

The Effect of Online Learning Attitudes of University Students on their Online Learning Readiness

Gülten HERGÜNER

Sakarya University of Applied Sciences, Sports Science Faculty, Sakarya/Turkey
herguner@subu.edu.tr
ORCID: 0000-0002-3087-3684

Saltuk Buğra SON

Ankara Bar Association, Lawyer, Ankara/Turkey
sonsaltukbugra@gmail.com
ORCID: 0000-0001-9899-4530

Sinem HERGÜNER SON

Gazi University, School of Foreign Languages, Ankara/Turkey
herguner0634@gmail.com
ORCID: 0000-0003-3099-6307

Ahmet DÖNMEZ

Sakarya University of Applied Sciences, Graduate Education Institute, Department of Physical Education and Sport Teaching, Sakarya/Turkey
ahmet27donmez27@gmail.com
ORCID: 0000-0001-6754-4369

ABSTRACT

The aim of this study is to determine the effect of online learning attitudes of university students on their online learning readiness. The study was designed with relational screening model. The research group was formed of 306 university students who are selected with the appropriate sampling method from the non-probabilistic sampling methods from (Law Faculty and the departments of English Language Teaching and Physical and Sports) at different state universities. Data of the research were collected through “Online Learning Attitude Scale” developed by Usta, Uysal and Okur (2016), “Online Learning Readiness Scale” developed by Hung, Chou, Chen and Own (2010) and adapted into Turkish by Yurdugül and Alsancak-Sarikaya (2013) and “Personal Information Form” developed by the researchers. Data were analyzed by using descriptive statistics, Pearson correlation and regression technique. Looking into the findings of the study, a moderately significant and positive relation was ascertained between the online learning attitudes of students and their online learning readiness ($p < .05$). Besides, online learning attitude has a meaningful effect on online learning readiness ($p < .05$). In addition, it was determined that online learning attitudes and readiness of students did not differ in a statistically significant manner by faculty/department studied ($p > .05$). This study revealed that online learning attitude of learners has a positive effect on their online learning readiness. As a result, to provide the learner with a decent online learning, it is a need to form basis for online learning readiness by creating a positive online learning attitude.

Keywords: University student, Law, English language teaching, Physical education and sports, Online learning attitude, Online learning readiness.

INTRODUCTION

Today's world is experiencing a number of changes depending on the innovations brought by information and communication technology, which is constantly developing and renewing itself. These changes also manifested themselves in the field of education and this allowed the education environment to be designed with new models. One of these models is online learning. Online learning not only provides convenience for the learner digitally, but also allows the learner to follow the changing and improving conditions actively.

Online learning, which has become an interesting and popular type of learning in the educational environment (Pillay, Irving and Tones, 2007) is a learning process in which students realize learning far from the sources by reaching many learning resources at the same time in an environment different from traditional learning-teaching activities and by interacting more than the class environment in most cases (Çalışkan, 2002). Moreover, Horton (2000) defines online learning as a form of education realized over a browser or applications without a need for an additional software and learning resource.

Online learning not only encourages the use of technology for learning and teaching process (Stein, Shephard and Harris, 2011), but also promotes development of pedagogical subjects focused on learning and use of digital resources and communication tools. This type of learning can successfully support learning and facilitates pedagogical decision-making (Gebre, Saroyan and Bracewell, 2014; Osborne, Dunne and Farrand, 2013). According to a pedagogical perspective, it is highly important to determine and encourage the learning leadership of students for a strong online discussion community (Kim, Wang and Ketenci, 2020). Thinking about the facilitation under the leadership of trainer, this type of learning puts students into more frequent interaction and creates discussion environments (Oh, Huang, Mehdiabadi and Ju, 2018) and allows students to think about their ideas critically (Baran and Correria 2009; Brooks and Jeong, 2006; Hew and Cheung, 2008; Wang, 2008). In addition, the use of technology in education has become inevitable for both individual and social reasons with the developments experienced (Usta, 2011). Thus, students should use technology effectively in order to generate new ideas and express their ideas correctly. It is considered very important for students to be motivated for the online environment, which has become the fastest communication/sharing channels, to take action with online channels and to achieve the necessary motivation in this process.

Online learning is multifaceted (Vandenhouten, Gallagher-Lepak, Reilly and Berg, 2014), students should have online readiness (So and Swatman, 2006) and online attitudes (Usta, Uysal and Okur, 2016) in order to realize this multifaceted learning. Online readiness implies physical and mental readiness for the user to obtain learning experience (Borotis and Poullymenakou, 2004). Online learning attitude can be explained as *“the desire and the manner of the individual towards online learning”*.

