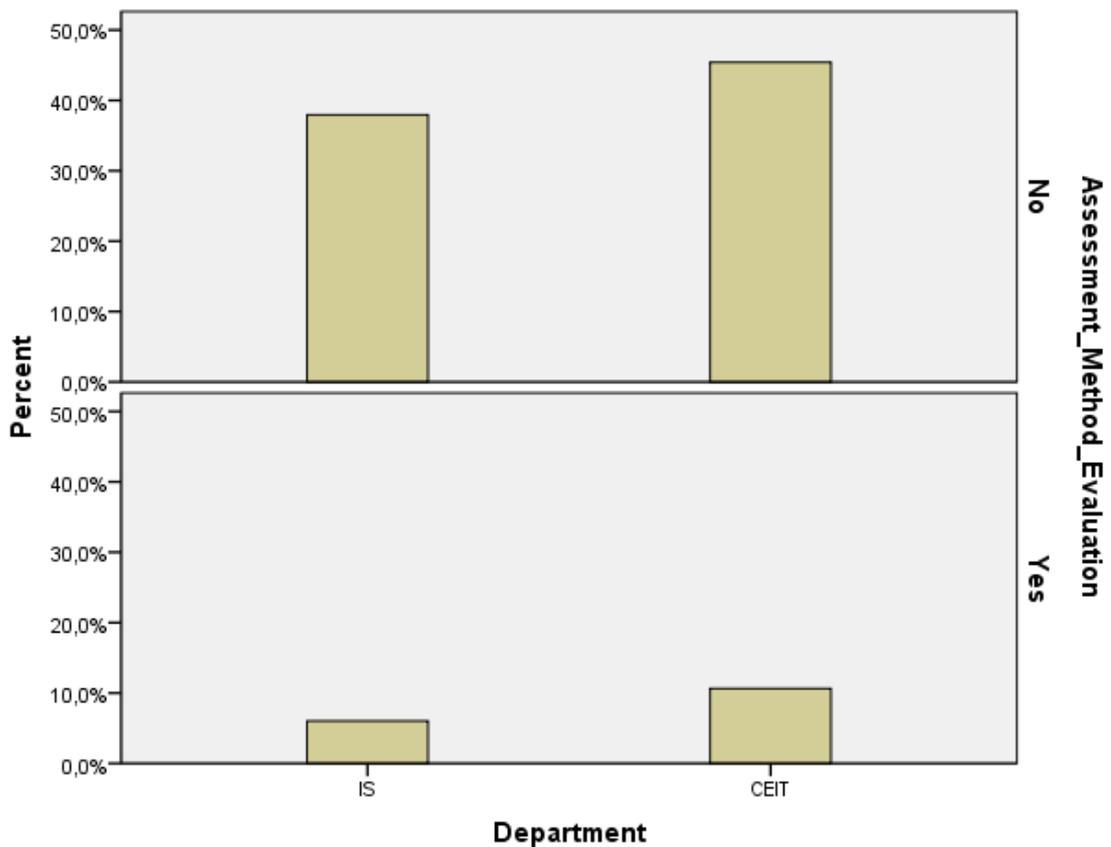
			Learning Objective Number Given			Total
			0	2	3	
Learning Objective Information	No	Count	<b>18</b>	0	0	18
		% within Learning Objective Information	<b>100.0%</b>	.0%	.0%	100.0%
	Yes	Count	<b>128</b>	39	18	185
		% within Learning Objective Information	<b>69.2%</b>	21.1%	9.7%	100.0%
Total		Count	146	39	18	203
		% within Learning Objective Information	71.9%	19.2%	8.9%	100.0%

Almost 83% of the students mentioned that the assessment methods of the course were not selected according to the learning objectives in order that according to students, assessment methods and learning objectives were not related with each other or if they had a relation, they were not imposed to the students as shown on the figure 26.



**Figure 26: Assessment Methods are Related with Learning Objectives or Not**

Results of department analysis showed that number of the students who think that assessment methods were not related with learning objectives of the course was higher than the others who mentioned the opposite for both departments as shown on the figure 27 below. Therefore, there was not a significant difference among the results gathered from both departments.



**Figure 27: Assessment Methods are Related with Learning Objectives or Not According to Departments**

A comparison related with the students' evaluation of assessment methods and their success rates are shown on the table 9 below.

An independent-samples t test was conducted to evaluate the hypothesis that success rate of the students who mentioned that assessment methods were related with learning objectives were higher than others who mentioned opposite. The test was not significant,  $t(170.00) = -10.21$ ,  $p = 0.5$ . Success rate of the students who mentioned that assessment methods were related with learning objectives ( $M = 4.00$ ,  $SD = 0.00$ ) were higher than the others who mentioned the opposite ( $M = 3.62$ ,  $SD = 0.49$ ).

**Table 9: Comparison of Assessment Method Evaluation and Students' Success Rate**

**Group Statistics**

Assessment Method Evaluation		N	Mean	Std. Deviation	
Success Rate	No	171	<b>3, 62</b>	0, 487	0,037
	Yes	32	<b>4, 00</b>	0, 000	0, 000

**Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Success Rate	Equal Variances Assumed	519, 471	<b>0, 000</b>	-4,408	201	<b>0, 000</b>
	Equal Variances not Assumed			-10,21	170, 000	<b>0, 000</b>

84% (171) of the students mentioned that assessment methods were not related with learning objectives and they did not give any example for such kinds of methods. 16% (32) of the students mentioned that assessment methods were related with learning objectives but only 13% (4) of these 32 students were able to give one example to such kinds of methods as shown on the table 10.

**Table 10: Assessment Method Evaluation and Number of Such Kind of Assessment Methods Given by Students**

			Assessment Method Relation with Learning Objectives		Total
			0	1	
Assessment Method Evaluation	No	Count	<b>171</b>	0	171
		% within Assessment Method Evaluation	<b>100.0%</b>	.0%	100.0%
	Yes	Count	28	4	32
		% within Assessment Method Evaluation	87.5%	12.5%	100.0%
Total		Count	199	4	203
		% within Assessment Method Evaluation	98.0%	2.0%	100.0%

91% (185) of the students claimed that learning objectives were shared with them at the beginning of the course and 83% (153) of these 185 students who constitute the huge amount of them mentioned that assessment methods were not selected according to the predetermined learning objectives as shown on the table 11.

**Table 11: Comparison of Whether Learning Objectives Shared with Students and Assessment Method Evaluation**

			Assessment Method Evaluation		Total
			No	Yes	
Learning Objective Information	No	Count	18	0	18
		% within Learning Objective Information	100.0%	.0%	100.0%
	Yes	Count	<b>153</b>	32	185
		% within Learning Objective Information	<b>82.7%</b>	17.3%	100.0%
Total		Count	171	32	203
		% within Learning Objective Information	84.2%	15.8%	100.0%

A comparison related with the students' opinions about assessment methods relation with learning objectives and number of the courses they had taken is shown on the table 12 below.

An independent-samples t test was conducted to evaluate the hypothesis that number of the courses taken by the students who mentioned that assessment methods were related with learning objectives were higher than others who mentioned opposite. The test was not significant,  $t(201) = -4.95$ ,  $p = 0.5$ . Number of the courses taken by the students who mentioned that assessment methods were related with learning objectives ( $M = 3.38$ ,  $SD = 0.94$ ) were higher than the others who mentioned the opposite ( $M = 2.47$ ,  $SD = 0.95$ ).

**Table 12: Assessment Method Evaluation and The Number of E-learning Courses Taken by Students**

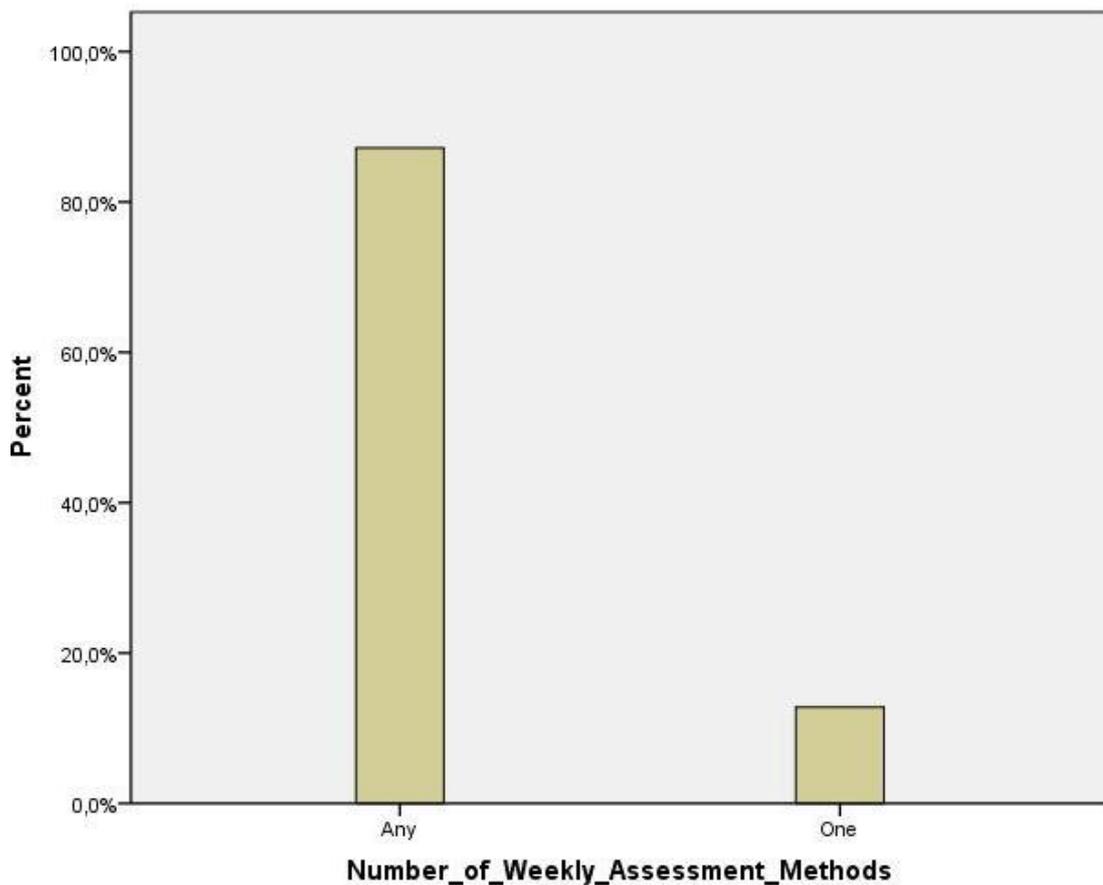
**Group Statistics**

Assessment Method Evaluation		N	Mean	Std. Deviation	
Number of Courses	No	171	<b>2, 47</b>	0, 954	0,073
	Yes	32	<b>3, 38</b>	0, 942	0, 166

