

## THE RELATIONSHIP BETWEEN PROSPECTIVE TEACHERS' READINESS AND SATISFACTIONS ABOUT WEB-BASED DISTANCE EDUCATION

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### ABSTRACT

Distance education is a kind of education in which learner and teacher communicate through a means either simultaneously or at different times being present in different places. In this study, it is aimed to determine the prospective teachers' readiness and satisfaction levels after the procedure related with the courses which they take through distance education. Correlational study model is used in the study. The study was conducted with 261 undergraduate students who took some of the courses distantly in diverse undergraduate programs in the faculty of education at Abant Izzet Baysal University, Bolu, Turkey and 232 students of pedagogical formation in the same faculty. The participants of the study consisted of 493 prospective teachers. In the study, "e-Readiness Scale" and "e-Satisfaction Scale" were used as data collection tools. As a result, the levels of readiness and satisfaction from web based distance education of prospective teachers was found to be above the mean score. Readiness levels according to the sub dimensions of the Readiness Scale were generally positive; however, prospective teachers thought that they were equipped in the subjects including the sub dimensions of "technical skills" and "factors that affect success". It was determined that prospective teachers were generally satisfied with the subjects related to all the sub dimensions of the Satisfaction Scale. It was revealed that there was a meaningful relationship between readiness and satisfaction levels. The readiness and satisfaction levels of the prospective teachers having pedagogical formation education were higher when compared to those of the prospective teachers of education faculty. The department having the highest readiness and satisfaction levels was History-Geography department.

**Keywords:** Web-based distance education, e-readiness, e-satisfaction, online learning, prospective teacher.

### INTRODUCTION

Communication technologies have great importance in people's lives nowadays since they are used frequently both in daily life and business life. Hence, computer and communication technologies used in the education recently have enabled the style, model, time and place

of the education to be different than the traditional education. Technology-based learning environments bring along very different lesson design and needs from the traditional teaching (Ates & Altun, 2008). Distance education is a teaching style giving the opportunity to use information and communication technologies at the highest level. That digital information processing and communication develop rapidly create a set of teaching and learning opportunity. Distance education is a way of teaching which is realized by student learners and teachers being present at different places in different times (Kramer, Neugebauer, Magenheimer & Huppertz, 2015; Offir & Lev, 1999). In its broader sense, distance education is teaching and planned learning in which teaching normally occurs in a different place from learning, requiring communication through technologies as well as special institutional organization (Moore & Kearsley, 2011). In this definition, education concept is used in order to explain the interaction between the teacher and the student. The interaction between teacher and learner might be provided by learning materials such as computers, videoconference, internet, fax, phone or texting. Distance education allows the information to be transferred from some place to another place and rapid development of computer and electronic technologies contributes to increase the efficiency of distance education (Offir & Lev, 1999). The necessities of the current era lead many educational institutions, companies and public institutes to give education to the personnel and students by using distance education (Baris, 2015). Since the sense of lifelong learning is becoming more and more important, many institutions provide opportunities for people to renew and improve themselves via distance education they give.

Therefore, distance education has become an education model applying lesson materials and the interaction by using communication technologies without having time or place limitations of the learner and teacher (Horzum, 2003). This education model which is also called web-based distance education is allowing to follow the teaching program from various places via internet developed in one place. Web-based distance education provides independence from place and distance and enables people to participate in the teaching program via internet in any time of the day (independent from time) by using a computer platform (independent from tool) from all over the world (independent from distance) (Altıparmak, Kurt & Kapidere, 2011). Web-based instruction provide the active participation of the students to the education program and learning activities offered to them via only computer and internet connection at anytime and anywhere. E-learning environments provide synchronous and asynchronous communication and interactions between and among students and these learning environments can create social development of students through their interactions (Bicen, Ozdamli & Uzunboylu, 2014). The new generation of distance education pioneered by England and the USA provides education in the levels of undergraduate, post graduate and doctorate as online (Tao & Yeh, 2008). Fayne (2014) pointed out that since the mid-1990s, with the technological advances that have made online learning both viable and popular, researchers have been reporting on the unique affordances and challenges of Web-based learning. Downing & Dyment (2013) in this regard stated the widespread use of online teaching and learning in education in general. According to them (2013) the adoption of online teaching and learning in the higher education sector has been widespread and is now found across a wide range of disciplines (e.g., business, education, health, psychology, accounting, information technology) and program levels (e.g., from associate to doctoral degrees). Higher education institutions develop online programs and organizations and give more importance to improving the quality of online lessons with the online learning becoming widespread (He, Xu & Kruck, 2014; Rovai & Downey, 2010). For the efficiency of an online lesson, great effort has been put on the design, development, teaching and evaluation of a lesson (He, Xu & Kruck, 2014; Kramer, Neugebauer, Magenheimer & Huppertz, 2015). One of the elements emphasized on this subject is to identify how ready the students are to get web-based distance education and how sufficient they feel themselves before starting this education process and provide a suitable distance education to them. This concept named as readiness to e-learning is defined as "to be ready for the experience of e-learning psychologically and mentally" (Borotis & Poulymenakou, 2004; So & Swatman, 2006). The term e-readiness might be explained as the capacity to follow the opportunities allowing the use of electronic resources such as internet (Kaur & Abas, 2004). The e-readiness is one