In order for this multifaceted online learning to be realized, students must have a certain readiness level. Since the readiness of students allows the advancement of online learning (Hukle, 2009). So we can express that a positive online attitude of the learner forms a basis for online learning readiness. For this purpose, readiness of students should be considered before the process if success is desired for online learning practices (So and Swatman, 2006). Thus, readiness is a directly effective structure for success in online learning environments (Artino, 2009; Galy, Downey and Johnson, 2011; Kruger-Rose and Waters, 2013). Even if the standards of all components of the program are prepared in accordance with the development of distance education programs, the success of the education largely depends on the attitudes and approaches of the learner towards these conditions (Usta et al., 2016). Attitude is a concept with “cognitive, effective and behavioral” dimensions (Tavşancıl, 2006). The realization of online attitude can be ensured by the learner reacting to all stimuli of the electronic environment, activating her/his own thoughts, energy and desire, reacting to the effect and turning it into behavior.

An individual's attitude towards performing the behavior is directly proportional to that individual's intention to perform the behavior (Lee, Qu and Kim, 2007; Arı, Yılmaz and Doğan, 2015). Considered in this framework, the attitude of an individual towards learning can be directly related to that individual's learning (Kara, 2010). Depending on the attitude towards the learning environment, the level of adaptation and success may vary (Birişçi, Metin and Demiryürek, 2011).

Students are among the online learning environments. That is to say, positive or negative attitudes towards education in web-based learning environments largely affect the realization of learning (Sanders and Morrison-Shetlar, 2001; Alomyan and Au, 2004). In this regard, the institutions offering web-based teaching services must consider the attitudes of students (Daniels, Tyler and Christie, 2000). As a matter of fact, if student attitude is not taken into account in the educational environment, it may be difficult to wait for learning experiences to occur (Küçükahmet, 2017). Considering these information, it is indispensable to determine the attitudes of students towards the web-based learning (Donmuş-Kaya and Akpunar, 2019).

Because of coronavirus (COVID-19) epidemic, online learning has increased incrementally in recent months (Li and Lalani, 2020) and rapid transitions to online learning were made at all levels of education in order to reduce the traditional classroom environment where face-to-face communication is very intense and social distance is almost non-existent at times. The number of students who cannot attend schools or universities due to the epidemic is increasing rapidly, governments from all over the world have decided to close educational institutions to control this global epidemic (UNESCO, 2020). This study examines the relation between the attitudes towards online learning and readiness in university education, which has increased rapidly in recent months. In today's world where online learning has increased due to technological developments and the epidemic (COVID-19), this research is thought to be important in that it analyzes the online learning attitude and readiness of students studying in different disciplines of education and Turkish culture and it will guide the future studies. Moreover, this research is thought to provide a contribution and resource to the stakeholders in higher education institutions during the epidemic and post-epidemic education and training process.

METHOD

Research Model

This study was conducted with a “relational screening model” being among the quantitative approaches. According to Karasar, relational screening model is “the research model that aim to determine the existence and / or degree of co-change between two or more variables.” (Karasar, 2018, p. 114).

Research Group

The research group was selected from the non-probabilistic sampling methods with the appropriate sampling method. The sample group is composed of 190 female and 116 male students studying in Law Faculties, Departments of English Language Teaching and Physical Education and Sports Teaching in different state universities of Turkey.

Table 1. Descriptive statistics of the research group

Gender	n	%
Female	190	62.1
Male	116	37.9
Department/Faculty	n	%
Law	103	33.7
English Language Teaching	98	32.0
Physical Education and Sports Teaching	105	34.3
Universities	n	%
Sakarya University	101	33.0
Gaziantep University	33	10.8
Uşak University	21	6.9
Trabzon University	26	8.5
Bartın University	20	6.5
Sakarya University of Applied Sciences	105	34.3
Total	306	100.0

Table 1 shows the descriptive statistics results of the participant students. Accordingly, 62.1% of the participants (n=190) are female and 37.9% of them (n=116) are male students. By faculties, 33.7% of them (n=103) are students of law faculty, 32.0% (n=98) is composed of students in the department of English language teaching and 34.3% (n=105) is the students from the physical education and sports teaching department. Looking at the distribution by universities, 33.0% (n=101) of students from Sakarya University, 10.8% (n=33) of them from Gaziantep University, 6.9% (n=21) from Uşak University, 8.5% (n=26) from Trabzon University, 6.5% (n=20) from Bartın University and 34.3% (n=105) from Sakarya University of Applied Sciences were included in the study.

