# Investigation of the Satisfaction Levels of Teacher Candidates towards E-Courses

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**ABSTRACT**
In today's technology age, e-learning environments and e-courses are increasingly used in every level of education. In e-learning environments, teachers and students come together without time and place limitation and they are trained such in a traditional classroom environment. Courses in e-learning environments are often used in universities and teacher training departments. E-learning has become one of the preferred learning environments, especially since students are not limited by a particular classroom environment and are flexible. From this perspective, it is also important to determine the level of teacher candidates' satisfaction with the lessons in the e-learning environments for organizing and expanding the e-courses. In this study, it is aimed to determine the satisfaction level of the teacher candidates towards e-courses. Survey method was used to collect the research data. Participants of the study are the teacher candidates of the Faculty of Education at Sakarya University in the academic year of 2016-2017. "Satisfaction Scale for E-Courses" developed by Kolburan Geçer and Deveci Topal (2015) was used in the study. The scale consists of 35 items and 5 factors. These factors are Course Content and Teaching Process, Used Materials and Communication Tools, Attitude Towards E-Course, Media Design and Teacher-Student Interaction. It was examined whether there was any difference between the satisfaction levels of teacher candidates towards e-courses according to their gender, department, high school graduation types and internet usage period. According to the results of the study, it was concluded that the satisfaction level of the teacher candidates towards e-courses was medium level. Satisfaction levels towards e-courses vary according to the gender of the teacher candidates, the used materials and communication tools and attitudes toward e-courses. Satisfaction levels towards e-courses differ only in the dimension of media design according to the departments of teacher candidates. Another result is that the satisfaction levels of the teacher candidates towards e-courses do not differ according to their high school graduation types and daily internet usage periods.

**KEYWORDS:** e-learning, e-course, student satisfaction

## INTRODUCTION

People's perspectives have been changed with the rapid improvement of technology in recent years. Today's technology age is called especially as the internet age. Everyone from young to old ages uses the internet in almost all environments. Internet is used in all areas such as education, health, entertainment and communication. Online learning or e-learning concepts emerge when individuals, especially university students, are thought to use the internet for educational purposes. E-learning is a learning process in which teachers and students come together without time and place limitation, and the electronic communication systems are used for interaction between the teacher, student and the course content. E-learning can be conducted in different ways according to the level of education and the content of the course (Moore & Kearsley, 2012; Simonson, Smaldino, Albright & Zvacek, 2012; Adnan & Boz Yaman, 2017). E-learning is the process of learning-teaching activities through internet technologies in order to increase knowledge and performance (Rosenberg, 2001). In other words, e-learning is the use of synchronous and asynchronous communication processes electronically to create and strengthen knowledge (Garrison, 2011; Şahin, Keskin, Özgür & Yurdagül, 2017).

A large part of the activities we can perform in today's classroom environment can be applied in e-learning environments without any problems. The e-learning application includes links to simulation, demonstration, audio and video frequency, internet materials and resources (Learnframe, 2000). E-learning has become one of the preferred learning environments, especially since it does not keep students in a particular classroom environment and provides flexibility in time. Aydın (2003) stated that the use of e-learning systems offers many advantages such as reducing the cost of publishing materials, efficient distribution and updating of materials, support on the need, increased interaction and taking into account the individual differences (Şahin et al., 2017). It is important that the learning designs implemented in this environment are qualified in order for the advantages of e-learning systems to be effective. Many components must be considered together when designing e-learning environments (Tuncer & Taşpınar, 2008). Course materials presented in the e-learning environment should be of a kind that prevents learners from being passive participants (Çelen, Çelik & Seferoğlu, 2011). If

the students who attend the courses in this environment feel comfortable, their satisfaction level will increase and they will want to spend more time in this environment. The expectations of the students should be determined and the necessary ones should be provided to meet these expectations in order to ensure the satisfaction of the students in the environment. Sun, Tsai, Finger, Chen & Yeh (2008) found that the critical factors affecting student satisfaction in e-learning are computer anxiety of the student, attitude of the instructor towards e-learning, flexibility of e-learning, quality of e-learning, perceived utility, perceived ease of use and variety of evaluations (Kolburan Geçer & Deveci Topal, 2015). Students should be satisfied with the courses in order to be permanent in e-learning environment and to adopt these environments in e-learning environment as well as in all environments. The more satisfied the students are with the environment, the more effective they will participate in the courses in the e-learning environment.