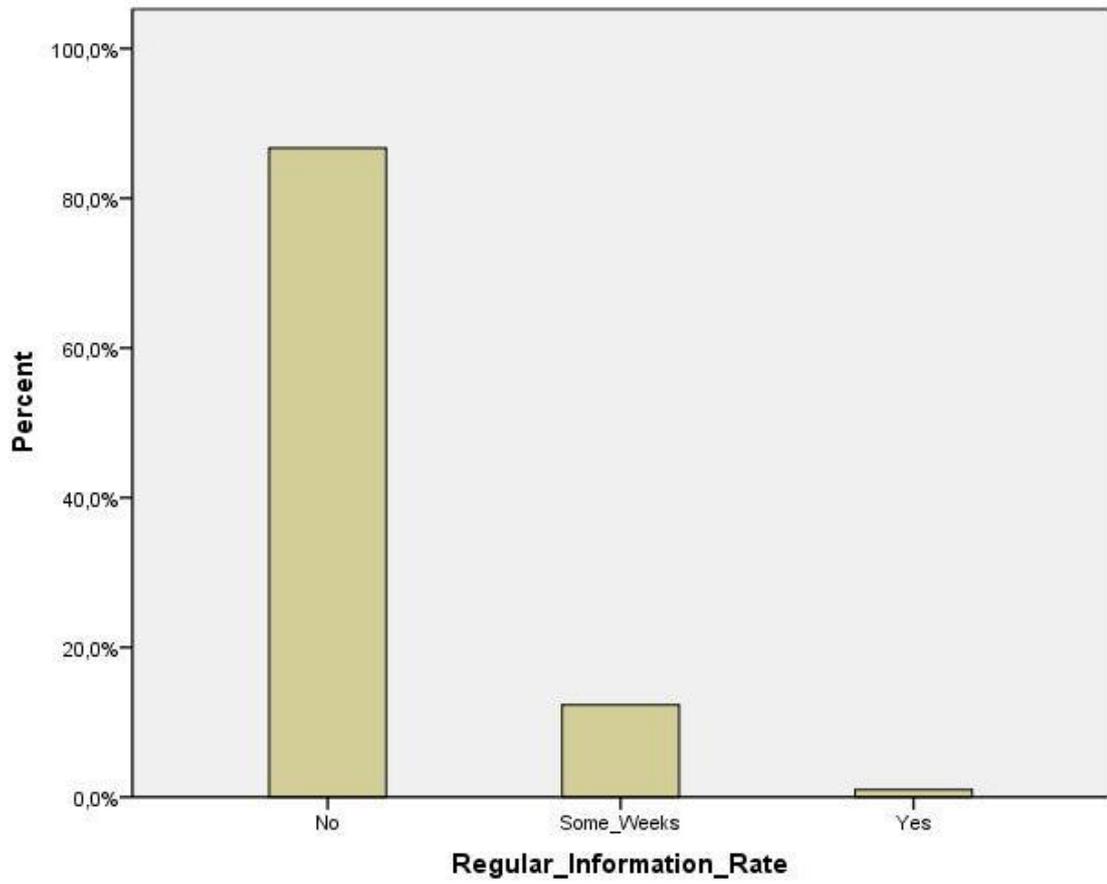
**Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Number of Courses	Equal Variances Assumed	0, 51	<b>0, 0821</b>	-4,949	201	<b>0, 000</b>
	Equal Variances not Assumed			-4,991	43, 739	<b>0, 000</b>

Approximately 87% of the students mentioned that throughout the course, weekly assessment methods were not applied as shown on the figure 28 therefore they were not able to gather information about their improvement and success level according to the predetermined learning objectives. Moreover, 85% of the students mentioned that they were rarely or never informed about their progress and reaching to the learning objectives of the lesson according to the regular assessment methods applied shown on the figure 29.

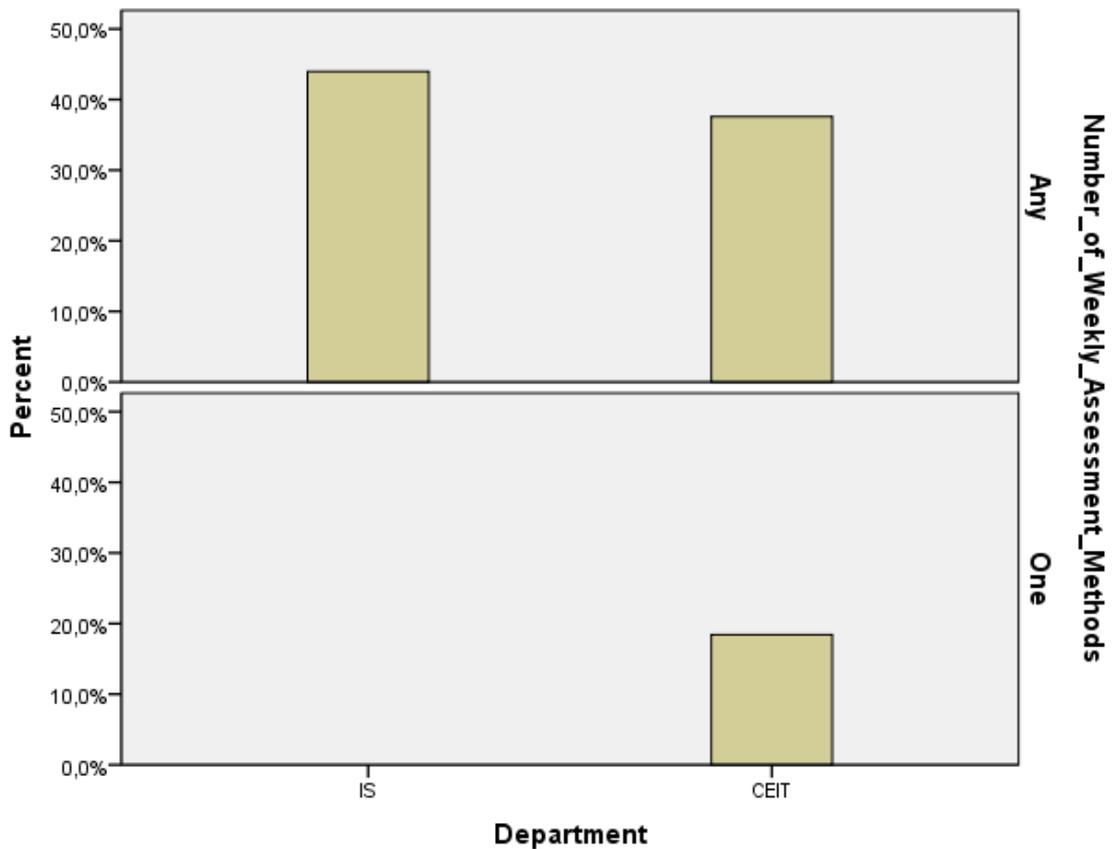


**Figure 28: Number of Weekly Assessment Methods Applied**



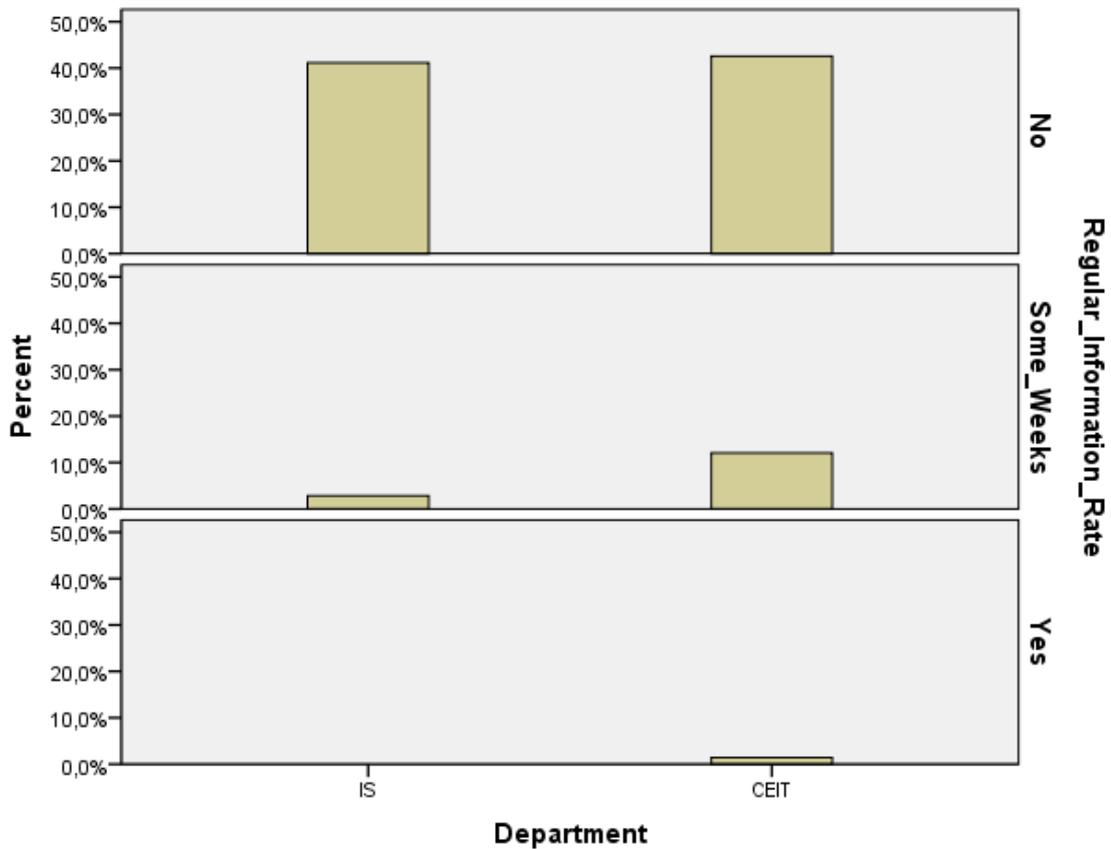
**Figure 29: Regular Information Rate Given Students Related with Their Improvement**

Results of department analysis showed that any of the students in IS department don't think that there was not any weekly assessment methods applied. However, some of the students of CEIT department mentioned that they were applied weekly assessment methods but number of them was low when compared with students who mentioned the opposite as shown on the figure 30 below. Therefore, there was not a significant difference among the results gathered from both departments.