Data Collection Tools

Data of the research were collected through “Online Learning Attitude Scale” developed by Usta, Uysal and Okur (2016), “Online Learning Readiness Scale” developed by Hung, Chou, Chen and Own (2010) and adapted into Turkish by Yurdugül and Alsancak-Sarıkaya (2013) and “Personal Information Form” developed by the researchers. The detailed information related to measurement tools is given below.

Personal Information Form

Within the scope of the research, "Personal Information Form" developed by the researchers was used in order to determine some demographic information of the students. This form aims to reach such information as gender, university and faculty/department of the students.

Online Learning Attitude Scale

“Online Learning Attitude Scale” used in the research was developed by Usta, Uysal and Okur (2016) on university students. The measurement tool consists of 20 items in 5-point Likert type (1 = Strongly disagree, Strongly agree = 5). Following the statistical analysis, it was determined that the measurement tool had 4 factors: "general acceptance", "individual awareness", "perceived usefulness" and "application effectiveness". According to the results of the factor analysis performed to test the construct validity of the scale, 4 factors including 20 items explain 63.821% of the total variance. Cronbach Alpha internal consistency coefficients of the scale were calculated as .77 for general acceptance, .85 for individual awareness, .79 for usefulness and .68 for application effectiveness and general Cronbach Alpha internal consistency coefficient was found as .90 (Usta, Uysal and Okur, 2016). At the end of the present study, Cronbach Alpha internal consistency coefficients of the scale were calculated as .66 for general acceptance, .89 for individual awareness, .78 for usefulness and .60 for application

effectiveness and general Cronbach Alpha internal consistency coefficient was found as .91. In this study, statistical operations were performed over the total score for the purpose of the research.

Online Learning Readiness Scale

The "Online Learning Readiness Scale" used within the scope of the study was developed by Hung et al. (2010) and adapted into Turkish by Yurdugül and Alsancak-Sırakaya (2013). The measurement tool is in 5-point Likert type (1 = Strongly disagree, Strongly agree = 5) and consists of 20 items. Following the statistical analysis, the measurement tool was found to have 5 factors namely “computer-Internet self-efficacy”, “self-directed learning”, “learner control”, “motivation for learning” and “online communication self-efficacy”. Cronbach Alpha internal consistency coefficients of the scale were found as .92 for computer-Internet self-efficacy, .84 for self-directed learning, .85 for learner control and .80 for motivation for learning and 0.91 for online communication self-efficacy and general Cronbach Alpha internal consistency coefficient was calculated as .87 (Yurdugül and Alsancak-Sırakaya, 2013). At the end of the present study, Cronbach Alpha internal consistency coefficients of the scale were found as .88 for computer-Internet self-efficacy, .70 for self-directed learning, .71 for learner control and .83 for motivation for learning and .76 for online communication self-efficacy and general Cronbach Alpha internal consistency coefficient was calculated as .89. In this study, statistical operations were performed over the total score for the purpose of the research.

Data Collection

Before data collection, the required permissions were taken from Sakarya University of Applied Sciences in order to conduct the research. Due to the corona virus (Covid-19) epidemic, research questions were transferred to the online data collection system. The questions transferred to the online system were conveyed to the students between 19.05.2020 and 08.06.2020 through the dean's office, department heads and faculty members, and the data were collected. In addition, a text describing the purpose of the research was written before the questions in order to ensure the voluntary participation of the students in the research and the “I agree to participate in the research voluntarily” button was added to the system.

Data Analysis

The obtained data of the students were checked one by one. Later, data were arranged and conveyed to SPSS program. Before deciding on the statistical operations to be performed on the data, the conformity of the data to the normal distribution was controlled with the normality test. After the statistical operation performed, data were found to distribute within the range $-1 > \dots < +1$. These values obtained are acceptable for normal distribution (Tabachnick and Fidell, 2013). Data were analyzed by using descriptive statistics, Pearson correlation and regression technique.

FINDINGS

Table 2. The results of the relation between online learning attitudes of students and their online learning readiness

	Online Learning Readiness	
Online Learning Attitude	r	.65
	p	.00**

Table 2 shows the Pearson correlation analysis results indicating the relation between online learning attitudes of students and their online learning readiness. As a result of the analysis, a positive, moderate and significant relation was ascertained between the online learning attitudes of students and their online learning readiness ($r=.65$; $p<.01$).

Table 3. The effect of online learning attitudes of students on their online learning readiness

Model	B	Std. Error	β	t	p
Constant	33,73	2,18	---	15,45	,00
Online Learning Attitude	,49	,03	,64	14,85	,00

R= .65 R^2_{adj} = .42
 $F_{(1.304)} = 220.56$ p= .00

Dependent variable=Online learning readiness

Method: Enter

Table 3 reveals the results of simple linear regression analysis performed to determine the effect of online learning attitudes of students on their online learning readiness. The regression model was found to be statistically significant after the analysis. Looking at the t-test results regarding the significance of regression coefficients, online learning attitude ($\beta = .64$; $t = 14.85$; $p < .01$) was found to be a significant predictor on online learning readiness. It can be stated that 42% of the total variance belonging to online learning readiness is explained with online learning attitude.