In this context, studies on e-courses in the literature are few. In their study, Adnan & Boz Yaman (2017) concluded that the satisfaction levels of engineering students with e-learning experiences who use e-learning environments are below average. Pena and Yeung (2010) found that as the level of Information and Communication Technology competency decreases, the level of satisfaction decreases. Şen Ersoy (2015), who conducted a study with distance learning English lessons, determined that most of the students found the course content interesting and they did not expressed any problem in communication and interaction with the instructor. However, it has been pointed out that some of the students experienced technical difficulties and learning difficulties in the lessons, they preferred face-to-face lecture and they wanted to see a concrete teacher figure in their lectures. As a result of another study by Gürbüz (2014), it has been seen that students have mostly positive perspectives about the distance education system and that their levels of satisfaction are high in terms of quality, time and place flexibility of the offered education. Öztürk, Kara, Özkeskin and Uça Güneş (2017) determined that most of their learners were highly satisfied with the distance education system. In addition, it was seen that various studies (Beqiri, Chase & Bishka, 2009; Bray, Aoki & Dlugosh, 2008; Palmer & Holt, 2009) were carried out in the literature.

However, no study was found on the investigation of the satisfaction levels towards e-courses of the teacher candidates in the faculty of education towards e-courses. For this reason, it is important to investigate the satisfaction levels towards e-courses of teacher candidates who are currently studying in the faculty of education and who will perform the teaching profession in the future.

The aim of the study is to determine the satisfaction levels of teacher candidates towards e-courses. Following questions were investigated according to this aim.

1. What are the satisfaction levels of teacher candidates towards e-courses?
2. Does the satisfaction levels of teacher candidates differ according to their;
    a. Genders,
    b. Departments,
    c. High school graduation types,
    d. Daily internet usage periods?

## METHOD

This study aims to show the satisfaction levels of the teacher candidates towards e-courses. Survey method was used to collect the research data. Survey method is a research approach that aims to describe the past or present as it exists. It is attempted to define the individual or object subject to the research as if it is within its own condition (Karasar, 2005). Moreover, relational survey methods were used in line with sub-objectives.

### Participants

The participants of the study are the teacher candidates who are studying in the Faculty of Education at Sakarya University in the academic year of 2016-2017. Quantitative distributions are given in Table 1 for teacher candidates whose scales were considered valid.

**Table 1.** *Participants' Characteristics*

| Variables | | f | % |
|---|---|---|---|
| **Gender** | Male | 91 | 38,6 |
| | Female | 145 | 61,4 |
| **Department** | Computer Education and Instructional Technologies | 56 | 23,7 |
| | Special Education | 42 | 17,8 |
| | Turkish Education | 113 | 47,9 |
| | Primary School Education | 25 | 10,6 |

| | | | |
|---|---|---|---|
| **High School Graduation Type** | General High School | 41 | 17,4 |
| | Vocational High School | 76 | 32,2 |
| | Anatolia High School | 95 | 40,3 |
| | Others | 24 | 10,2 |
| **Daily Internet Usage** | 0-1 hour | 26 | 11,0 |
| | 1-3 hours | 74 | 31,4 |
| | 3-5 hours | 80 | 33,9 |
| | More than 5 hours | 56 | 23,7 |
| **Total** | | **236** | **100** |

There was no specific sample for this study, 236 teacher candidates were participated in total. 91 (38.6%) of the participants are male and 145 (61.4%) of them female. 56 students (23.7%) are in the department of Computer Education and Instructional Technologies, 42 of them (17.8%) are in the department of Special Education, 113 of them (47.9%) are in the department of Turkish Education and 25 of them (10.6%) are in the department of Primary School Education.