**Figure 30: Number of Weekly Assessment Methods Applied According to Departments**

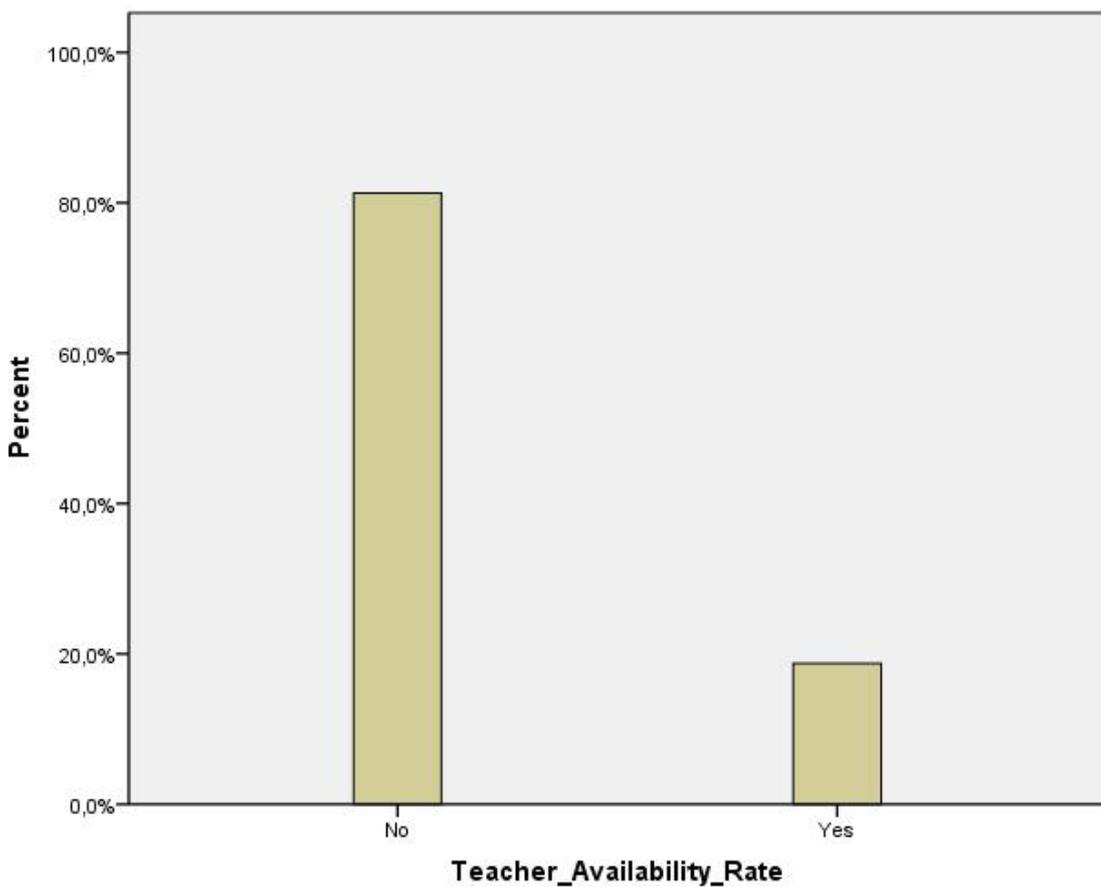
Results of department analysis showed that number of the students who mentioned that they were not provided with regular information about their improvement was higher than the others who mentioned the opposite for both departments as shown on the figure 31 below. Therefore, there was not a significant difference among the results gathered from both departments.



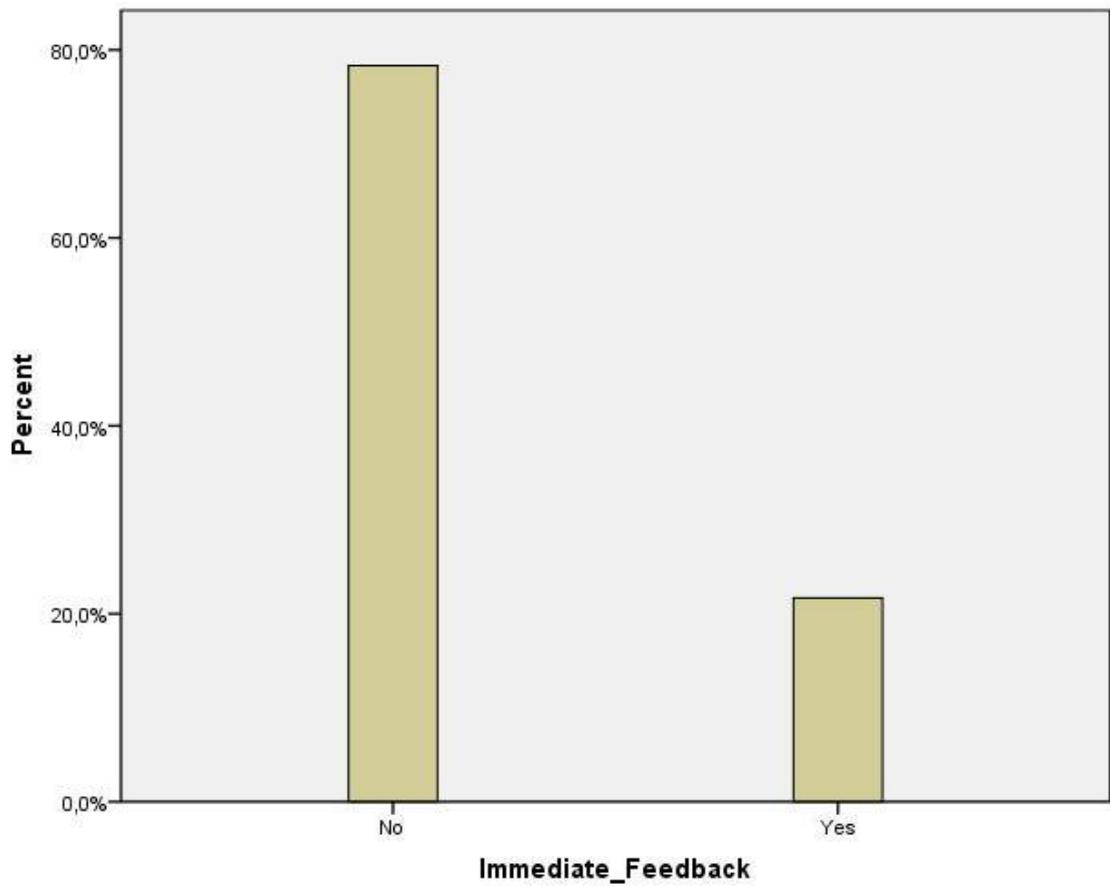
**Figure 31: Regular Information Rate Given Students Related with Their Improvement According to Departments**

#### 4.4 Teacher Support Level

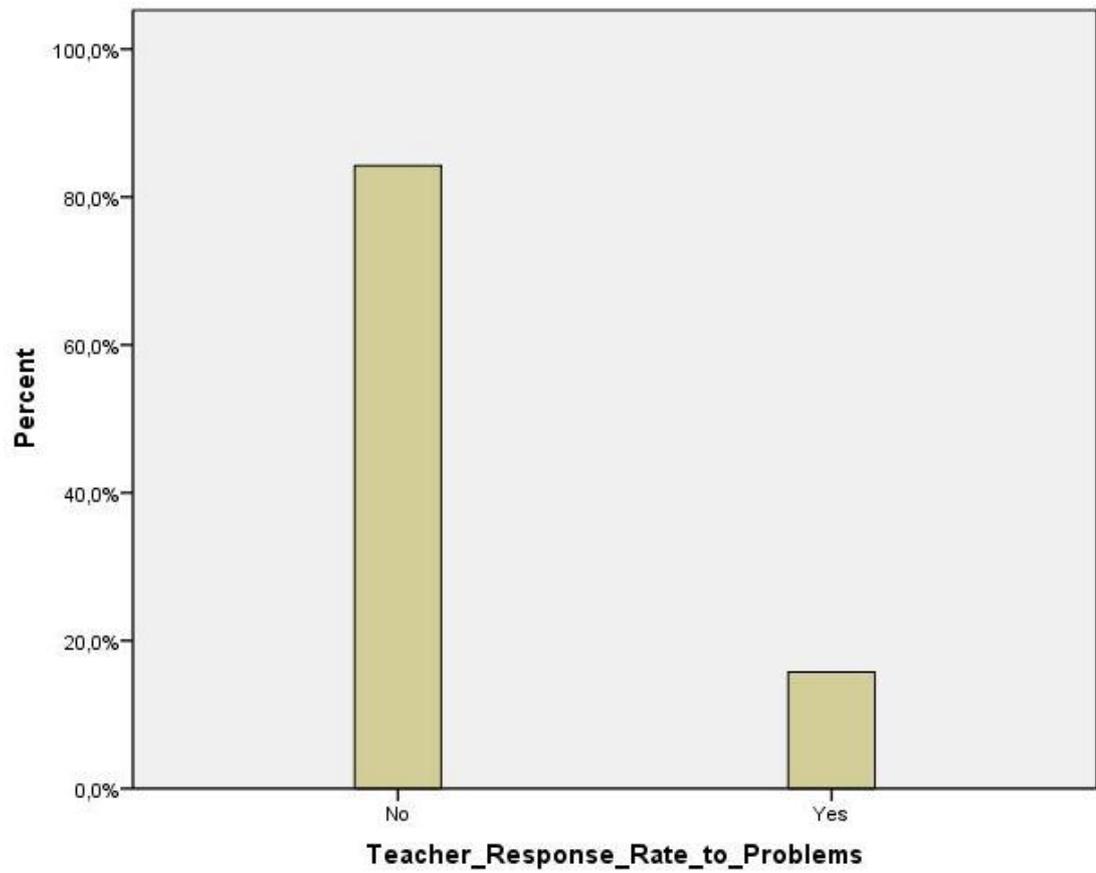
Results of this study showed that almost 81% of the students were not happy with the teacher support of e-learning courses because they mentioned that they were not able to reach teachers all of the times they need as shown on the figure 32 and 78% of students mentioned that they were not able to get immediate feedback when necessary as shown on the figure 33. Moreover, 83% of the students mentioned that according to the previous experiences of them about e-learning courses they were not able to get response from teachers to their problems immediately and when they need as shown on the figure 34.