Table 4. Comparison of online learning attitudes of students by their faculty/department studied

	Faculty/Department Studied	n	\bar{X}	sd	F	p
Online Learning Attitude	Law Faculty	103	64.81	13.31	.70	.50
	English Language Teaching	98	62.37	16.09		
	Physical Education and Sports Teaching	105	64.01	15.01		

Table 4 shows the one-way variance ANOVA analysis results used to compare the online learning attitudes of students by the faculty/department studied. In the light of the analysis, it was determined that online learning attitudes of students did not differ in a statistically significant manner by faculty/department studied ($F = .70$; $p > .05$).

Table 5. Comparison of online learning readiness of students by their faculty/department studied

	Faculty/Department Studied	n	\bar{X}	sd	F	p
Online Learning Readiness	Law Faculty	103	63.89	10.23	2.75	.07
	English Language Teaching	98	64.63	10.87		
	Physical Education and Sports Teaching	105	67.37	12.50		

Table 5 shows the one-way variance ANOVA analysis results used to compare the online learning readiness of students by the faculty/department studied. The analysis showed that online learning readiness of students did not differ in a statistically significant manner by faculty/department studied ($F = 2.75$; $p > .05$).

DISCUSSION, CONCLUSION AND SUGGESTIONS

This study aims to examine the effect of online learning attitude of university students on online learning readiness. In this regard, 306 students studying in Law Faculties, Departments of English Language Teaching and Physical Education and Sports Teaching in different state universities of Turkey participated in the research. Many educators and researchers have emphasized the importance of network technology in terms of helping learners as learning is a social process (Liu & Tsai, 2008). The Internet, one of the most important inventions of the century, provided the opportunity of continuous learning with online learning, which enables learners reach information comfortably and without any place restriction. This situation drew attention to the importance of online attitude and online readiness concepts.

As a result of the research, a moderately significant and positive correlation was found between online learning attitudes of university students and their online learning readiness. In addition, it has been concluded that online attitude predicts online readiness significantly and online attitude has 42% of the total variance in explaining online readiness. The result of this research has proved that if the readiness of students in online education is desired to be high, it is necessary to keep their online attitudes high.

Online learning continues to become popular in disciplines where course content and teaching process is appropriate for teaching time (Arbaugh, 2000; Dahalan, Hassan, & Atan, 2012). Even though the effects of this educational process on students are a matter of debate (Kirtman, 2009; Yoany, 2006), some studies argue that students bring a different approach to this journey in the educational process (Bernard et al, 2004; DiMaria-Ghalili, Ostrow, & Rodney, 2005). Online learning has become a form of learning that has increased its popularity in higher education institutions in recent years and meets the demands with the opening of new online learning programs every day (Tallent-Runnels et al., 2006; Zandberg and Lewis, 2008; Hung et al., 2010). It has become inevitable that students have a positive attitude and behavior towards this increasingly widespread learning style. Considering the learning process, a student's attitude is important for the learning process (Chapman and Van Auken, 2001). Student attitude in the learning process has a strong impact on behavior (Arbaugh, 2000; Arbaugh, 2010; Bernard et al., 2004). Low performances can be in relation to a bad attitude

(Sadik and Reisman, 2004). As a matter of fact, one of the difficulties teachers often encounter during the teaching phase is to form positive student attitudes (Prior, Mazanov, Meacheam, Heaslip, & Hanson, 2016). In addition, attitudes are an important tool for students to encourage themselves (Love, Love and Northcraft, 2010). If the attitude is negative or condescending, the learner's chance to enter any learning process decreases (Prior et al., 2016). Previous research has indicated that there is little difference between face-to-face and distance learning in terms of learning outcomes whereas there is a difference in students' experience of life (Cooper, 2001; Waldman, Perreault, Alexander, & Zhao, 2009). This is the point where the importance of individual differences, which covers attitude and readiness in learning process as well, comes to the stage. That is to say, learners with positive attitude towards online learning are expected to show far more readiness to acquire knowledge, which would most probably lead them have further and more qualified learning outcomes, and thus higher academic success. In the light of this information, the importance of positive attitude in the online learning environment has been clearly revealed as a result of the research. Since the positive attitude and its significant effect on the student's learning readiness show that the results of this research are consistent with the information given above. A clear result of the positive attitude and the significant effect on learning readiness of the student indicates that the findings of this research and the above information are consistent. It is reported in studies in the literature that when learners have a positive attitude towards online learning, they are more satisfied with learning and learning is effective (Piccoli, Ahmad and Ives, 2001; Ku, Tseng, & Akarasriworn, 2013) as well as keeping their motivation and interest alive (Yang & Lin, 2010).