**Data Collection Tools**

Personal information form created by the researcher and "Satisfaction Scale for E-Courses" developed by Kolburan Geçer ve Deveci Topal (2015) were used to collect the data for this study. The scale consists of 35 items and 5 factors. “Course Content and Teaching Process” consists of 9 items, “Used Materials and Communication Tools” consists of 8 items, “Attitude Towards E-Course” consists of 6 items, “Media Design” consists of 8 items and “Teacher-Student Interaction” consists of 4 items. Scale was scored in 5 levels; 1 for “Strongly Disagree”, 2 for “Disagree”, 3 for “Rarely Disagree”, 4 for “Agree” and 5 for “Strongly Agree”. Cronbach Alpha reliability value of the scale is .966. Cronbach Alpha reliability values for the sub-dimensions of the scale are; .932 for “Course Content and Teaching Process”, .921 for “Used Materials and Communication Tools”, .881 for “Attitude Towards E-Course”, .914 for “Media Design” and .900 for “Teacher-Student Interaction”. Internal consistency value of the scale after it was applied to teacher candidates is.905.

**Data Analysis**

A sufficient number of copied data collection tool were applied to the teacher candidates by the researcher. The highest score that can be taken for each item on the applied scale is five (5) and the lowest score is one (1). Three evaluation intervals and criteria were determined on average value in order to interpret and evaluate teacher candidates' satisfaction levels for e-courses (Table 2).

**Table 2.** *Evaluation Criteria for the Satisfaction Levels Towards E-Courses*

| Evaluation Criteria | Evaluation Range |
|---|---|
| Low Level | 1,00 – 2,33 |
| Medium Level | 2,34 – 3,66 |
| High Level | 3,67 – 5,00 |

Arithmetic average, percentage and frequency were used in the analysis of the collected data as descriptive statistics. On the other hand, independent sample t-test and variance analysis were used to determine whether the levels of satisfaction of e-courses differ according to the gender of the teacher candidates, their departments, their high school graduation and their daily internet usage periods. The significance level was taken as .05 in the analyzes of the data. SPSS 16.0 (Statistical Package for the Social Sciences) package program was used in statistical analysis.

## FINDINGS AND INTERPRETATIONS

The satisfaction levels of teacher candidates towards e-courses and the evaluation of satisfaction levels of these e-courses in terms of different variables are given as separate titles within the scope of this study.

**Satisfaction Levels of Teacher Candidates towards E-Courses**

Teacher candidates' satisfaction levels towards e-courses were evaluated in five dimensions; Course Content and Teaching Process, Used Materials and Communication Tools, Attitude for E-courses, Media Design and Teacher-Student Interaction (Table 3).

**Table 3.** *Satisfaction Levels towards E-Courses in Terms of Sub-Dimensions*

| | Subscale | $\overline{X}$ | sd |
|---|---|---|---|
| 1 | Course Content and Teaching Process | 3.28 | .61 |
| 2 | Used Materials and Communication Tools | 3.19 | .72 |
| 3 | Attitude Towards E-Courses | 3.15 | .60 |
| 4 | Media Design | 3.39 | .70 |
| 5 | Teacher-Student Interaction | 3.15 | .89 |
| | **General** | **3.25** | **.52** |

As seen in the table, means of the teacher candidates' satisfaction levels towards e-courses are; ($\overline{X}$=3.28) for the dimension of course content and teaching process, ($\overline{X}$=3.19) for used materials and communication tools, ($\overline{X}$=3.15) for attitude towards e-courses, ($\overline{X}$=3.39) for media design and ($\overline{X}$=3.15) for teacher-student interaction. This shows that teacher candidates have medium level of satisfaction towards e-courses.

**Satisfaction Levels of Teacher Candidates According to Their Genders**

It was examined whether the satisfaction levels of the teacher candidates towards e-courses differ according to their genders. The findings were given in Table 4.

**Table 4.** *Satisfaction Levels of Teacher Candidates According to Their Genders*

| Subscale | Groups | n | $\overline{X}$ | Sd | df | t | p |
|---|---|---|---|---|---|---|---|
| Course Content and Teaching Process | Male | 91 | 3.35 | .57 | 234 | 1.464 | .145 |
| | Female | 145 | 3.23 | .64 | | | |
| Used Materials and Communication Tools | Male | 91 | 3.35 | .58 | 234 | 2.828 | .005 |
| | Female | 145 | 3.09 | .78 | | | |
| Attitude Towards E-Courses | Male | 91 | 3.25 | .56 | 234 | 1.971 | .049 |
| | Female | 145 | 3.09 | .62 | | | |
| Media Design | Male | 91 | 3.45 | .60 | 234 | 1.186 | .237 |
| | Female | 145 | 3.34 | .75 | | | |
| Teacher-Student Interaction | Male | 91 | 3.16 | .87 | 234 | .226 | .822 |
| | Female | 145 | 3.14 | .90 | | | |