**Figure 32: Teachers' Availability Rate for the Students**

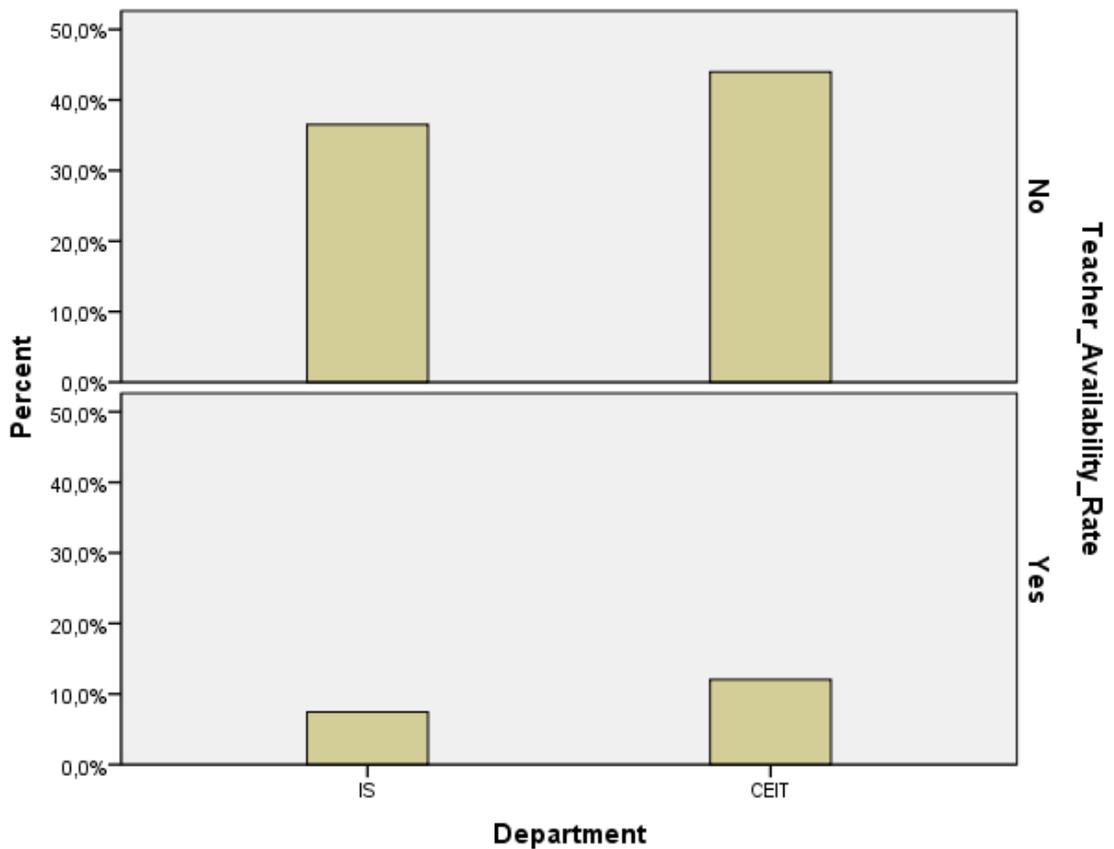


**Figure 33: Immediate Feedback Rate Provided by Teachers**

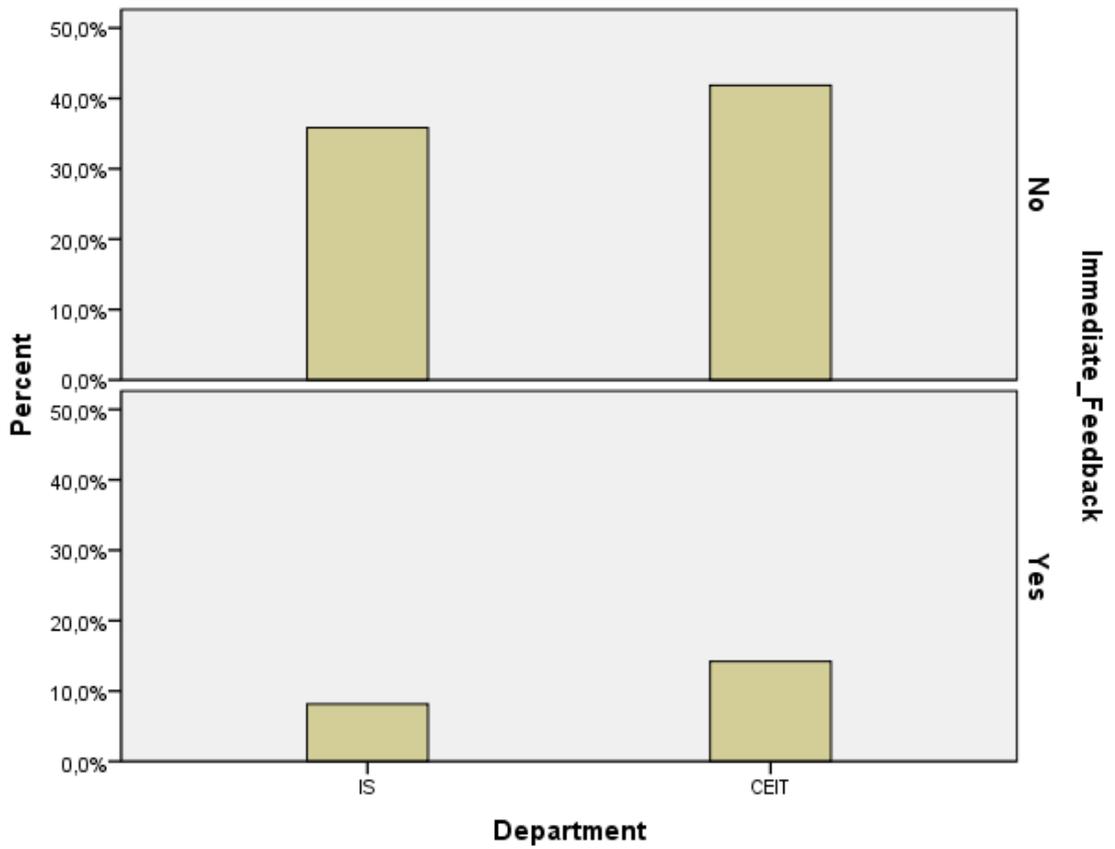


**Figure 34: Response Rate of Teachers to Students**

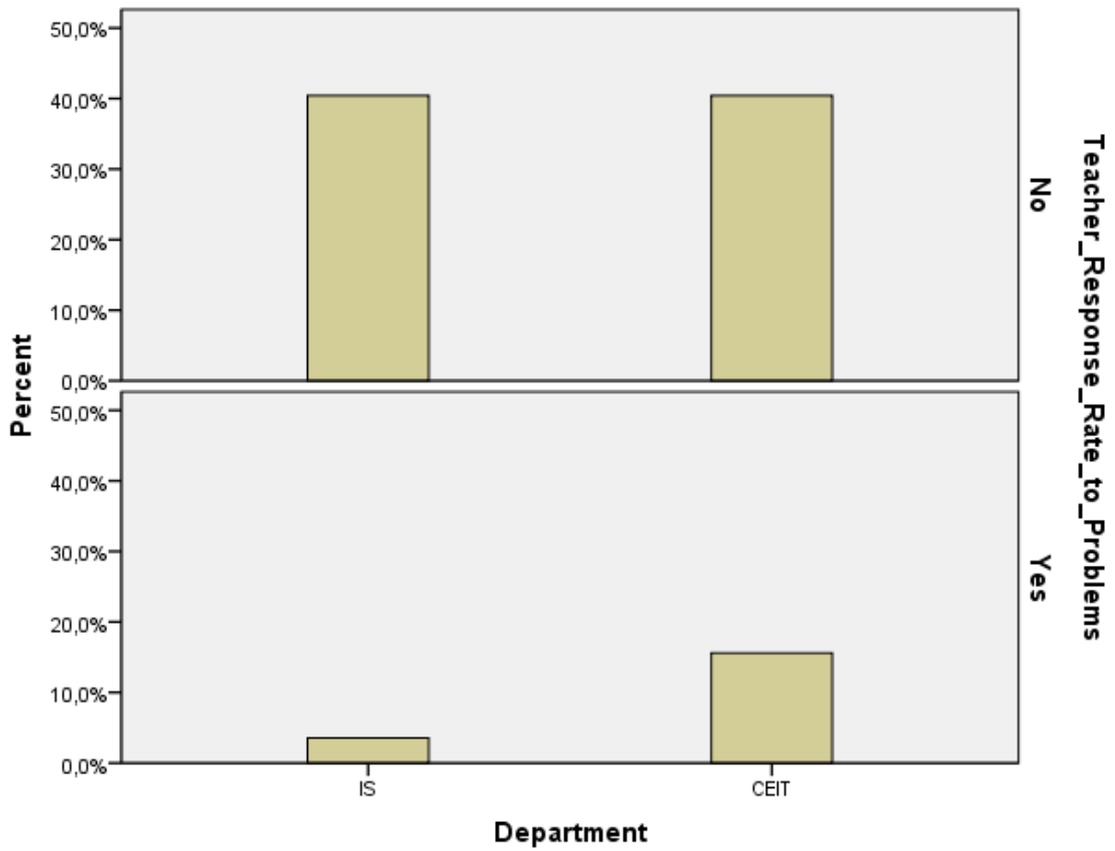
Results of department analysis showed that number of the students who mentioned that teacher's availability rate, response rate to their problems and immediate feedback rate were low was higher than the others who mentioned the opposite for both departments as shown on the figure 35, 36 and 37 below. In general, number of CEIT department students whose opinion were positive about these issues was higher than the IS department students whose opinion was similar but number of them were low when compared with the number of CEIT department students whose opinions were negative. Therefore, there was not a significant difference among the results gathered from both departments.



**Figure 35: Teachers' Availability Rate for the Students According to Departments**



**Figure 36: Immediate Feedback Rate Provided by Teachers According to Departments**



**Figure 37: Response Rate of Teachers to Students According to Departments**

81% (165) of the students mentioned that they were not able to reach teachers whenever they want and 90% (149) of these 165 students also asserted that teachers did not respond to the problems and questions of them whenever they need as shown on the table 13 below.

**Table 13: Teachers' Availability Rate and Their Response Rate to Problems**

			Teacher Response Rate to Student Problems		Total
			No	Yes	
Teacher Availability Rate	No	Count	<b>149</b>	16	165
		% within Teacher Availability Rate	<b>90.3%</b>	9.7%	100.0 %
	Yes	Count	22	16	38
		% within Teacher Availability Rate	57.9%	42.1%	100.0 %
Total		Count	171	32	203
		% within Teacher Availability Rate	84.2%	15.8%	100.0 %

A comparison related with the students' participation rate and their opinion about teacher availability when they need are shown on the table 14 below.

An independent-samples t test was conducted to evaluate the hypothesis that participation rate of the students who mentioned that teachers were available for them were lower than others who mentioned opposite. The test was not significant. Participation rate of the students who mentioned that teachers were available for them ( $M = 4.05$ ,  $SD = 0.23$ ) were lower than the others who mentioned the opposite ( $M = 4.73$ ,  $SD = 0.44$ ).

**Table 14: Comparison of Students' Participation Rate and Their Opinion about Teachers' Availability Rate**

**Group Statistics**

Teacher Availability Rate		N	Mean	Std. Deviation	
Participation Rate	No	165	<b>4, 73</b>	0, 444	0,035
	Yes	38	<b>4, 05</b>	0, 226	0, 037

**Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Participation Rate	Equal Variances Assumed	61, 696	<b>0, 000</b>	9, 176	201	<b>0, 000</b>
	Equal Variances not Assumed			13,506	111, 714	<b>0, 000</b>

A comparison related with the number of courses taken by students and their opinion about being able to get immediate feedback from teachers are shown on the table 15 below.

An independent-samples t test was conducted to evaluate the hypothesis that number of the courses taken by the students who mentioned that they were able to gather immediate feedback from teachers were lower than others who mentioned opposite. The test was not significant. Number of the courses taken by the students who mentioned that they were able to gather immediate feedback from teachers (M = 2.34, SD = 0.78) were lower than the others who mentioned the opposite (M = 2.69, SD = 1.05).