Online learning readiness, which is another aspect of online learning that has become very popular in educational institutions (Hung et al., 2010), is significantly explained by the online learning attitude. The concept of readiness is a variable that is frequently mentioned and measured in distance education, e-learning and online learning research (Horzum and Çakır, 2012; Fogerson, 2005; Smith, 2005; Watkins, Leigh and Triner, 2004; Smith, Murphy and Mahonay, 2003). The researches conducted emphasize the importance of motivation in online learning (Smith et al., 2003; Lim, 2004). The research results have revealed that motivation, being very important in online learning, plays an important role on students' attitudes and learning behaviors (Deci and Ryan, 1985; Fairchild, Horst, Finney and Barron, 2005; Ryan and Deci, 2000). Indeed, the concept of learning occurs through strong interactions and relationships between cognitive and motivational variables (Pintrich and Schunk, 2002; Stefanou and Salisbury-Glennon, 2002). The motivated individual's interest in the subject in performing the behaviors affects her/his attitude and intention in the subject to get the behavior in action, and this intention affects the actual behavior (Ari et al., 2015). Positive attitudes can lead the individual to well-motivated behavior. In this regard, positive attitude towards online learning directly affects the readiness for online learning. In other words, an action-reaction event, or being motivated to act and to show an attitude is to transform into behavior. As a matter of fact, the result of the present research supports this view.

The existence of the studies indicating the positive effect of readiness on learning is observed (Demir-Kaymak and Horzum, 2013; Hukle, 2009; Watkins et al., 2004; So and Swatman, 2006; Artino, 2009; Galy et al., 2011; Kruger-Rose and Waters, 2013). Moreover, many research results analyzing such factors as computer technologies and internet quality which affect online readiness have been reported (Eom, 2014; İlhan and Çetin, 2013; Wu, Tennyson & Hsia, 2010; Shee & Wang, 2008; Sun, Tsai, Finger, Chen & Yeh, 2008). These findings indicate that the convenience provided by technology to the individual can create positive attitudes in this individual towards technology. Ultimately, these positive attitudes also have a direct impact on readiness. Readiness covers the maturity level of the learner, her/his interests, needs, attitudes, motives, pre-learning, abilities and general health conditions. Readiness is also the state of the learner to be ready to learn physically, socially and mentally. In order to create a decent online learning readiness, positive online attitude must exist. The lack of one of these affects the others negatively. In short, online readiness means that the learner is ready and motivated in every way to receive information.

Another finding of the study is that online attitude and online readiness do not differ according to the faculty / department studied. It is thought that the main factor underlying this result is that the students who make up the sample receive education in social sciences such as Law, English, Physical Education and Sports. There are not only the studies supporting this finding in the literature (Adnan and Boz-Yaman, 2017), but also other studies differing from the research results (Yılmaz, Sezer and Yurdugül, 2019). The literature and the results of this research clearly show that the way for a qualified online learning is through establishing a positive online attitude and creating the basis for a successful online learning readiness. This study has revealed that learners' online attitudes have a positive effect on their online readiness. Thus, the results of the literature coincide with the results of our study. In subsequent research, it is recommended to conduct comparative studies on science students and social science students and to conduct similar studies at other levels of education where large sample groups and departments would be included.

