ONLINE EĞİTİM ALAN ÖĞRENCİLERİN EĞİTİM SİSTEMLERİ İLE İLGİLİ KALİTE ALGISININ TESPİTİ

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ÖZ

Online eğitim üniversite eğitiminin önemli bir parçası haline gelmiştir. Geçmişte online eğitim farklı üniversitelerde farklı biçimlerde uygulanmaktaydı. Teknolojinin hızlı gelişimi ile birlikte online eğitimde nternet aracılığı ile yeni bir biçim kazanmıştır. Öğrenciler coğrafi olarak nerede olurlarsa olsunlar derslerini online olaraak alabilmektedirler. Böylece çalışan insanlar zaman ve mekân engellerine takılmadan bir yükseköğretim programına kayıt olabilmektedirler. Birçok diğer ülke gibi Türkiye'de eğitim sistemini bu yeni eğitim formatına adapte etmiştir. 1980'li yıllarda bu sistem devlet üniversitelerindeki açıköğretim fakülteleri aracılığı ile uygulanmıştır. Ancak vakıf üniversitelerinin sayısındaki artışla birlikte, online eğitim farklı seviyelerdeki bir çok programda daha yaygın olarak uygulanmaya başlanmıştır. Bu çalışmada Türkiye'de bir üniversiteye kayıtlı olan online eğitim alan öğrencilerin kalite algıları belirlenmeye çalışılmıştır.

Anahtar Kelimeler: eğitim, hizmet pazarlaması, kalite, online eğitim

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QUALITY PERCEPTIONS OF ONLINE LEARNERS ABOUT THEIR EDUCATION SYSTEMS

ABSTRACT

Online learning (OL) has become an important part of university education. In the past OL was applied in different universities with different forms. With rapid technological developments OL gains a new format through Internet. Students can take courses online wherever they are geographically. Therefore working people and adults can enroll in a higher education institution without time and space barriers. Like many other countries, Turkey adapted its education system to this new form. Beginning from 1980s, this system was applied through open education faculties in state universities. However as the number of foundation universities increase, OL became more common application in many programs at different levels. In this study, quality perception of online learners that enrolled in a university in Turkey will be determined and analyzed through statistical analyses.

Keywords: education, service marketing, quality, service quality, online learning

Introduction

Measuring quality has always been an important issue, and a limited number of studies addressed this problem (Chapman and Henderson, 2010). Students' retention and their performance are influenced by the service quality provided by the higher education institutions (Kwek, Lau and Tan, 2010). Education quality is a complicated phenomenon influenced by different factors (Targamadze et al., 2010). A service is any act or performance one party can offer to another that is essentially intangible and does not result in the ownership of anything. Its production may or may not be tied to a physical product (Kotler and Keller, 2012). Parasuraman, Berry and Zeithaml (1988) emphasize that knowledge about goods' quality is insufficient to understand service quality due to characteristics of services namely intangibility, heterogeneity, inseparability and perishability. According to Oldfield and Baron (2000), higher education can be seen as a pure service and educational services fall into the field of services marketing (Gruber et al., 2010). Service quality is defined as the result of the comparison that customers make between expectations about a service and perception of the way the service was delivered (Grönross, 1984). The term "quality in education" has been defined by various scholars as excellence in education, value addition in education or defect avoidance in education process (Kwek, Lau, and Tan, 2010). Grönross (1984), introduced the "perceived service quality model" which has three dimensions; technical quality, functional quality and image (Kang and James, 2004). Technical quality answers the question what the customer gets. Functional quality answers the question of how he/she gets it. Functional quality cannot be evaluated as objectively as the technical dimension. The organization's image works as a filter and can positively or negatively modifies the customers' perception of service quality. The expectations of consumers are influenced by their view about company and its image so corporate image or brand image will be an important dimension of perceived service quality (Grönross, 1984).