Findings show that satisfaction levels towards e-courses do not differ significantly in the sub-dimensions of "course content and teaching process" [t(234)=1.464, p>.05], "media design" [t(234)=1.186, p>.05], and "teacher-student interaction" [t(234)=.226, p>.05] according to the genders of teacher candidates. There is a significant difference in the sub-dimensions of "used materials and communication tools" [t(234)=2.828, p<.05] and "attitude towards e-courses" [t(234)=1.971, p<.05]. It was seen that the male teacher candidates have higher satisfaction levels than the female teacher candidates in the sub-dimensions of the used materials and communication tools and attitudes towards e-courses. According to this result, male teacher candidates are more satisfied than female teacher candidates, by using the course materials used in the environment where e-courses are applied and communication tools developed for these environments. Moreover, it can be interpreted that male teacher candidates have a more positive attitude towards e-courses than female teacher candidates.

**Satisfaction Levels of Teacher Candidates According to Their Departments**

It was examined whether the satisfaction levels of the teacher candidates towards e-courses differ according to their departments. The findings were given in Table 5.

**Table 5.** *Satisfaction Levels of Teacher Candidates According to Their Departments*

| Subscale | Source of Variance | S.S | sd | M.S | F | p | Significant Difference |
|---|---|---|---|---|---|---|---|
| Course Content and Teaching Process | Between Groups | 1.125 | 3 | .375 | .995 | .396 | - |
| | Within Groups | 87.455 | 232 | .377 | | | |
| | Total | 88.580 | 235 | | | | |
| Used Materials and Communication Tools | Between Groups | 3.993 | 3 | 1.331 | 2.624 | .051 | - |
| | Within Groups | 117.678 | 232 | .507 | | | |
| | Total | 121.671 | 235 | | | | |
| Attitude Towards E-Courses | Between Groups | 1.150 | 3 | .383 | 1.058 | .368 | - |
| | Within Groups | 84.089 | 232 | .362 | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Total | 85.240 | 235 | | | | |
| Media Design | Between Groups | 7.851 | 3 | 2.617 | 5.737 | .001 | 1-2<br>2-4 |
| | Within Groups | 105.841 | 232 | .456 | | | |
| | Total | 113.692 | 235 | | | | |
| Teacher-Student Interaction | Between Groups | 3.359 | 3 | 1.120 | 1.421 | .237 | - |
| | Within Groups | 182.825 | 232 | .788 | | | |
| | Total | 186.184 | 235 | | | | |

Findings show that satisfaction levels towards e-courses do not differ significantly in the sub-dimensions of "course content and teaching process" [F(3-232) = .995, p>.05], "used materials and communication tools" [F(3-232) = 2.624, p>.05], "attitude towards e-courses" [F(3-232) = 1.058, p>.05] and "teacher-student interaction" [F(3-232) = 1.421, p>.05] according to the departments of teacher candidates. There is a significant difference in the sub-dimension of "media design" [F(3-232) = 5.737, p<.05]. Scheffe analysis as a Post Hoc analysis was performed to determine in which groups have significant difference. Teacher candidates from the department of Computer Education and Instructional Technologies ($\overline{X}$=3.61), Primary School Education ($\overline{X}$=3.56) and Special Education ($\overline{X}$=3.07) are more satisfied with the sub-dimension of media design towards e-courses.

**Satisfaction Levels of Teacher Candidates According to Their High School Graduation Types**

It was examined whether the satisfaction levels of the teacher candidates towards e-courses differ according to their high school graduation types. The findings were given in Table 6.