REFERENCES

- Adnan, M., & Boz-Yaman, B. (2017). Mühendislik öğrencilerinin e-öğrenmeye dair beklenti, hazır bulunuşluk ve memnuniyet düzeyleri. *Turkish Journal of Computer and Mathematics Education*, 8(2), 218-243.
- Alomyan, H., & Au, W. (2004). Exploration of instructional strategies and individual difference within the context of web-based learning. *International Education Journal*, 4(4), 86-91.
- Arbaugh, J. B. (2000). How classroom environment and student engagement affect learning in Internet-based MBA courses. *Business Communication Quarterly*, 63(4), 9-26.
- Arbaugh, J. B. (2010). Sage, guide, both, or even more? An examination of instructor activity in online MBA courses. *Computers & Education*, 55(3), 1234-1244.
- Arı, E., Yılmaz, V., & Doğan, M. (2015). Üniversite öğrencilerinin internet üzerinden alışverişlerine ilişkin tutum ve davranışların önerilen bir yapısal eşitlik modeliyle araştırılması. *Yönetim ve Ekonomi*, 22(2), 385-399.
- Artino Jr, A. R. (2009). Online learning: Are subjective perceptions of instructional context related to academic success?. *The Internet and Higher Education*, 12(3-4), 117-125.
- Baran, E., & Correia, A. P. (2009). Student-led facilitation strategies in online discussions. *Distance Education*, 30(3), 339-361.
- Bernard, R. M., Abrami, P. C., Lou, Y., Borokhovski, E., Wade, A., Wozney, L., Walseth, P.A., Fiset, M., & Huang, B. (2004). How does distance education compare with classroom instruction? A meta-analysis of the empirical literature. *Review of educational research*, 74(3), 379-439.
- Birişçi, S., Metin, M., & Demiryürek, G. (2011). İlköğretim öğretmenlerinin bilgisayar ve internet kullanımına yönelik tutumlarının incelenmesi: (Artvin ili örneği). *Eğitim Teknolojileri Araştırmaları Dergisi*, 2(4).
- Borotis, S., & Poulymenakou, A. (2004). E-learning readiness components: Key issues to consider before adopting e-learning interventions. In *E-Learn: World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education* (pp. 1622-1629). Association for the Advancement of Computing in Education (AACE).
- Brooks, C. D., & Jeong, A. (2006). Effects of pre-structuring discussion threads on group interaction and group performance in computer-supported collaborative argumentation. *Distance Education*, 27(3), 371-390.
- Chapman, K. J., & Van Auken, S. (2001). Creating positive group project experiences: An examination of the role of the instructor on students' perceptions of group projects. *Journal of Marketing Education*, 23(2), 117-127.
- Cooper, L. W. (2001). A comparison of online and traditional computer applications classes. *Higher Education Journal*, 28(8), 52-58.
- Çalışkan, H. (2002). *Çevrimiçi (Online) eğitimde öğrenci etkileşimi*. Eskişehir: Açık ve Uzaktan Eğitim Sempozyumu.
- Dahalan, N., Hassan, H., & Atan, H. (2012). Student engagement in online learning: Learners attitude toward e-mentoring. *Procedia-Social and Behavioral Sciences*, 67, 464-475.
- Daniels, M., Tyler, J., & Christie, B. (2000). *On-line instruction in counselor education: possibilities, implications and guidelines*. Virginia: American Counseling Association.
- Deci, E., & Ryan, R. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum Press
- Demir-Kaymak, Z., & Horzum, M. B. (2013). Çevrimiçi öğrenme öğrencilerinin çevrimiçi öğrenmeye hazır bulunuşluk düzeyleri, algıladıkları yapı ve etkileşim arasındaki ilişki. *Kuram ve Uygulamada Eğitim Bilimleri*, 13(3), 1783-1797.
- DiMaria-Ghalili, R. A., Ostrow, L., & Rodney, K. (2005). Webcasting: A new instructional technology in distance graduate nursing education. *Journal of Nursing Education*, 44(1), 11-18.
- Donmuş-Kaya, V., & Akpunar, B. (2019). Öğretim etkinlikleri modeli'ne dayalı çevrimiçi öğrenme ortamının öğrencilerin çevrimiçi öğrenme ortamına yönelik tutumlarına etkisi. *Fırat Üniversitesi Sosyal Bilimler Dergisi*, 29(1), 181-191.
- Eom, S. B. (2014). Understanding e-learners' satisfaction with learning management systems. *Bulletin of the IEEE Technical Committee on Learning Technology*, 16(2), 3.
- Fairchild, A. J., Horst, S. J., Finney, S. J., & Barron, K. E. (2005). Evaluating existing and new validity evidence for the academic motivation scale. *Contemporary Educational Psychology*, 30(3), 331-358.
- Fogerson, D. L. (2005). Readiness factors contributing to participant satisfaction in online higher education courses (Doctoral dissertation). *ProQuest Dissertations and Theses database, Section*, 226.
- Galy, E., Downey, C., & Johnson, J. (2011). The effect of using e-learning tools in online and campus-based classrooms on student performance. *Journal of Information Technology Education: Research*, 10(1), 209-230.
- Gebre, E., Saroyan, A., & Bracewell, R. (2014). Students' engagement in technology rich classrooms and its relationship to professors' conceptions of effective teaching. *British Journal of Educational Technology*, 45(1), 83-96.