Literature Review

Online Learning

Higher education around the world has experienced rapid growth. New players in the higher education market are adopting sophisticated marketing techniques to persuade students to enroll to their institution (Beneke, 2011). Kotler and Fox (1995) offer a description for marketing in education sector as "analysis, planning, implementation, and control of carefully formulated programmes designed to bring about voluntary exchanges of value with target markets to achieve institutional objectives. OL is closely associated with the new information technologies that have a significant impact on university studies (Gedviliene, 2010).

Besides online colleges, there are many traditional higher education institutions that offer their students both face-to-face and online courses together (Yener, 2013). This dual-mode system provides flexibility for working students (Ruth and Conners, 2012; Wu and Hwang, 2010). Students' retention and their performance are influenced by the service quality provided by the higher education institutions (Kwek, Lau and Tan, 2010). Education quality is a complicated phenomenon influenced by different factors (Targamadze et al, 2010). The numbers of studies about quality on OL is increasing, but only a few have examined the quality of e-learning from the learner's perspective (Jung, 2011, p.445).

Online learning is defined as "the acquisition of knowledge and skills through mediated information and instruction" (US Distance Learning Association, 2012). It is a type of educational mode that allows for flexibility in terms of mode and delivery. Learning techniques are delivered by electronic technology (Guha and Maji, 2008) such as internet, audio or video, interactive TV, CD-ROM, and so on. If there is a geographical separation between student and provider, OL will be an effective solution for both parts (Akeusola et al, 2011). OL is not new to education; correspondence schools have operated in the United States such as Pennsylvania State University which is one of the first universities that has a program of correspondence study in 1892 (Banas and Emor, 1998). Today online education exists worldwide and is applied to education at different levels (Sizoo et al, 2003).

With the rapid growth of the Internet, OL has become a viable form of education (Granitz and Greene, 2003). The global e-learning market is predicted to reach $107.3 billion by the year 2015. The US and Europe have 70% of market share of this market. Asia-Pacific region has the fastest growing market with 20% growth rate annually (Jose, 2010). The rising popularity of e-learning is attributed to its ability to enable students to study without the constraints of time and space (Tseng et al, 2011). OL extends geographical boundaries for students (Sheeja, 2011), the students can access to the online course at any time wherever they are with any type of Internet capable device. Universities can increase enrollment numbers, decrease the number of extra-hire teachers and offer a more flexible schedule to people with OL (Borstorff and Lowe, 2007). OL courses mean a reduced burden on university facilities (Ruth and Conners, 2012) and reduce overhead costs such as dormitories, classrooms and library shelf space associated with traditional delivery (Banas and Emor, 1998).

Although OL has many benefits for all stakeholders, there are some disadvantages for students and instructors. With the lack of human contact and personal instruction, students feel themselves isolated and OL can seem cold and impersonal (Borstorff and Lowe, 2007). Another negative implication of e-learning

is information overload which causes learning time increase and learning motivation decreases. Course completion rates in online education courses are often lower than in traditional classes (Ruth and Conners, 2012).

In evaluation of effectiveness of OL, researchers focus different aspects, such as technology and human factor in e-learning system (Wu and Hwang, 2010). Studies have identified five primary aspects in evaluating e-learning effectiveness. These include;

Quality of the system

Learner attractiveness

Instructor attitudes

Service quality

Supportive issues.

Lin (2010) developed a fuzzy evaluation model with four aspects which are;

System quality

Information quality

Service quality

Web site quality factors.

In his comprehensive e-learning solution model, Henry (2001) refers to the three parts of e-learning as technology, content and service (Wong and Huang, 2011). Different models have different dimensions to evaluate the effectiveness of OL; however in all studies the importance of service quality has been emphasized.

2.2. Service Quality

Service is used to describe activities performed by sellers and others that accompany the sale of a product and aid in its exchange or its utilization (American Marketing Association). A service is any act or performance one party can offer to another that is essentially intangible and does not result in the ownership of anything. Its production may or may not be tied to a physical product (Kotler and Keller, 2012). Parasuraman, Zeithaml and Berry (1988) emphasize that knowledge

about goods quality is insufficient to understand service quality due to characteristics of services namely intangibility, heterogeneity and inseparability and perishability. According to Oldfield and Baron (2000), higher education can be seen as a pure service and educational services fall into the field of services marketing (Gruber, et al., 2010). For quality concept there are multiple definitions. Garvin (1984), classified these definitions into five categories.