**Table 15: Comparison of Number of Courses Taken by Students and Their Opinion about Immediate Feedback Rate of Teachers**

**Group Statistics**

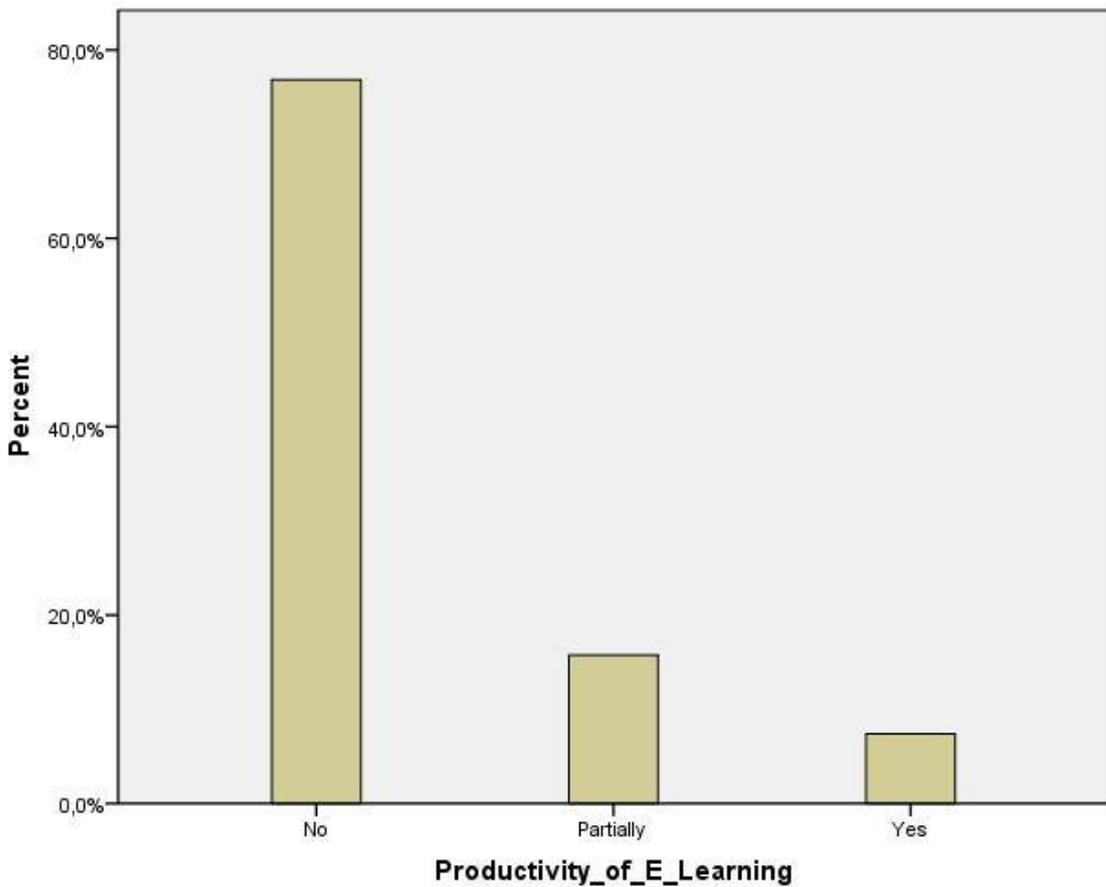
Immediate Feedback		N	Mean	Std. Deviation	
Number of Courses	No	159	<b>2, 69</b>	1, 050	0,083
	Yes	44	<b>2, 34</b>	0, 776	0, 117

**Independent Samples Test**

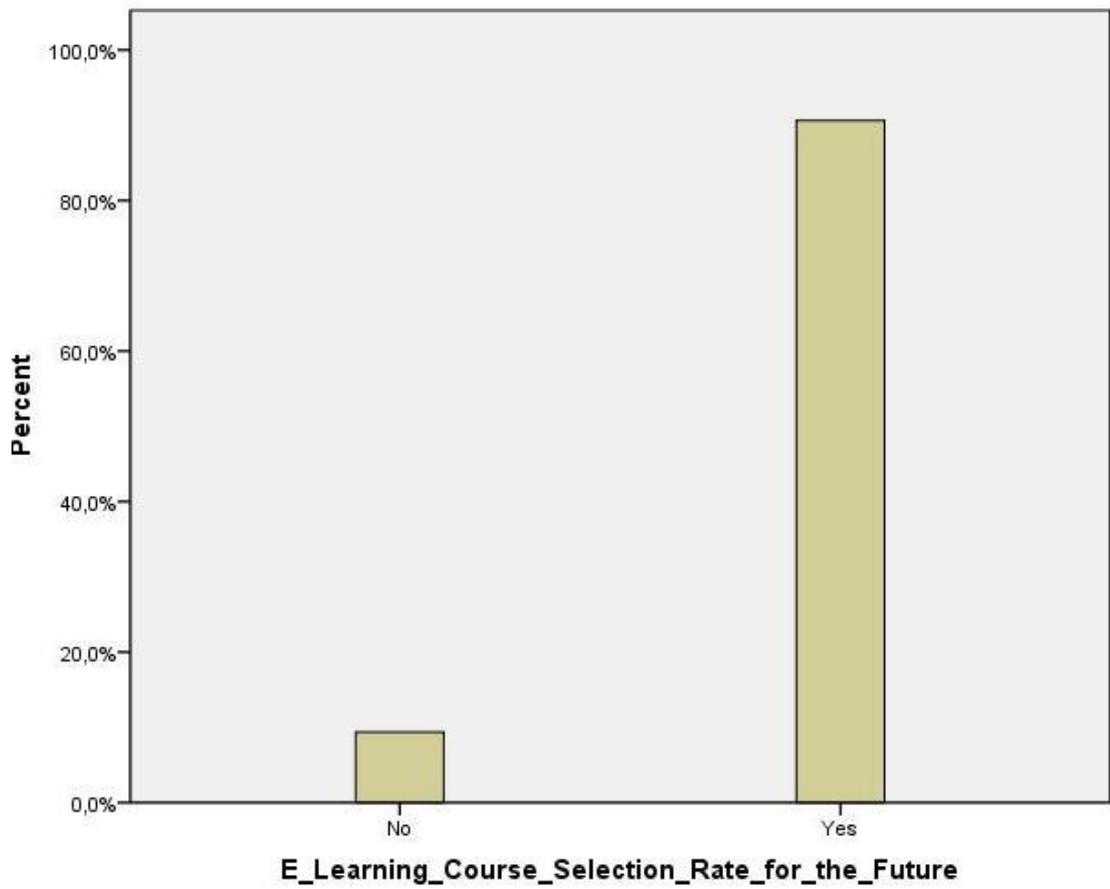
		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Number of Courses	Equal Variances Assumed	2, 698	<b>0, 102</b>	2, 027	201	<b>0, 044</b>
	Equal Variances not Assumed			2, 400	91, 273	<b>0, 018</b>

#### 4.5 E-Learning Evaluation

Approximately 7% of the students agree with the idea that e-learning courses more beneficial than traditional ones, 17% of them partially agree with it and the rest reject this idea shown on the figure 38. However they mentioned that they will still continue to select e-learning courses as first choice in their future life shown on the figure 39.

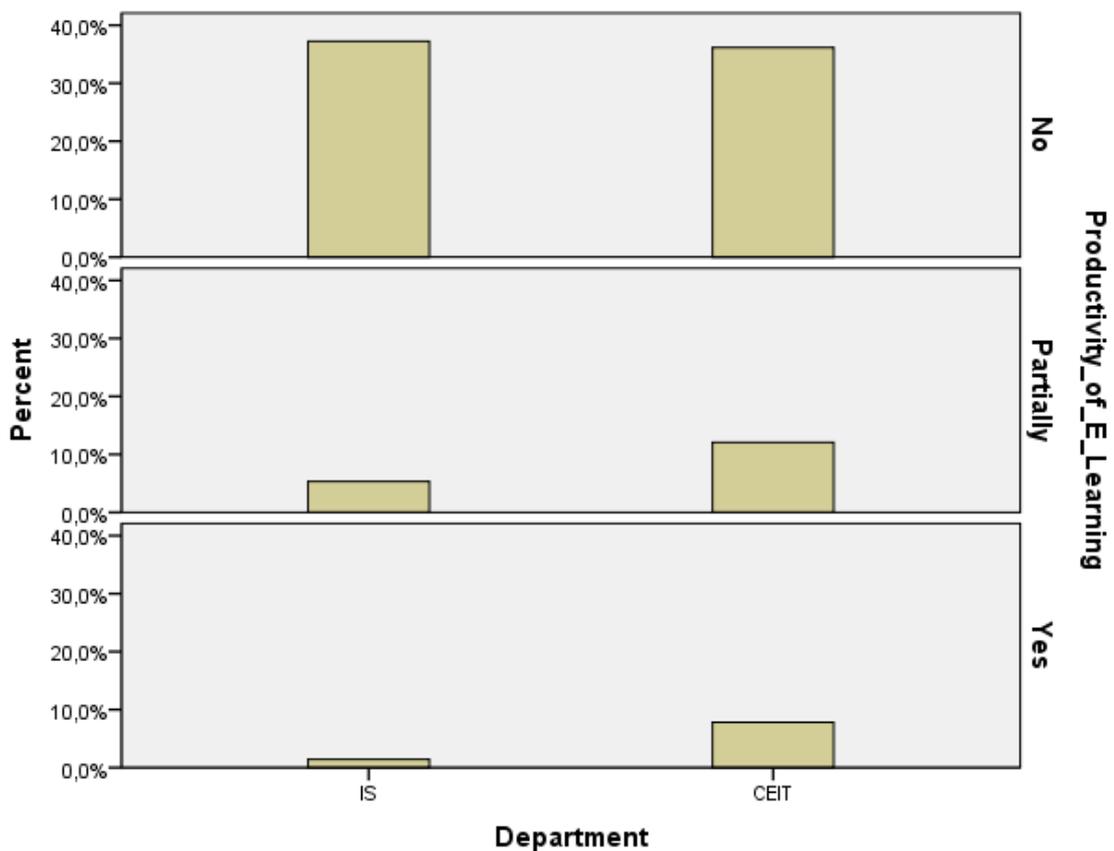


**Figure 38: Students' Opinion about Whether E-Learning is More Beneficial than Traditional One or Not**

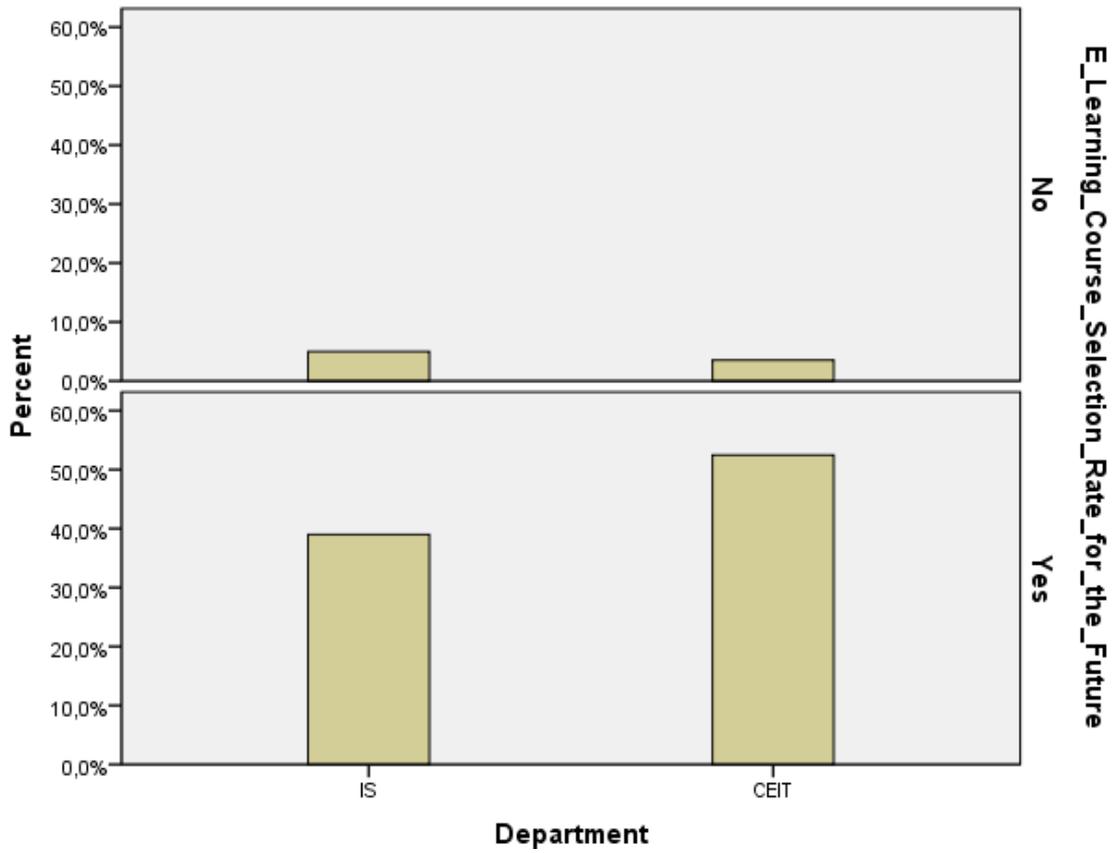


**Figure 39: Students' E-Learning Course Preference for the Future**

Results of department analysis showed that number of the students who mentioned that e-learning courses were not more beneficial than traditional one was higher than the others who mentioned the opposite for both departments as shown on the figure 40 below. Moreover, number of students who mentioned that they will continue selecting e-learning courses in the future was higher than the others show mentioned the opposite for both departments as shown on the figure 41 below. Therefore, there was not a significant difference among the results gathered from both departments about these two issues.