- Hew, K. F., & Cheung, W. S. (2008). Attracting student participation in asynchronous online discussions: A case study of peer facilitation. *Computers & Education*, 51(3), 1111-1124.
- Horton, W. (2000). *Designing web based training*. New York: John Wiley & Sons.
- Horzum, M. B., & Cakır, O. (2012). Structural equation modeling in readiness, willingness and anxiety of secondary school students about the distance learning. *Procedia-Social and Behavioral Sciences*, 47, 369-375.
- Hukle, D.R. L. (2009). *An evaluation of readiness factors for online education*, Mississippi State University, Unpublished Doctoral dissertation, Mississippi.
- Hung, M. L., Chou, C., Chen, C. H., & Own, Z. Y. (2010). Learner readiness for online learning: Scale development and student perceptions. *Computers & Education*, 55(3), 1080-1090.
- İlhan, M., & Çetin, B. (2013). Çevrimiçi öğrenmeye yönelik hazır bulunuşluk ölçeği'nin (ÇÖHBÖ) Türkçe formunun geçerlik ve güvenilirlik çalışması. *Eğitim Teknolojisi Kuram ve Uygulama*, 3(2), 72-101.
- Kara, A. (2010). Öğrenmeye ilişkin tutum ölçeğinin geliştirilmesi. *Elektronik Sosyal Bilimler Dergisi*, 9(32), 49-62.
- Karasar, N. (2018). *Bilimsel araştırma yöntemleri: Kavramlar, ilkeler ve teknikler*. (32.Baskı). Ankara: Nobel Yayın Dağıtım.
- Kim, M. K., Wang, Y., & Ketenci, T. (2020). Who are online learning leaders? Piloting a leader identification method (LIM). *Computers in Human Behavior*, 105, 106205.
- Kirtman, L. (2009). Online versus in-class courses: An examination of differences in learning outcomes. *Issues in Teacher Education*, 18(2), 103-116.
- Kruger-Ross, M. J., & Waters, R. D. (2013). Predicting online learning success: Applying the situational theory of publics to the virtual classroom. *Computers & Education*, 61, 176-184.
- Ku, H. Y., Tseng, H. W., & Akarasriworn, C. (2013). Collaboration factors, teamwork satisfaction, and student attitudes toward online collaborative learning. *Computers in human Behavior*, 29(3), 922-929.
- Küçükahmet, L. (2017). *Öğretim ilke ve yöntemleri* (27. Baskı). Ankara: Nobel Yayın Dağıtım
- Lee, H. Y., Qu, H., & Kim, Y. S. (2007). A study of the impact of personal innovativeness on online travel shopping behavior-A case study of Korean travelers. *Tourism Management*, 28(3), 886-897.
- Li, C., & Lalani, F. (2020). The COVID-19 Pandemic has changed education forever. This is how. World Economic Forum. URL <https://www.weforum.org/agenda/2020/04/coronavirus-education-global-covid19-online-digital-learning> A.D. 13.07.2020.
- Lim, D. H. (2004). Cross cultural differences in online learning motivation. *Educational Media International*, 41(2), 163-175.
- Liu, C. C., & Tsai, C. C. (2008). An analysis of peer interaction patterns as discoursed by on-line small group problem-solving activity. *Computers and Education*. 50(3), 627-639.
- Love, E. G., Love, D. W., & Northcraft, G. B. (2010). Is the end in sight? Student regulation of in-class and extra-credit effort in response to performance feedback. *Academy of Management Learning & Education*, 9(1), 81-97.
- Oh, E. G., Huang, W. H. D., Mehdiabadi, A. H., & Ju, B. (2018). Facilitating critical thinking in asynchronous online discussion: comparison between peer-and instructor-redirection. *Journal of Computing in Higher Education*, 30(3), 489-509.
- Osborne, R., Dunne, E., & Farrand, P. (2013). Integrating technologies into “authentic” assessment design: An affordances approach. *Research in Learning Technology*, 21.
- Piccoli, G., Ahmad, R., & Ives, B. (2001). Web-based virtual learning environments: A research framework and a preliminary assessment of effectiveness in basic IT skills training. *MIS quarterly*, 401-426.
- Pillay, H., Irving, K., & Tones, M. (2007). Validation of the diagnostic tool for assessing tertiary students' readiness for online learning. *High Education Research & Development*, 26(2), 217-234.
- Pintrich, P. R., & Schunk, D. H. (2002). *Motivation in education: Theory, research, and applications* (2nd ed.). Upper Saddle River, NJ: Merrill/Prentice Hall
- Prior, D. D., Mazanov, J., Meacheam, D., Heaslip, G., & Hanson, J. (2016). Attitude, digital literacy and self efficacy: Flow-on effects for online learning behavior. *The Internet and Higher Education*, 29, 91-97.
- Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25(1), 54-67.
- Sadik, A., & Reisman, S. (2004). Design and implementation of a web-based learning environment: Lessons learned. *Quarterly Review of Distance Education*, 5(3), 157-171,228.
- Sanders, D. W., & Morrison-Shetlar, A. I. (2001). Student attitudes toward web-enhanced instruction in an introductory biology course. *Journal of Research on Computing in Education*, 33(3), 251-262.
- Shee, D. Y., & Wang, Y. S. (2008). Multi-criteria evaluation of the web-based e-learning system: A methodology based on learner satisfaction and its applications. *Computers & Education*, 50(3), 894-905.
- Smith, P. J. (2005). Learning preferences and readiness for online learning. *Educational Psychology*, 25(1), 3-12.