Transcendent

Product-based

User-based

Manufacturing-based

Value-based

Transcendent definition associates quality with innate excellence and recognizable only through experience. The product-based approach defines quality as a measurable variable about product attributes. The user-based approach focuses on customer satisfaction. The manufacturing-based definition evaluates quality as conformance to specifications. According to the value-based definition, quality is equal to performance at an acceptable price (Tamimi and Sebastianelli, 1996). The concept of quality is defined by Deming (1998) as “customer judgment about the product or service produced by the business", and by Crosby (1979) as the "degree of compliance of a product with the requirements".

Service quality is defined as the result of the comparison that customers make between expectations about a service and perception of the way the service was delivered (Grönroos, 1984). The term “quality in education” has been defined by various scholars, such as excellence in education, value addition in education or defect avoidance in education process. Education quality is also defined as the character of the set of elements in the input, process, and output of the education system that provides services that completely satisfy both internal and external strategic constituencies by meeting their explicit and implicit expectations (Kwek, Lau and Tan, 2010).

Measuring quality has been always an important issue and limited number of studies addressed this problem (Chapman and Henderson, 2010). In literature there are two popular models used widely to measure service quality. Academics divided into two schools of thought; Nordic or American (Kang and James, 2004). The American perspective of service quality is based primarily on Parasuraman et all’s

proposition that is "Gaps model" also known as SERVQUAL, only reflects the service delivery process. It has five components which are reliability, assurance, tangibles, responsiveness and empathy (Parasuraman et al, 1988). The SERVQUAL model is frequently used to evaluate the students' perceived service quality in the education industry (Russell, 2005; Dursun et al., 2013, 2014). However, there is no consensus in the literature about determinants of the students' perceived service quality in higher education. Grönroos (1984), based on the Nordic perspective, introduced the "perceived service quality model" which has three dimensions; technical quality, functional quality and image (Kang and James, 2004). Technical quality answers the question what the customer gets. Functional quality answers the question of how he gets it. Functional quality cannot be evaluates as objectively as the technical dimension. The organization's image works as a filter and can positively or negatively modifies the customers' perception of service quality. The expectations of consumers are influenced by their view about company and its image so corporate image or brand image will be an important dimension of perceived service quality (Grönroos, 1984).

Quality in OL is defined as an evaluation process that "judges, measures, or assesses the quality of the development and delivery of online courses/learning environments focused on appropriate design and best practice, and is aimed at self-improvement ensuring quality instruction in a non-threatening way" (Quilter and Weber, 2004; Chapman and Henderson, 2010). OL quality is a complex and multi-faceted issue. There are general quality principles that can apply both conventional learning and OL; however OL has unique characteristics such as asynchronous interactions and open access to resources (Jung, 2011). Quality in OL can have different meanings for institutions and researchers. Institutions may be more concerned about quality of their management and researchers may be more interested in the nature, depth and extent of the learning (Jung and Latchem, 2007).

Brand Image

Brand is a name, term, sign, symbol, or design, or a combination of them, intended to identify the goods and services of one seller or group of sellers and to differentiate them from those of competitors (American Marketing Association, 2017). It is generally agreed that a brand adds to the value of a product or service. This added value is termed brand equity, which can be viewed by customers as both a financial asset and as a set of favorable associations and behaviors (The Marketing Science Institute, 1989).

In brand literature, one of the most important concepts is brand equity and there are many different definitions for brand equity. According to these different

definitions, brand equity is "a differentiated, clear image that goes beyond simple product preference" (Barwise, 1993), "the value a brand name adds to a product" (Broniarczyk and Alba 1994), "the added value that a brand endows a product with" (Farquhar, 1990), "the combination of brand awareness, liking and perceptions" (Moore, 1993), "the value attached to a brand because of the powerful relationship that has been developed between the brand and customers and other stakeholders over time" (Keegan, Moriarty and Duncan, 1995).