**Table 6.** *Satisfaction Levels of Teacher Candidates According to Their High School Graduation Types*

| Subscale | Source of Variance | S.S | sd | M.S | F | p | Significant Difference |
|---|---|---|---|---|---|---|---|
| Course Content and Teaching Process | Between Groups | 1.037 | 3 | .346 | .916 | .434 | - |
| | Within Groups | 87.542 | 232 | .377 | | | |
| | Total | 88.580 | 235 | | | | |
| Used Materials and Communication Tools | Between Groups | .829 | 3 | .276 | .531 | .662 | - |
| | Within Groups | 120.842 | 232 | .521 | | | |
| | Total | 121.671 | 235 | | | | |
| Attitude Towards E-Courses | Between Groups | 1.335 | 3 | .445 | 1.230 | .299 | - |
| | Within Groups | 83.905 | 232 | .362 | | | |
| | Total | 85.240 | 235 | | | | |
| Media Design | Between Groups | 3.181 | 3 | 1.060 | 2.226 | .086 | - |
| | Within Groups | 110.511 | 232 | .476 | | | |
| | Total | 113.692 | 235 | | | | |
| Teacher-Student Interaction | Between Groups | 1.138 | 3 | .379 | .476 | .699 | - |
| | Within Groups | 185.046 | 232 | .798 | | | |
| | Total | 186.184 | 235 | | | | |

Findings show that satisfaction levels towards e-courses do not differ significantly in the sub-dimensions of "course content and teaching process" [F(3-232) = .916, p>.05], "used materials and communication tools" [F(3-232) =.531, p>.05], "attitude towards e-courses" [F(3-232) = 1.230, p>.05], "media design" [F(3-232) =2.226, p>.05], and "teacher-student interaction" [F(3-232) =.476, p>.05] according to the high school graduation types of teacher candidates.

**Satisfaction Levels of Teacher Candidates According to Their Daily Internet Usage Periods**

It was examined whether the satisfaction levels of the teacher candidates towards e-courses differ according to their daily internet usage periods. The findings were given in Table 7.

**Table 7.** *Satisfaction Levels of Teacher Candidates According to Their Daily Internet Usage Periods*

| Subscale | Source of Variance | S.S | sd | M.S | F | p | Significant Difference |
|---|---|---|---|---|---|---|---|
| Course Content and Teaching Process | Between Groups | ,614 | 3 | ,205 | .540 | .655 | - |
| | Within Groups | 87,965 | 232 | ,379 | | | |
| | Total | 88,580 | 235 | | | | |
| Used Materials and | Between Groups | 2,077 | 3 | ,692 | 1.343 | .261 | - |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Communication Tools | Within Groups | 119,594 | 232 | ,515 | | | |
| | Total | 121,671 | 235 | | | | |
| Attitude Towards E-Courses | Between Groups | 1,215 | 3 | ,405 | 1.118 | .342 | - |
| | Within Groups | 84,024 | 232 | ,362 | | | |
| | Total | 85,240 | 235 | | | | |
| Media Design | Between Groups | ,458 | 3 | ,153 | .313 | .816 | - |
| | Within Groups | 113,234 | 232 | ,488 | | | |
| | Total | 113,692 | 235 | | | | |
| Teacher-Student Interaction | Between Groups | 2,464 | 3 | ,821 | 1.037 | .377 | - |
| | Within Groups | 183,721 | 232 | ,792 | | | |
| | Total | 186,184 | 235 | | | | |

Findings show that satisfaction levels towards e-courses do not differ significantly in the sub-dimensions of "course content and teaching process" [F(3-232) = .540, p>.05], "used materials and communication tools" [F(3-232) =1.343, p>.05], "attitude towards e-courses" [F(3-232) = 1.118, p>.05], "media design" [F(3-232) =.313, p>.05], and "teacher-student interaction" [F(3-232) =1.037, p>.05] according to the daily internet usage periods of teacher candidates.

## RESULTS AND RECOMMENDATIONS

Satisfaction levels of the teacher candidates who are educated in the faculty of education towards e-courses were determined as medium level in this study. Moreover, it was observed that the satisfaction levels towards the sub-dimensions: course content and teaching process, used materials and communication tools, attitude towards e-courses, media design and teacher-student interaction were also medium level. Adnan and Boz Yaman (2017) found that engineering faculty students had level of satisfaction below average towards e-courses. Bray, Aoki and Dlugosh (2008) found that students who can cope with the difficulties of the online learning process, who can use the computer easily, who can communicate easily with the teachers and who prefer the individual learning process, have higher satisfaction levels. Chua and Montalbo (2014) reached a conclusion that students are satisfied with their work in virtual learning environments. Öztürk, Kara, Özkeskin and Uça Güneş (2017) found that most of the students who took courses through the Anadolum eCampus System were highly satisfied with the eCampus system and at the same time, they found that students were benefiting also the learning and preparation perspective from the system. Findings of the other similar studies related to e-courses and e-learning environments in this field (Leonard & Guha, 2001; Islam & Ferdowsi, 2014; Şirin & Tekdal, 2015) are supporting the findings obtained from this study.