- Smith, P. J., Murphy, K. L., & Mahoney, S. E. (2003). Towards identifying factors underlying readiness for online learning: An exploratory study. *Distance Education, 24*(1), 57-67.
- So, T., & Swatman, P.M.C. (2006). *E-Learning readiness of Hong Kong teachers. Hong Kong IT in Education Conference 2006 "Capacity Building for Learning through IT"* (HKITEC2006), February 6–8, 2006, Hong Kong Exhibition and Convention Centre, Hong Kong.
- Stefanou, C. R., & Salisbury-Glennon, J. D. (2002). Developing motivation and cognitive learning strategies through an undergraduate learning community. *Learning Environments Research, 5*(1), 77-97.
- Stein, S. J., Shephard, K., & Harris, I. (2011). Conceptions of e-learning and professional development for e-learning held by tertiary educators in New Zealand. *British Journal of Educational Technology, 42*(1), 145-165.
- 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. *Computers & Education, 50*(4), 1183-1202.
- Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics*, 6th edn Boston. Ma: Pearson.
- Tallent-Runnels, M. K., Thomas, J. A., Lan, W. Y., Cooper, S., Ahern, T. C., Shaw, S. M., & Liu, X. (2006). Teaching courses online: A review of the research. *Review of Educational Research, 76*(1), 93-135.
- Tavşancıl, E. (2006). *Tutumların ölçülmesi ve SPSS ile veri analizi*. (3. Baskı). Ankara: Nobel Yayınları.
- UNESCO. (2020). URL:<https://en.unesco.org/news/covid-19-educational-disruption-and-response> A.D. 13.07.2020
- Usta, E. (2011). The effect of web-based learning environments on attitudes of students regarding computer and internet. *Procedia-Social and Behavioral Sciences, 28*, 262-269.
- Usta, İ., Uysal, Ö., & Okur, M. R. (2016). Çevrimiçi öğrenme tutum ölçeği: Geliştirilmesi, geçerliği ve güvenilirliği. *Journal of International Social Research, 9*(43).
- Vandenhouten, C., Gallagher-Lepak, S., Reilly, J., & Ralston-Berg, P. (2014). Collaboration in e-learning: A study using the flexible e-learning framework. *Online Learning, 18*(3), n3.
- Waldman, L., Perreault, H., Alexander, M., & Zhao, J. (2009). Comparing the perceptions of online learning between students with experience and those new to online learning. *Information Technology, Learning, and Performance Journal, 25*(2), 20.
- Wang, Q. (2008). Student-facilitators' roles in moderating online discussions. *British Journal of Educational Technology, 39*(5), 859-874.
- Watkins, R., Leigh, D., & Triner, D. (2004). Assessing readiness for e-learning. *Performance Improvement Quarterly, 17*(4), 66-79.
- Wu, J. H., Tennyson, R. D., & Hsia, T. L. (2010). A study of student satisfaction in a blended e-learning system environment. *Computers & Education, 55*(1), 155-164.
- Yang, Y., & Lin, N. C. (2010). Internet perceptions, online participation and language learning in Moodle forums: A case study on nursing students in Taiwan. *Procedia-Social and Behavioral Sciences, 2*(2), 2647-2651.
- Yılmaz, R., Sezer, B., & Yurdugül, H. (2019). Üniversite öğrencilerinin e-öğrenmeye hazır bulunuşluklarının incelenmesi: Bartın Üniversitesi Örneği. *Ege Eğitim Dergisi, 20*(1), 180-195.
- Yoany, B. (2006). Distance education trends: Integrating new technologies to foster student interaction and collaboration. *Distance Education, 27*(2), 139–153.
- Yurdugül, H., & Alsancak-Sırakaya, D. (2013). Çevrimiçi öğrenme hazır bulunuşluluk ölçeği: Geçerlik ve güvenilirlik çalışması. *Eğitim ve Bilim, 38*(169).
- Zandberg, I., & Lewis, L. (2008). *Technology-based distance education courses for public elementary and secondary school students: 2002-03 and 2004-05*. National Center for Education Statistics, Institute of Education Sciences, US Department of Education.