Srinivasan et al. (2005) define brand equity as the difference between the choice probability of a certain brand and that of the base product. Aaker (1991) defines brand equity as a set of four categories of brand assets linked to a brand's name or symbol that add to the value provided by a product or service to a firm and/or to that firms' customers;

Brand awareness

Perceived quality

Brand association

Brand loyalty

Marketing researchers suggested brand image is a vital element of brand equity. Keller (1993) defined brand image as "a set of perceptions about a brand as reflected by brand associations in consumer's memory". Aaker (1991) defined it as "a set of associations, usually organized in some meaningful way". Biel (1992) however defined it as "a cluster of attributes and associations that consumers connect to the brand name". The more positive brand image is positively related to higher brand equity (Faircloth, Capella and Alford, 2001). Although brand image has been recognized as an important factor which positively or negatively influences marketing activities, there is not a unanimous agreement on its appropriate definition (Onurlubaş and Çakırlar, 2017; Onurlubaş and Şener, 2016).

As all companies, higher education institutions which hold a favorable image by the public would definitely gain a better position in the market, sustainable competitive advantage and increase market share (Sondoh et al, 2007). Higher education institutions should develop a distinct image to create a competitive advantage in an increasingly competitive market (Gündüz and Yener, 2012). University image can be defined as the sum of all the beliefs an individual has towards the university. According to Kotler and Fox (1995), an institution's current image is often more important than quality because perceived image actually

influences choices made by prospective students (Alves and Raposo, 2010). McNally and Speak (2002) define a higher education brand as “perception or emotion maintained by a buyer or a prospective buyer describing the experience related to doing business with an academic institution with its product and service”. Like many service-oriented organizations, universities are facing an increasingly competitive environment in which they must find ways to differentiate their institution (Judson et al, 2009). Higher education, sharing many characteristics with other organizations of the public sector, has a number of stakeholders such as students, their parents and family, academic and administration staff, and society, all of whom experience different aspects of the higher education institutions (Trivellas and Dargenidou, 2009). Students’ retention and their academic performance are influenced by the service quality provided by the higher education institutions (Kwek, Lau and Tan, 2010).

Kotler and Fox (1995) define marketing in education sector as analysis, planning, implementation, and control of carefully formulated programs designed to bring about voluntary exchanges of value with target markets to achieve institutional objectives. McNally and Speak (2002) define a higher education brand as "perception or emotion maintained by a buyer or a prospective buyer describing the experience related to doing business with an academic institution with its product and service". University with good image will have a greater competitive advantage than universities without it. Therefore, the success of the university is associated with its ability to create, develop and manage unique resources. Therefore, it can be suggested that the image of this organization will be the source of its competitive advantage (Druteikiene, 2011). Like many service-oriented organizations, universities are facing an increasingly competitive environment in which they must find ways to differentiate their institution and tell their story (Judson et al., 2009).

OL in the World and Turkey

OL has become increasingly popular over the years. In the 2000-2001 academic periods, more than three million students were enrolled in OL courses in the U.S. and the National Center for Education Statistics expects this number to increase 18.2 million by 2013 (NCES, 2012; Güneş and Altıntaş, 2012). In 2000–2001, 89% of 4-year public institutions in the USA offered distance education courses with 90% of the offerings being internet courses using computer-based instruction (Wang et al, 2010). From the 1970s onwards, Asian governments established open universities to accommodate the large numbers of adults and school-leavers unable to gain entry to conventional universities. Thailand was the first country to open an open admissions university in 1971 and the following years,

open universities were established in many Asian countries such as Israel, Iran, Turkey, India, China, Japan, Hong Kong, etc (Jung and Latchem, 2007).

By the end of 2017, the population of Turkey is 79,76 million and its population growth rate is 1,35 percent yearly. The median age is 31,9, so majority of Turkey's population is young. The ages of students in higher education institutions are usually between 19-30. 14,38 million people which means 18 % of the total population are between these age groups (http://www.tuik.gov.tr). In spite of the highest young population, the numbers of higher education institutions are not sufficient. There are 114 public universities whereas 65 foundation universities and 6 foundations vocational school (www.yok.gov.tr). Total number of the highest education institutions is 210 and their distribution can be seen in the Table 1.