of the important elements to be emphasized in stages of design and organization of e-learning so that distance education becomes effective and students become successful. Identifying the e-readiness enables to apply the aims of computer and communication technologies efficiently and design e-learning strategies comprehensively (Kaur & Abas, 2004).

As discussed above, it is required to identify the e-readiness of the individuals participating in online learning process, and also to identify their satisfaction at the end of the education in order for distance learning to become successful. The expectation of the student and the experience in an online lesson should be matched. The notion of e-satisfaction is defined as the interactivity, task-orientation, teaching support, technological support, discussion, flexibility and being ergonomic provided to students during e-learning process (Wickersham & McGee, 2008). Sun, Tsai, Finger, Chen & Yeh (2008) identified the important factors affecting the satisfaction of students in e-learning as confirming the literature computer anxiety of the learner, teacher attitude towards e-learning, flexibility of e-learning lesson, lesson quality of e-learning, usefulness which is perceived, the easiness of use which is perceived and evaluation variety. Higher education institutes essentially need to identify e-readiness and expectation levels of students in order to develop efficient distance education programs to provide the satisfaction of students in these factors. There are studies examining the relationship between e-readiness and satisfaction of the students getting distance education in the literature (Deveci Topal, 2016; Gunawardena & Duphorne, 2001; Ilgaz & Gulbahar, 2015; Paechter, Maier & Macher, 2010; Sahin & Shelley, 2008). Whereas the use of distance education in the education world especially in teacher education is very old, the use of web-based distance education is new. Teacher training programs in accordance with information and communication technologies have played an important role in distance education. In this sense, distance education is used to provide career development of the teachers both in undergraduate education and in in-service training (Gelislil, 2015; Shepherd, Bolliger, Dousay & Persichitte, 2016). Nowadays, universities open distance education associate degree, undergraduate degree, post graduate and certificate programs. Some universities prefer distance education as an element supporting formal education (Baris, 2015). However, as mentioned here, distance education should be used as an element supporting face to face education in teacher training. Hence, distance learning presents a new and wide point of view to how teaching and learning might be. However, this viewpoint does not mean that distance education takes over face to face education. New technologies provide wider opportunities for distance education and the use of these technologies becomes very effective in meaningful and permanent learning to take place in the learning and teaching processes (Bicen, Ozdamli & Uzunboylu, 2014; Hsu & Bruce, 1998). In this scope, when distance education is used in teacher training, a school-based teacher training might be done by creating different applications for theoretical and applied courses. Training might be supported by doing theoretical courses with the techniques and methods of distance education and applied courses in faculties and schools (Gelislil, 2015). Fayne (2014) emphasized that when distance education is used as a means of training of preservice teachers, online programs should be developed carefully and proposed that they should be together with face to face education.

From this viewpoint, prospective teachers studying in departments of teaching in the faculty of education and the ones who study in other areas than teaching but getting pedagogical formation education have been included in this research. Web-based distance education in these two kinds of education programs (undergraduate program and pedagogical formation program) given in the faculty of education has been used in teaching of some theoretical lessons. It is considered significant with this research to identify the e-readiness and expectations and satisfactions of prospective teachers towards giving some theoretical lessons with distance education which has been applied for the first time in the faculty of education. Bof (2004) has emphasized the importance of designing a training program to meet the needs and expectations and to provide the satisfaction at the end of training by identifying what kind of training system prospective teachers need and their expectations especially in the models applying distance education in teacher training.