**Figure 40: Students' Opinion about Whether E-Learning is More Beneficial than Traditional One or Not According to Departments**



**Figure 41: Students' E-Learning Course Preference for the Future According to Departments**

77% (156) of the students claimed that e-learning courses are not more beneficial than the traditional ones but 98% (153) of these 156 students mentioned that they will continue to select e-learning courses rather than traditional ones as shown on the table 16 below:

**Table 16: Student Opinions about Benefits of E-Learning and Their E-Learning Preference Rate for the Future**

			E-Learning Course Selection Rate in the Future		Total
			No	Yes	
Productivity of E-Learning	No	Count	3	<b>153</b>	156
		% within Productivity of E-Learning	1.9%	<b>98.1%</b>	100.0%
	Partially	Count	2	30	32
		% within Productivity of E-Learning	6.3%	93.8%	100.0%
	Yes	Count	14	1	15
		% within Productivity of E-Learning	93.3%	6.7%	100.0%
Total		Count	19	184	203
		% within Productivity of E-Learning	9.4%	90.6%	100.0%

A comparison related with the students' preference of e-learning course selection in the future and their success rates are shown on the table 17 below.

An independent-samples t test was conducted to evaluate the hypothesis that success rate of the students who mentioned that they will continue to prefer e-learning courses in the future were higher than others who mentioned opposite. The test was not significant,  $t(23.53) = -6.26$ ,  $p = 0.5$ . Success rate of the students who mentioned that they will continue to prefer e-learning courses in the future ( $M = 3.73$ ,  $SD = 0.44$ ) were higher than the others who mentioned the opposite ( $M = 3.16$ ,  $SD = 0.38$ ).

**Table 17: Comparison of Students' Success Rate and Their E-learning Course Selection Preference for the Future**

**Group Statistics**

E-Learning Course Selection Rate in the Future		N	Mean	Std. Deviation	
Success Rate	No	19	<b>3, 16</b>	0, 375	0,086
	Yes	184	<b>3, 73</b>	0, 443	0, 033

**Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Success Rate	Equal Variances Assumed	5, 971	<b>0, 015</b>	-5,461	201	<b>0, 000</b>
	Equal Variances not Assumed			-6,262	23, 531	<b>0, 000</b>

A comparison related with the students' preference of e-learning course selection in the future and their participation rates are shown on the table 18 below.

An independent-samples t test was conducted to evaluate the hypothesis that participation rate of the students who mentioned that they will continue to prefer e-learning courses in the future were higher than others who mentioned opposite. The test was not significant,  $t(27.31) = -6.87$ ,  $p = 0.5$ . Participation rate of the students who mentioned that they will continue to prefer e-learning courses in the future ( $M = 4.66$ ,  $SD = 0.48$ ) were higher than the others who mentioned the opposite ( $M = 4.11$ ,  $SD = 0.32$ ).

**Table 18: Comparison of Students' Participation Rate and Their E-learning Course Preference for the Future**

**Group Statistics**

E-Learning Course Selection Rate in the Future		N	Mean	Std. Deviation	
Participation Rate	No	19	<b>4, 11</b>	0, 315	0,072
	Yes	184	<b>4, 66</b>	0, 476	0, 035

**Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Participation Rate	Equal Variances Assumed	45, 401	<b>0, 000</b>	-4,943	201	<b>0, 000</b>
	Equal Variances not Assumed			-6,871	27, 312	<b>0, 000</b>

A comparison related with the students' preference of e-learning course selection in the future and number of e-learning course that students had taken till that day are shown on the table 19 below.

An independent-samples t test was conducted to evaluate the hypothesis that number of courses taken by the students who mentioned that they will continue to prefer e-learning courses in the future were lower than others who mentioned opposite. The test was not significant. Number of courses taken by the students who mentioned that they will continue to prefer e-learning courses in the future ( $M = 2.57$ ,  $SD = 1.05$ ) were lower than the others who mentioned the opposite ( $M = 3.00$ ,  $SD = 0.00$ ).

**Table 19: Comparison of Number of Courses Taken by Students and Their E-learning Course Preference for the Future**

**Group Statistics**

E-Learning Course Selection Rate in the Future		N	Mean	Std. Deviation	
Number of Courses	No	19	<b>3, 00</b>	0, 000	0, 000
	Yes	184	<b>2, 57</b>	1, 048	0, 077

**Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Number of Courses	Equal Variances Assumed	53, 927	<b>0, 000</b>	1,781	201	<b>0, 076</b>
	Equal Variances not Assumed			5,556	183, 000	<b>0, 000</b>

## **CHAPTER 5**

### **DISCUSSION**

E-learning courses and institutions serve its students with great number of opportunities like time and place flexibility provided that people are able to continue their education whenever they want throughout their life. Similar to other education types, e-learning has advantages and disadvantages and different studies should be made and precautions should be taken in order to decrease disadvantages and increase quality. Different factors can affect quality but students have the greater importance because all of the teaching-learning facilities are performed for students, their success, development and improvement. Due to this reason, students' expectations, opinions and ideas should be evaluated and their problems should be solved in the first step. In order to achieve this aim, collect information about the situation of e-learning in a higher education institution in Turkey and evaluate it in the view of student perspective, students are applied a questionnaire and results gathered from it and results are mentioned in this study. Different from previous studies, this study focused on only students, gathered their ideas, expectations and problems. With the help of findings of this study, teachers and institutions will be able to take precautions, make changes and improve the quality of e-learning courses.

## **5.1 Reliability of the Study**

Results of all studies are very important for people but reliability of them is also very crucial. In the literature part of this study it was mentioned that to apply survey method appropriate number of participants and group should be found, appropriate and accurate responses should be gathered from them and these responses should be analyzed. According to Bell's (1996) observations, lack of responses gathered from participants or accuracy of the responses may result in biases about survey result. Some of the questionnaire questions asked students to measure and show the reliability of this study. In the view of the analysis of these questions it can be claimed that responses of the students were reliable as follows:

It can be thought that results gathered from the questionnaires were reliable and people can trust this study because these students were not ordinary people but their level of education was graduate and undergraduate degree, they were all familiar with universities, had deep knowledge about university courses and education life. In other words they had qualifications to evaluate and compare the quality of different courses, assessment methods, tools and techniques. Moreover, 41% of the students were graduated from a department related with e-learning and 43% of these students working for a company e.g. TUBITAK, different banks, etc. which benefit from e-learning and e-training. And also, approximately 20% of the students whose job is not related with e-learning deals with it with the help of their company. E-learning courses and facilities are almost completely related with internet and computer usage abilities of the people and students in case that success and improvement of the students can be affected from it easily in positive and negative manner. Due to this reason, if students were not familiar with these technologies, they may have felt disappointed, bored, their viewpoint of e-learning might have been negative and they might have given unreliable responses to questions of questionnaire. In addition, if students were unsuccessful in the e-learning courses they had taken and they were not happy with the effectiveness of the course, the reason of it might be their low level of computer and internet knowledge. As result, in the view of this perspective, students who contributed this study were all computer and internet literate therefore

it can be claimed that their responses to questionnaire questions and results of this study were not affected from this factor.

Experience of the students about e-learning is an important factor while gathering the ideas and suggestions of the students because if they don't have enough experience, they cannot make comparison and give appropriate responses. Results of the questionnaires showed that most of the students were experienced about these types of courses to evaluate the quality of them and give creative opinions. Otherwise, given opinions might not be objective and students might have criticize courses, teachers and institutions subjectively. Besides, the results show that students participation rates to the lessons, their success rates and grades were high on this account it can be inferred that they were all interested in the lesson, they spent effort to be successful, knew what was expected from them and what had been done throughout the course. Therefore it can be thought that their responses to the questionnaires and contributions to the study were valuable and reliable.

It was explained in the previous parts of this study in detail that results were gathered from students of two different departments at METU and these results were examined individually according to the departments. This analysis was important because there may be significant difference among the results of departments individually but they may not be understood when both departments were examined together. However, analysis made according to the departments showed that there was not a significant difference among the results gathered from both departments and opinions of the students in both departments were similar.

## **5.2 Effect of Teacher for Success**

It was claimed in the literature part of this study that in order to increase the success and improvement of students, teachers should be available for students as possible as they can. Moreover, they should try to solve problems that students face about course and teachers should give immediate feedback about student improvements, questions and results of the activities and exams. Riffell and Sibley (2003) claims that quick and detailed feedback improves students' understanding of the course materials and content. Besides, teachers should continuously monitor students, guide them

according to predetermined learning objectives, give immediate feedback whenever necessary and solve their problems in order not to decrease their motivation. Palloff and Pratt (1999) suggest that once the educator prepares the course and content for students, they should monitor and guide them. Willis (1993) claims that teachers have the responsibility of managing exams, solving technological problems, prepare and distribute course materials, prepare assignments, collect and evaluate them. It was emphasized in the literature review part of this study that student motivation and concentration may decrease because of low level of feedback and help from teachers therefore teachers should be careful about these issues and behave as mentioned in the previous studies and researches. However, when the results of student responses were examined, it was inferred that situation is not as successful as expected from teachers according to the previous experiences of the students about e-learning courses as follows: most of the students mentioned that they were not able to get immediate feedback from teachers and teachers were not available for them regularly. In addition, according to the most of the students teachers did not respond to their problems and solve them quickly. According to these results, e-learning course students are not happy with the teacher support. It was also investigated that whether there was a relation between the responses of students and their participation rates to the lessons and lack of experience about e-learning but it was inferred that there was not a significant relation among them.

It was asserted from investigations made in the literature part of this study that students are self-motivated in e-learning courses and need support of teachers more than the traditional education course students. Chang (2009) found that feedback from instructors has good effect on students because they feel that teacher is dealing with them and the course. If students are not able to reach teachers whenever they need, their motivation may decrease which in turn decrease their improvement and success rate. Similar result was gathered from this study and according to the student responses it was understood that grades and success rates of the students decrease parallel to the feedback rate gathered from teachers. It was extracted that success rates of the students who mentioned that they were not able to get enough and timely feedback from teachers lower than the others but when the effect size was examined it was gathered that significance was low. This means, immediate feedback gathered

from the teachers affects the success of students but it has not a great effect on them however, it is an expected condition that effect should be higher. Results of this study did not support the results of previous ones because previous findings revealed that success rate of students decrease if they are not able to get help from teachers to solve problems and teachers are not available for them regularly. This is an expected situation in general but when the results were examined it was gathered that success rates of the students who claimed that teachers were not available for them regularly and they did not solve their problems as quick as possible were higher than the others or there was not a significant difference among them.