Table 1: Number of Higher Education Institutions in Turkey

Type of Institution	No.
State Universities	114
Foundation Universities	65
Other Institutions	25
Foundation Vocational School	6
Total	210

In Table 2 shows total number of students in higher education at different education levels with respect to open and traditional education system in 2017. 23,6% of the total students were enrolled in online education institutions in Turkey.

Table 2: Number of Students in Higher Education Institutions in Turkey in 2017

		Pre-graduate	Undergraduate	Graduate	PhD	Total
Formal	Male	2.014.944	3.291.898	563.238	107.200	5.977.280
	Female	1.650.608	2.928.847	367.228	75.334	5.022.017
	Total	3.665.552	6.220.745	930.466	182.534	10.999.297
OL	Male	656.598	1.112.780	25.556	0	1.794.934
	Female	789.702	809.633	4.408	0	1.603.743
	Total	1.446.300	1.922.413	29.964	0	3.398.677
Total	Male	2.671.542	4.404.678	588.794	107.200	7.772.214
	Female	2.440.310	3.738.480	371.636	75.334	6.625.760
	Total	5.111.852	8.143.158	960.430	182.534	14.397.974

In Turkey, the first Open Education faculty was established by Anadolu University in 1982. By 2012, Istanbul University and Atatürk University, which are both state universities, started to enroll students to their open education faculties. After establishing foundation higher education institutions, the numbers of OL programs rapidly increased. Today most of the state universities have OL programs too, or are prepared to open. In the Table 3 the numbers of higher education institutions which have at least one OL programs at different levels will be seen.

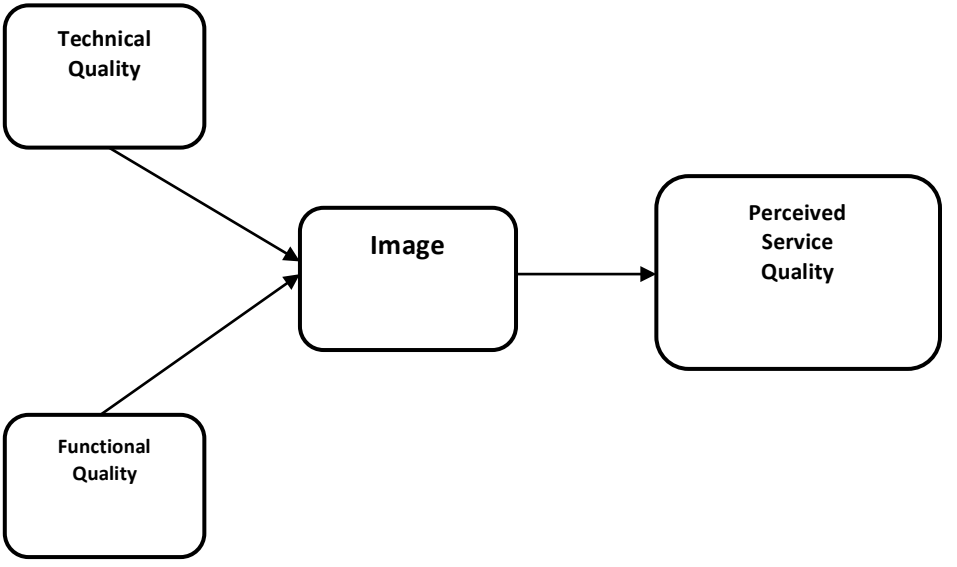
Table 3: Number of Higher Education Institutions That Have DL Programs

	State	Foundation	Other	No. of Programs in DL
Pre-graduate	26	6	1	36
Undergraduate	6	4	1	22
Graduate	5	8	1	13

Research Methodology

To measure service quality, Grönross Service Quality Model was used. This model is more appropriate for representation of service quality than the SERVQUAL perspective, which concentrates only on functional quality (Kang and James, 2004). Grönross service quality model is represented below in Figure 1.