Satisfaction levels towards e-courses differ in the dimensions of "used materials and communication tools" and "attitudes towards e-courses" while they do not differ in the "course content and teaching process", "media design" and "teacher-student interaction" dimensions according to the gender of the teacher candidates. In other words, male students are more satisfied than female students, in the dimensions of "used materials and communication tools" and "attitude towards e-courses". This difference may be because of the male students who study in university are closer to technology, they participate more effectively in learning activities through online environments, and also male students are more positive towards courses in e-learning environments than female students are. Adnan and Boz Yaman (2017) found that the satisfaction levels of e-learning experiences did not differ according to the gender of the students but the satisfaction of the male students was more positive than the female students. There was no difference between the gender of the students and their satisfaction levels towards e-learning and e-courses in the studies of Öztürk et.al. (2017), Shayan and İscioglu (2017) and Chua and Montalbo (2014).

Another result is that satisfaction levels towards e-courses differ only in the dimension of media design while they do not differ in the dimensions of course content and teaching process, used materials and communication tools, attitude towards e-courses and teacher-student interaction according to teacher candidates' departments. In other words, in terms of the dimension of media design, teacher candidates from the department of Computer Education and Instructional are more satisfied than the teacher candidates from the department of Special Education are. Naveh, Tubin and Pliskin (2010) found that there was a low level of correlation between the satisfaction levels of learners and their departments. There is no difference between the satisfaction levels of students towards e-learning and e-courses and their departments or faculties in the studies of Adnan and Boz Yaman (2017), Shayan and İscioglu (2017) and Öztürk and others (2017).

Last result is that satisfaction levels of teacher candidates towards e-courses do not differ according to their high school graduation types and their daily internet usage periods. It can be interpreted that there is no difference since teacher candidates did not have any courses in e-learning environments during high school education.

Moreover, it may be that the satisfaction levels of teacher candidates towards e-courses do not differ according to their daily internet usage periods because of teacher candidates who take courses in e-learning environment do not use the internet only for educational purposes. With this result, it can be interpreted that teacher candidates do not have enough information about e-learning environments and e-courses during high school education.

Considering the results of this study, it is thought that it would be beneficial for the teacher candidates, who will educate the generation of the future, to have more opportunities to study especially in e-learning environments and e-courses. It will be possible to increase the satisfaction levels of teacher candidates when the e-courses are arranged and the necessities for e-courses are given in detail because of this age is the technology age and courses are being taught in e-learning environments at every level of education. This study can be further investigated in detail by a qualitative research methodology and conducting a more in-depth study to improve the satisfaction level towards e-courses.

**REFERENCES**

Adnan ve Boz Yaman (2017). Mühendislik Öğrencilerinin E-Öğrenmeye Dair Beklenti, Hazır Bulunuşluk ve Memnuniyet Düzeyleri. *Turkish Journal of Computer and Mathematics Education*. 8(2), 218-243.

Aydın, C. H. (2003). Uzaktan Eğitimin Geleceğine İlişkin Eğilimler. *Elektrik Mühendisliği*, 419, 29-36.

Beqiri, M. S., Chase, N. M. & Bishka, A (2009). Online Course Delivery: An Empirical Investigation of Factors Affecting Student Satisfaction. *Journal of Education for Business*, 85 (2), 95-100.

Bray, E., Aoki, K. & Dlugosh, L. (2008). Predictors of Learning Satisfaction in Japanese Online Distance Learners. *International Review of Research in Open & Distance Learning*, 9(3), 1-24.

Chua, C. & Montalbo, J. (2014). Assessing Students' Satisfaction on the Use of Virtual Learning Environment (VLE): An Input to a Campus-Wide E-Learning Design and Implementation. *In Informing and Knowledge Management*, 3(4), 108-115.

Çelen, F. K., Çelik, A. ve Seferoğlu, S. S. (2011). Yükseköğretimde Çevrim-İçi Öğrenme: Sistemde Yaşanan Sorunlar ve Çözüm Önerileri. *Journal of European Education*, 1(1), 25-34.