### **5.3 Learning Objective and Assessment Method Evaluation**

In the literature part of this study it was mentioned that learning objectives are one of the important factors which affects the quality and pace of the course and education. All of the activities, facilities and tools are selected in order to reach and achieve them provided that they should be determined at the beginning of the course. Moreover, these learning objectives should be shared with students at the beginning of the course to inform them about the content that they will learn, the aim they should reach and motivate them about these goals. Paul and Amy (2009) mention that goals keep students on target. Bowe and Fitzmaurice (2004) defines learning objective as a statement of what learners will be able to do, know and understand at the end of a course. According to the results of questionnaire, most of the students mentioned that learning objectives were explained to them at the beginning of the course taken at that semester and this is an expected condition but some other small number of students said that they were not informed about it. Reason of this small number of students' response was investigated whether it was related with their participation rate to the course and experience related with e-learning courses or not. Results of this investigation revealed that student awareness of learning objectives was not related with their participation rate and e-learning course experience. As a result, student responses to the questionnaire questions showed that learning objectives of the courses were determined at the beginning of the term and they were shared with students as an expected situation. However, 63% of the students who said that learning objectives were explained at the beginning of the term were not

able to list any of the learning objectives of the lesson and this was a conflict related with this issue because students were expected to list all of the objectives successfully. This result is an indicator of a fact that telling the learning objectives to the students is not enough alone, they should be emphasized and students should be reminded regularly about them as mentioned in the literature review part of this study. Besides, although this issue is a very crucial and expected, participants of this study mentioned that teachers did not provide regular information about their improvement and achievement of the learning objectives. Furthermore, while it is expected as mentioned in previous studies, it was learned from the responses of most of the students that there was not a regular assessment method applied in the courses taken at that semester which provides information about student' improvement and reaching level to the predetermined learning objectives. One of the students emphasized this idea by saying that:

*Değerlendirme metotları sürekli olarak çalışmamı ve motive olmamı gerektirmiyordu bu yüzden sadece sınavların, proje ve ödev teslim tarihlerinin öncesinde çalışmama yeterli oluyordu.*

*Assessment methods did not necessitate continuous motivation and study therefore I mostly studied before exams, project and homework deadlines.*

Importance of the assessment method selection was also emphasized in this study. It was asserted in the literature part of this study that assessment methods should be selected according to the predetermined learning objectives in order to learn whether students are able to reach those objectives, achieve what is expected from them and this situation is important for the quality and improvement of education. Stenlund (2009) mentions that assessment methods of the educational program should be arranged according to the objectives of it. Otherwise, assessment methods cannot measure students' improvement, right skills and knowledge and cannot give idea and information about the quality of education type. According to Wass et al. (2000), because students try to do their best to meet the assessment requirement in order to be successful, assessment is completely related with the curriculum. Nevertheless, assessment methods of the e-learning courses taken at that semester were not related with the predetermined learning objectives according to the students. They

mentioned that, assessment methods of almost all e-learning courses were similar and there is no significant difference among them according to the aims, objectives and goals of the lesson. One of the students supported this idea by saying that:

*Bu güne kadar aldığım bütün e-öğrenme derslerinde hemen hemen aynı değerlendirme metotları uygulandı. Bu yüzden, değerlendirme metotlarının öğrenme hedef ve amaçlarına uygun olarak seçildiğini düşünmüyorum.*

*Almost same assessment methods are applied in all of the e-learning courses I have taken therefore I don't think that they are determined and selected according to the learning objectives.*

Grades of the students who mentioned that assessment methods were related with learning objectives were higher than the others but there was not a significant difference among them. This result refuses the expected condition that if assessment methods are not selected in relation with learning objectives, they cannot measure right skills and students may not be successful. It was also investigated that whether student opinions were related with their lack of experience about e-learning courses or not. Results of this investigation showed that experiences of the students who think assessment methods are not related with predetermined learning objectives are lower but this difference is as not significant as to affect the result. Moreover, 13% (185) of all students claimed that assessment methods were related with the predetermined learning objectives but only 13% (4) of these 32 students were able to give one example to such kinds of methods on this account they were not able to support their opinion with examples. Besides, 83% of the students who asserted that learning objectives were shared with them at the beginning of the term mentioned that assessment methods of the course taken at that semester were not selected according to these learning objectives and this is not an expected situation.

#### **5.4 E-Learning Evaluation**

It was claimed in the literature review part of this study that people prefer e-learning courses because of working conditions, advantages of e-learning like time and place flexibility, continuous and up to date information. Junyong and Yumei (2010) also claim that because e-learning is very flexible, it attracts attention of people

according to whom balancing work is important provided that more people prefer this learning type all day and day. The emphasis on lifelong learning increases as a result of changing economic and working climate (Gallacher and Feutrie, 2003). Morgan and Donald (1998) found that 24% of the students who enrolled to US colleges and universities were part time students. This situation is also investigated in this study for a higher education institution in Turkey and it was tried to be learned whether students prefer e-learning courses because of its flexibility, up to date and continuous education or there is another reason. When the responses of the students were investigated, it was gathered that most of the students do not think that e-learning is more beneficial than other education types but a great number of them mentioned that they will continue preferring e-learning courses in the future. 77% (156) of the students claimed that e-learning courses are not more beneficial than the traditional ones but 98% (153) of these 156 students mentioned that they will continue to select e-learning courses rather than traditional one. Some of the students support this idea by saying that:

*İletişim kurma seviyem öğretmenlerin tavırlarına göre değişmektedir ve motivasyonum sınıf ortamında yapılan eğitimde daha yüksek oluyor. Fakat işimden ve zamanımın kısıtlı olmasından dolayı e-öğrenmeyi seçmeye devam edeceğim.*

*My communication level chance according to the teachers' attitudes and motivation is higher in traditional education as compared to e-learning courses but I am not able to attend traditional school courses because of my job and lack of time therefore I will continue to select e-learning courses rather than traditional ones.*

These results show that although students are not happy with the quality of e-learning courses which is not an expected condition, they will still prefer this education type because of its advantages as expected according to the previous studies. It was also explored whether responses of the students about these questions were affected from their success rate and high level of grades, experience about e-learning courses and participation rate. However, it was gathered there is not a significant relation among them to consider and affect the results searched.

## **CHAPTER 6**

### **CONCLUSION**

E-learning is gaining popularity continuously and becoming a necessity and inseparable part of the people because it is one of the appropriate ways for continuous education of people, learn about changes, developments and innovations related with their jobs and area. This is a valuable way for this aim because people cannot survive their education life with traditional education which has fixed time and place while they are working at a full time job. In the view of these facts, people benefit from different advantages of e-learning but it has also disadvantages to be solved in order to increase the quality of it. Some examples to these disadvantages are distance between students and teachers, low level of teacher control on students, technology dependence and investment rate.

There are important factors which affect the quality of education and learning objective determination at the beginning of the course and sharing them with students in order to motivate them and increase their motivation is one of them. Selecting assessment methods according to the predetermined learning objectives and relating them with each other is another factor otherwise assessment methods cannot measure the right skills and knowledge. Moreover, teacher attitudes related with the courses and student expectations is another factor that can increase and decrease the quality and help students to improve themselves and their knowledge.

It is a fact that all of the teaching-learning facilities are performed for students, their improvements and success. Due to this reason, their expectations, opinions and problems should be considered in the first stage to improve the quality of education and make it more valuable and beneficial. However, in general teachers, institutions and universities arrange the courses but student opinions, expectations and problems are not considered while designing the course, selecting materials and methods. This study tries to provide information about student expectations and problems to universities, teachers and institutions in order help them to arrange better and more effective courses for students. In order to reach this information, survey method was used, questionnaire was applied to the students and results were analyzed.

Similar studies have been made before this study related with the expectations, ideas and problems of the students from e-learning but these studies focused on only one specific issue like student ideas about assessment methods, their resistance level to e-learning courses, feeling about quality of e-learning and their level of satisfaction. Some others investigated all of the factors that can affect the quality such as teachers, students, institutions and universities. Nevertheless, this study differs from the previous ones in that it completely focuses on the students and it does not investigate only one issue related with the students. It tries to provide results and findings about critical issues related with e-learning according to student perspectives.

The summary of the whole study and advices for the future works are given at this chapter of the study.

## **6.1 Summary**

Students are at the center of all teaching-learning facilities therefore quality of e-learning process in a higher education institution in Turkey is evaluated according to the responses of students and it was inferred from the results that there are still problems related with it. Most of the students who attended to the study were experienced about e-learning, their computer and internet literacy, participation rates to the lessons and success rates were high, their jobs and organizations were related with e-learning on this account it can be said that the results gathered from their responses were reliable.

Teachers have a big importance for education and students therefore they should always support students and provide them necessary information. It was gathered according to the previous experiences of the students about e-learning courses that teachers of e-learning courses in a higher education institution in Turkey are not available for students regularly, students are not able to gather immediate feedback from them and problems of students are not solved by teachers most of the times. All of these factors may affect motivation, performance, improvement and success of students but results showed that only lack of feedback affected the success rates of students in negative manner but effect of it was low.

Learning objectives should be determined at the beginning of the course in order to plan the rest of the term successfully and they should be shared with students in order to increase their awareness and motivation. Moreover, assessment methods should be selected according to the predetermined learning objectives in order to increase the reliability and affectivity of it. Most of the students mentioned that learning objectives were shared with them at the beginning of the course but assessment methods were not selected according to them because they think regular assessment methods were applied similar to other education types. In addition, it was inferred from the questionnaire results that learning objectives were not emphasized continuously with the help of regular assessment methods because it was gathered that students were not aware of the learning objectives or they had forgot them at the end of the term.

People in the world prefer e-learning courses because of its advantages offered to them and situation is also similar in a higher education institution in Turkey. Although students mentioned that e-learning is not more effective and beneficial than traditional education, they will continue to prefer e-learning courses in the future. This is an indicator that students prefer it because of the advantages it server students.

## **6.2 Limitations and Future Work**

The results of this study can be a reference for the future studies and researchers can make them definite with the help of additional tests such as: results of this study were

gathered from the questionnaires applied to the students but in the future researchers can also gather more reliable information by selecting two different groups and supporting them with different opportunities. For example, one group of students can be supported with teacher help, immediate feedback, predetermined learning objectives and appropriate assessment methods but other group will not be provided with them and both groups are observed throughout the term. This method could not be used in this study because it is a costly method and it necessitates permission and authority. Moreover, another questionnaire can be applied to the teachers in order to gain their ideas related with the education type, methods, learning objectives, assessment methods and students. Besides, cross comparison can be made between the answers of students and teachers. This cross comparison can provide additional and more reliable and accurate information. In addition, some of the information such as participation rates of students and their success rates can be gathered directly from the teacher or institution in order to increase the reliability of this information and results of study.