Figure 1: Grönross Service Quality Model



Hence there are three research hypotheses, and they are seen below,

H_1: Functional quality has significant effect on image of students, who are enrolled an online higher education program.

H_2: Technical quality has significant effect on image of students, who are enrolled an online higher education program.

H_3: Image have significant effect on perceived service quality of students, who are enrolled an online higher education program.

3.1. Research Participants and Measuring Instrument

The population of the research is nearly 3.4 million students who enrolled an online education program in a university. Convenience sampling method was used and participation was voluntary. The survey was conducted anonymously and no personal information was collected that could be used to identify any individual participants. Sample size of the research is 348 students. Data was obtained using a questionnaire which contains close-ended questions. The questionnaire has two different parts. First is perceived service quality scale which covers 30 closed-ended questions and they was prepared by researcher with respect to factors in Grönross' service quality model. The second part has questions about participants' demographic characteristics. At Table 4 demographic characteristics of participants are summarized.

Table 4: Demographic Characteristics of Participants

Gender	Male (%57,5); Female (%42,5)
Age	20-25 (%37,9); 26-30 (%28,7); 31-35 (%17,2); 36-40 (%7,5); 40+ (%8,6)
Marital status	Married (%40,2); Single (%59,8)
Children	0 (%62,6); 1 (%17,8); 2 (%16,1); 2+ (%3,4)
Job	Yes (%61,5); No (%38,5)
Income	0-2000 (%54,6); 2001-3000 (%21); 3001-4000 (%12,6); 4000+ (%11,8)
Graduation	Yes (%47,7); No (%52,3)
Connection point	None (%11,5); Mobile (%33,9); Home/Workplace (%54,6)
Study material	Course book (%52,9); Online materials (%53,4); None (%3,4)

According to the demographic characteristics of students, the number of male students is higher than female students. Nearly 66,6 percent of them are between 20-30 years old. %40 of students who are enrolled an online higher education program are married and %37,3 of them have children. As expected two thirds of the students work in a job and %75,6 of them have lower than 3000 TL monthly income. %47,7 of the students who are enrolled in an online higher education program have graduated in another higher education program before. Students follow their online courses through Internet connection. 54,6 % of students connect to the Internet at their home or workplace. 33,9 % of them use their mobile devices for the courses.

Online programs provide students different course materials. Some of them are hard copy and some of them are online materials. Usage rate of course book in an online program is %52,9. Usage of online materials are more practical, students can study their courses via using their mobile phones, however usage rate of the online materials is nearly same with course book.

3.2. Reliability and Factor Analyses

Internal reliability of the factors is calculated with Cronbach's alpha test. It is expected the alpha value is greater than 0,7 (Nunnally, 1978). According to the result of the analysis, Cronbach alpha value is 0,801. It means the measurement instrument has sufficient internal consistency for further analysis such as factor analysis.

Before factor analysis "Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy" and "Bartlett's Test of Sphericity" result should be interpreted. KMO test result is 0,854 which means greater than 0,6 and it means the sample size is adequate for factor analysis (Pallant, 2005). Significance value of Bartlett test is lower than 0,05 (0,00), therefore factor analysis is appropriate. All variables have met required conditions for factor analysis. According to the factor analysis, we get 3 different factors as expected. These factors are functional quality, technical quality and image. In Table 5, mean and standard deviation values of the factors are seen. The results show us that functional quality perceptions of students about DL are greater than their technical quality perceptions. Also variances explained of each factor are shown in this table.

Table 5: Descriptive Statistics of Service Quality Factors

Factor Name	Mean	Std. Deviation	Total Variance Explained
Functional Quality	2,6628	0,74104	22,465
Technical Quality	2,6236	0,85325	19,933
Image	2,5096	0,8764	19,910

Correlation Analysis

In Table 6 correlation analyses between factors in Grönross service quality models are seen. According to the results all factors have significant and positive relationship with each other. Functional and technical quality factors have higher

correlation with image factor. However the relationship between technical quality and functional quality is positive and low comparatively (%18,7).