Garrison, D. R. (2011). E-Learning in the 21st Century: A Framework for Research and Proactice. New York: Taylor & Francis.

Gürbüz, F. (2014). Students' Views on Distance Learning in Turkey: An Example of Anadolu University Open Education Faculty. *Turkish Online Journal of Distance Education*, 15(2), 239-250.

İslam, A. & Ferdowsi, S. (2014). Meeting the Needs of Distance Learners of M.Ed Program: Bangladesh Open University Perspective. *Turkish Online Journal of Distance Education*, 15(2), 175-193.

Karasar, N. (2005). Bilimsel Araştırma Yöntemi. Ankara: Nobel Yayın Dağıtım.

Kolburan Geçer, A. & Deveci Topal, A. (2015). Development of Satisfaction Sclae for E-Cource: Reliability and Validity Study. *Journal of Theory and Practice in Education*, 11(4), 1272-1287.

Learnframe, (2000). Facts, Figures & Forces Behind E-Learning.

Leonard, J. & Guha, S. (2001). Education at the Crossroads: Online Teaching and Student' Perspective on Distance Learning. *Journal of Research on Technology in Education*, 34(1), 51-57.

Moore, M.G. & Kearsley, G. (2012). Distance Education: A Systems View of Online Learning. Belmont, CA: Wadsworth Cengage Learning.

Naveh, G., Tubin, D. & Pliskin, N. (2010). Student LMS Use and Satisfaction in Academic Institutionas: The Organizational Perspective. *The Internet and Higher Education*, 13(3), 127-133.

Öztürk, A., Kara, Y., Özkeskin, E. E. & Uça Güneş, E. P. (2017). Açık ve Uzaktan Öğrenenlerin Öğrenme Yönetim Sistemi ve Öğrenme Malzemelerine İlişkin Memnuniyet Durumları. *Anadolu Üniversitesi Açıköğretim Uygulamaları ve Araştırmaları Dergisi*, 3(4), 81-107.

Palmer, S. R. & Holt, D. M. (2009). Exaimining Student Satisfaction with Wholly Online Learning. *Journal of Computer Assisted Learning*, 25, 101-113.

Pena, M. & Yeung, A. (2010). Satisfaction with Online Learning: Does Students' Computer Competence Matter? *International Journal of Technology, Knowledge & Society*, 6(5), 97-108.

Rosenberg, M. J. (2001). E-Learning: Strategies for Delivering Knowledge in the Digital Age, Mcgraw-Hill Companies, New York.

Shayan, P. & İscioğlu, E. (2017). An Assessment of Students' Satisfaction Level from Learning Management Systems: Case Study of Pyamnoor and Farhangian Universities. *Engineering, Technology & Applied Sciences Research*, 7(4), 1874-1978.

Simonson, M., Smaldino, S. E., Albright, M. & Zvacek, S. (2012). Teaching and Learning at a Distance: Foundations of Distance Education. Boston: Pearson Education, Inc.

Sun, P. C., Tsai, R. J., Finger, G., Chen, Y. Y. & Yeh, D. (2008). What Drives a Successful E-Learning? An Empirical Investigation of the Critical Factors Influencing Learner Satisfaction. *Computer & Education*, 50(4), 1183-1202.

Şahin, M., Keskin, S., Özgür, A. & Yurdugül, H. (2017). E-Öğrenme Ortamlarında Öğrenen Özelliklerine Dayalı Etkileşim Profillerinin Belirlenmesi. *Eğitim Teknolojisi Kuram ve Uygulama*, 7(2), 172-792.

Şen Ersoy, N. (2015). Uzaktan İngilizce Dersinin Farklı Değişkenler Açısından İncelenmesi. *Eğitim ve Öğretim Araştırmaları Dergisi*, 4(3), 95-106.

Şirin, R. & Tekdal, M. (2015). İngilizce Dersinin Uzaktan Eğitimine Yönelik Öğrenci Görüşleri. *Gaziantep University Journal of Social Sciences*, 14(1), 323-335.

Tuncer, M. & Taşpınar, M. (2008). Sanal Ortamda Eğitim ve Öğretimin Geleceği ve Olası Sorunlar. *Sosyal Bilimler Dergisi*, 10(1), 125-144.