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## APPENDICES

### Appendix A: Last Version of Questionnaire Applied to Students

#### ANKET – Uzaktan Eğitim

Merhaba, ben ODTÜ - Enformatik Enstitüsü, Bilişim Sistemleri bölümü yüksek lisans öğrenci Abdullah Selman. Uzaktan eğitim derslerinde hedeflenen amaçlar ve bu amaçlara yönelik uygulanan değerlendirme yöntemlerinin eğitimin kalitesini arttırıp arttırmadığını ve bu konuda öğrencilerin görüşlerini inceleyen tezimi yazmak için bir araştırma yapmaktayım. Bu araştırma kapsamında sizin de yardımınızla, uzaktan eğitimde uygulanan değerlendirme yöntemlerinin, öğrenme amaçlarına yönelik uygulanıp uygulanmadığını ve bu yöntemlerinin, hedeflenen amaçlara ulaşmaya yardımcı olup olmadığını tespit etmeye çalışacağım. Bu araştırmayı kolaylaştırmak amacıyla, cevaplamanızı istediğim birtakım sorular hazırladım. Bu soruları cevaplamanız yaklaşık olarak 10 dakikanızı alacaktır. Aktiviteye katılmak zorunda değilsiniz ya da aktivitenin herhangi bir aşamasında ayrılabilirsiniz. Kişisel bilgileriniz hiçbir şekilde başka bir amaç için kullanılmayacaktır. Katılımınız için çok teşekkür ederim.

#### Genel Bilgiler

1. Yaşınız:

2. Cinsiyetiniz:

Bayan  Erkek

3. Öğrenim Durumunuz:

İlköğretim  Lise  Ön Lisans  Lisans  Yüksek Lisans

4. Mesleğiniz:

5. Çalıştığınız Kurum:

6. Ne zamandan beri bilgisayar kullanıyorsunuz?

5 aydan az  5 ay ile 1 yıl arası  1 yıl ile 2 yıl arası  
 2 yıl ile 3 yıl arası  3 yıl ile 4 yıl arası  4 yıl ile 5 yıl arası  
 5 yıldan fazla

7. Bir haftada ortalama olarak kaç saat interneti kullanıyorsunuz?

30 dakikadan az  30dk. ile 1 saat arası  1 saatten fazla  
 2 saatten fazla  3 saatten fazla  4 saatten fazla  
 5 saatten fazla

8. Bu güne kadar, kaç tane uzaktan eğitim dersi aldınız?

1  2  3  4  5  6-8  8-10  Daha Fazla

9. Bu dönem almış olduğunuz uzaktan eğitim dersinin adı ve kapsamı nedir?

10. Dönem boyunca uygulanan ders, aktivite, ödev ve sınavlara katılım oranınız nedir?

- 80% - 100%    60% - 80%    40% - 60%    20% - 40%  
 0% - 20%

11. Ders süresince genel olarak başarı durumunuz nasıldı?

- Başarılı    Orta    Ortalamanın Altında    Başarısız

12. Ders ilk başladığında, dersin hedef ve amaçları ve sizden beklenen kazanımlar konusunda bilgilendirildiniz mi?

- Evet    Hayır

Cevabınız Evet ise bu bilgiler size ne gibi katkı sağladı:

.....  
.....  
.....  
.....

13. Dersin başlıca hedef ve amaçları ve sizden beklenen kazanımlar nelerdir?

- a)  
b)  
c)  
d)  
e)

14. Aldığınız ders süresince ve ders tamamlandıktan sonra, sizin kazanımlarınızı ölçmek için uygulanan değerlendirme yöntemleri nelerdir (yazılı sınav, proje, haftalık ödevler, vs)?

- a)

- b)
- c)
- d)
- e)

**15.** Uygulanan değerlendirme yöntemleri, dersin hedef ve amaçlarına ve sizin gelişiminizi ölçmeye yönelik miydi? Nedenleriyle açıklayınız.

- Evet                       Hayır                       Bazıları

.....

.....

.....

.....

**16.** Sizce, hangi değerlendirme yöntemleri, dersin hedef ve amaçlarına yönelikti?

- a)
- b)
- c)
- d)
- e)

**17.** Ders süresince, düzenli olarak uygulanan (haftalık) bir değerlendirme yöntemi var mıydı? Varsa yöntemi (haftalık rapor, ödev, her hafta geliştirilen dönem projesi vs) ve verimli olup olmadığını belirtiniz.

- a)
- b)
- c)

18. Uygulanan değerlendirme yöntemlerinin sonuçlarını ve geri dönütlerini kısa sürede alabiliyor muydunuz?

Evet  Hayır  Bazen  Çogu Zaman

19. Dersin öğretmeni, gelişiminiz ve dersin amaçlarının karşılanması konusunda sizi düzenli olarak bilgilendiriyor muydu?

Evet  Hayır  Bazı Haftalar

20. Dersin öğretmenine, ihtiyacınız olduğu her an ulaşabiliyor muydunuz? Nedenleriyle açıklayınız (sistemin doğru çalışmaması, internet bağlantısı ile ilgili problemler, iş yoğunluğu, vs).

Evet  Hayır  Bazen  Çogu Zaman

.....  
.....  
.....  
.....

21. Dersin öğretmeni, ders süresince sizin ihtiyaçlarınıza cevap verebildi mi, karşılaştığınız problemleri kısa sürede çözebildi mi? Nedenleriyle açıklayınız (zaman yetersizliği, teknik bilgi eksikliği, donanım eksikliği, vs).

Evet  Hayır  Bazen  Çogu Zaman

.....  
.....  
.....  
.....

22. Bu dersteki ve daha önceki tecrübelerinize dayanarak, uzaktan eğitim derslerinin diğerlerine göre daha verimli olduğunu söyleyebilir misiniz? Nedenleriyle açıklayınız.

Evet       Hayır       Kısmen       Çogu Yöntiyle Evet

.....  
.....  
.....  
.....

**23.** Bundan sonraki ders seçimlerinizde, uzaktan eğitim dersleri birinci tercihiniz olur mu? Nedenleriyle açıklayınız.

Evet       Hayır

.....  
.....  
.....  
.....

## **Appendix B: First Version of Questionnaire Applied to Students**

### **ANKET – Uzaktan Eğitim**

Merhaba, ben ODTÜ - Enformatik Enstitüsü, Bilişim Sistemleri bölümü yüksek lisans öğrencisi Abdullah Selman. Uzaktan eğitim derslerinde hedeflenen amaçlar ve bu amaçlara yönelik uygulanan değerlendirme yöntemlerinin eğitimin kalitesini artırıp arttırmadığını ve bu konuda öğrencilerin görüşlerini inceleyen tezimi yazmak için bir araştırma yapmaktayım. Bu araştırma kapsamında sizin de yardımınızla, uzaktan eğitimde uygulanan değerlendirme yöntemlerinin, öğrenme amaçlarına yönelik uygulanıp uygulanmadığını ve bu yöntemlerinin, hedeflenen amaçlara ulaşmaya yardımcı olup olmadığını tespit etmeye çalışacağım. Bu araştırmayı kolaylaştırmak amacıyla, cevaplamanızı istediğim birtakım sorular hazırladım. Bu soruları cevaplamanız yaklaşık olarak 10 dakikanızı alacaktır. Aktiviteye katılmak zorunda değilsiniz ya da aktivitenin herhangi bir aşamasında ayrılabilirsiniz. Kişisel bilgileriniz hiçbir şekilde başka bir amaç için kullanılmayacaktır. Katılımınız için çok teşekkür ederim.

### **Genel Bilgiler**

1. Yaşınız:

2. Cinsiyetiniz:

Bayan

Erkek

3. Öğrenim Durumunuz:

4. Mesleğiniz:

5. Çalıştığınız Kurum:

6. Ne zamandan beri bilgisayar kullanıyorsunuz?
7. Bir haftada ortalama olarak kaç saat interneti kullanıyorsunuz?
8. Bu güne kadar, kaç tane uzaktan eğitim dersi aldınız?
9. Bu dönem almış olduğunuz uzaktan eğitim dersinin adı ve kapsamı nedir?
10. Dönem boyunca uygulanan ders, aktivite, ödev ve sınavlara katılım oranınız nedir?
11. Ders süresince genel olarak başarı durumunuz nasıldı?
12. Ders ilk başladığında, dersin hedef ve amaçları ve sizden beklenen kazanımlar konusunda bilgilendirildiniz mi?
- Evet       Hayır
13. Dersin başlıca hedef ve amaçları ve sizden beklenen kazanımlar nelerdir?
- a)
- b)
- c)
- d)
- e)

**14.** Aldığınız ders süresince ve ders tamamlandıktan sonra, sizin kazanımlarınızı ölçmek için uygulanan değerlendirme yöntemleri nelerdir?

- a)
- b)
- c)
- d)
- e)

**15.** Uygulanan değerlendirme yöntemleri, dersin hedef ve amaçlarına ve sizin gelişiminizi ölçmeye yönelik miydi?

- Evet                       Hayır                       Bazıları

**16.** Sizce, hangi değerlendirme yöntemleri, dersin hedef ve amaçlarına yöneliktir?

- a)
- b)
- c)
- d)
- e)

**17.** Ders süresince, düzenli olarak uygulanan (haftalık) bir değerlendirme yöntemi var mıydı? Varsa yöntemi ve verimli olup olmadığını belirtiniz.

- a)
- b)
- c)

**18.** Uygulanan değerlendirme yöntemlerinin sonuçlarını ve geri dönütlerini kısa sürede alabiliyor muydunuz?

Evet       Hayır       Bazen       Çogu Zaman

**19.** Dersin öğretmeni, gelişiminiz ve dersin amaçlarının karşılanması konusunda sizi düzenli olarak bilgilendiriyor muydu?

Evet       Hayır       Bazı Haftalar

**20.** Dersin öğretmenine, ihtiyacınız olduğu her an ulaşabiliyor muydunuz?

Evet       Hayır       Bazen       Çogu Zaman

**21.** Dersin öğretmeni, ders süresince sizin ihtiyaçlarınıza cevap verebildi mi, karşılaştığınız problemleri kısa sürede çözebildi mi?

Evet       Hayır       Bazen       Çogu Zaman

**22.** Bu derste ve daha önceki tecrübelerinize dayanarak, uzaktan eğitim derslerinin diğerlerine göre daha verimli olduğunu söyleyebilir misiniz?

Evet       Hayır       Kısmen       Çogu Yönüyle Evet

**23.** Bundan sonraki ders seçimlerinizde, uzaktan eğitim dersleri birinci tercihiniz olur mu?

Evet       Hayır

## Appendix C: Ethics Clearance

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ  
APPLIED ETHICS RESEARCH CENTER

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Gönderen : Prof. Dr. Canan Özgen *Canan Özgen*  
IAK Başkan Yardımcısı

İlgi : Etik Onayı

Danışmanlığını yapmış olduğunuz Bilişim Sistemleri Bölümü Yüksek Lisans öğrencisi Abdullah Selman'ın "Türkiye'de Uygulanan E-Öğrenme Faaliyetleri ile İlgili Öğrenci Görüşleri" isimli araştırması "İnsan Araştırmaları Komitesi" tarafından uygun görülerek gerekli onay verilmiştir.

Bilgilerinize saygılarımla sunarım.

Etik Komite Onayı  
Uygundur  
08/01/2013

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