Table 6: Correlation Analysis of Quality Factors

		Functional	Technical	Image
Functional	Pearson Correlation	1	,187**	,530**
	Sig. (2-tailed)		0	0
	N	348	348	348
Technical	Pearson Correlation	,187**	1	,623**
	Sig. (2-tailed)	0		0
	N	348	348	348
Image	Pearson Correlation	,530**	,623**	1
	Sig. (2-tailed)	0	0	
	N	348	348	348

**. Correlation is significant at the 0.01 level (2-tailed).

Since there are positive relationships between all the factors included in the Grönross service quality factors, then we cannot reject any of the research hypotheses (H_1, H_2, and H3).

Other Analysis

Since the significance level is less than 0,05 (0,014), functional quality level of students differ according to their gender and male students have higher image level (μ_{male} = 2,75, μ_{female} = 2,55). According to the marital status of the online education students, Perceived image ($\mu_{married}$ = 2,72, μ_{single} = 2,37) and functional quality ($\mu_{married}$ = 2,76, μ_{single} = 2,59) level of married student are higher than single students. Perceived image level of students who have a job (μ = 2,58) are higher than students who does not work (μ = 2,39), as functional quality perception (μ_{work} = 2,76, $\mu_{notwork}$ = 2,51). ANOVA test results show that there is a significant relationship

between technical quality, functional quality and perceived image and the age of student. As the age is grown, all service quality factors gets higher. Since the online education in universities provides students an opportunity for working, and also adults can enroll these programs. As the Table 4 shows 40 percent of online students are married and some of them have children. Functional quality and perceived image level of students get higher as their number of children rises. Finally monthly income levels of students that have enrolled a university's online program have a statistically significant relationship with functional quality, technical quality and perceived image about service quality. All these three factors' values get higher as the income of students increases.

Table 7: Quality Factors and Demographic Variables

	Functional	Technical	Image
Gender	Male		
Marital	Married		Married
Job	Yes		Yes
Age	↑	↑	↑
Children	↑		↑
Income	↑	↑	↑

Table 7 summarizes all the analysis between service quality factors and demographic characteristics of students who are enrolled to an online program of a higher education institution in Turkey. For example male students' functional quality perception is higher than female students. However, Image and technical quality perception do not differ according to gender of the students. As age, number of children and monthly income of the students get higher, and then technical quality, functional quality and image perception about online learning also increase.

Conclusion

Online learning is an important issue in today's university education systems. With the developments in technology, OL became common and easily applicable for higher education institutions and students. For both parts OL have many advantages, universities does not suffer many costs that are relevant with traditional education such as classrooms and extra-hired teachers, on the other hand students do not have to exist at school for the courses. If they have required hardware and software, they

can easily access all the course materials wherever they are, so they will have more time for working. Like many countries, universities in Turkey started to use OL system effectively. Even some universities use dual education system which combines OL and traditional education together. Students in this system can take courses in classroom or OL and will compare the effectiveness of the courses. The most significant measures of OL effectiveness were the quality of the OL system and learner attractiveness. According to the results of the analyses, technical and functional quality of OL and image of institution have positive effect on students' perceived service quality. Since image of the higher education institution is affected many different factors, its effect on perceived service quality is not so high as technical and functional quality of OL system. Students' functional quality perception about OL is more than technical quality perception. If the university can enhance its technical and functional quality perception about distance learning system, students' service quality perceptions also enhance. However increase in image perception does not depend on only OL system and only some portion of the image raises perceived service quality about OL. Customer satisfaction is an important concept for all companies. In higher education institutions customers are students and academic staff. The success of a university largely depends on their customers' success. Universities have limited financial resource and OL is a useful tool for universities about cost saving. However if its customers' satisfaction level is low in OL courses in comparison with other courses, there are two choice for institutions. First, leaving the OL system and the second is to solve students' problems in OL system to provide academic and financial sustainability.

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