Meanwhile, satisfaction is a key factor in improving effective course content to meet the expectations and desire of students (Calli, Balcikanli, Calli, Cebeci & Seymen, 2013; Teo, 2010). According to Gulbahar (2012), in e-learning environments the investigation / the identification of the students' satisfaction about the whole process is important, for this purpose the students' opinions should be revealed and pointed out that the students' satisfaction levels should be controlled periodically during the process and necessary changes should be made accordingly. This will lead to the continuous improvement of the e-learning programs in implementation and the programs will be more useful for the students. Meanwhile, identifying the students' readiness levels and doing instruction according to course objectives are considered as important learning and teaching principles for effective teaching process (Aykac, 2014). These principles are taken into account during the development of e-learning environments and processes. Therefore; indicators of the students' readiness levels and students' satisfaction criteria should be taken into consideration during the development of e-learning programs used in teacher education programs in particular. when the present study is concerned, the findings of the study related to the prospective teachers' e-learning readiness levels and satisfaction levels can be used for the development of e-learning programs implemented in teacher education, can be used for making decisions as to whether to implement e-learning and distance education as a means in teacher education or not. Even though the literature presents various studies about individuals' e-learning readiness levels and satisfaction levels in e-learning courses (Adnan, Kalelioglu & Gulbahar, 2017; Brinkerrhoff & Koroghlanian, 2007; Cole, Shelley. & Swartz, 2014; Deveci Topal, 2016; Gunawardena & Duphorne, 2001; Ilgaz & Gulbahar, 2015; Kirmizi, 2015; Korkmaz, Cakir & Tan, 2015; Lemos, & Pedro, 2012; Sahin & Shelley, 2008), a few studies are observed about identifying novice teachers' and prospective teachers' e-learning readiness and satisfaction levels (Cain & Phillip, 2013; Paechter, Maier & Macher, 2010; Kennedy, Cavanaugh & Dawson, 2013). Therefore; it is believed that this study is important to fill the gap in the literature about the subject area.

In the present study, therefore, it is aimed to determine the prospective teachers' readiness and satisfaction levels after the procedure related with the courses which they take through distance education. In line with the aim of the study, the following questions below were answered in the study:

- What are the readiness and satisfaction levels of prospective teachers about distance education?
- Is there a significant difference between, readiness levels and satisfaction levels of prospective teachers about distance education?
- Do readiness levels of prospective teachers significantly differ as to their subject-area and their education programs? (education faculty students and pedagogical formation students )
- Do satisfaction levels of prospective teachers significantly differ as to their subject-area and their subject-area and their education programs? (education faculty students and pedagogical formation students )

## **METHODOLOGY**

### **Research Approach**

This is a correlational study. Correlational studies, investigate the possibility of relationships between two or more variables. "A major purpose of correlational research is to clarify our understanding of important phenomena by identifying relationship among variables" (Fraenkel & Wallen , 2006). In this study, therefore, the relationship between the prospective teachers' readiness levels and satisfaction levels about distance education were examined with regard to certain variables (their subject-area, their education program).

## Participants

There are twelve teacher training undergraduate programs at Abant Izzet Baysal University Education Faculty and since 2014 -2015 academic year a distance education program was initiated in all programs. In this respect, since 2014 -2015 academic year in the freshman year, the students in all programs take "Ataturk's Principles and Revolutionary History – I,II", "Foreign Language-I,II" and "Turkish I-Writing Skills", Turkish II-Speaking Skills" courses via web -based distance education. Meanwhile, pedagogical formation program is provided for university graduates who are the graduates of different faculties at Abant Izzet Baysal University Education Faculty in order to gain teaching professional knowledge, skills and competencies. Since 2015 – 2016 academic year, pedagogical formation students take the following courses, namely; "Teaching Principles and Methods" "Individualized Teaching", "Curriculum Development", "History of Education" and "Use of Technology in Education" via web-based distance education. While nearly nine hundred prospective teachers at Abant Izzet Baysal University Education Faculty take the courses mentioned above via distance education since 2014 -2015 academic year, one thousand five hundred pedagogical formation students from different faculties take the courses mentioned above via web-based distance education since 2015 -2016 academic year. The participants of the present study is formed by totally (n=493) prospective teachers (n=261) of them are undergraduate prospective teachers and (n=232) of them are pedagogical formation students.

Table 1. Participants

Gender	N	%
Male	116	23,5
Female	377	76,5
Subject Area	N	%
Classroom Teaching Department	150	30,4
Social Studies Teaching Department	45	9,1
Psychological Counseling and Guidance	37	7,5
Music Teaching Department	29	5,9
History-Geography	112	22,8
Philosophy-Sociology-Psychology	120	24,3
TOTAL	493	100,0

Information about participants' gender and subject area are presented in Table 1. The prospective teachers who formed the study group have not participated any distance education program before. When the study group is examined in terms of their gender, it is seen that 76.5 % (n=377) were female prospective teachers and 23.5 % (n=116) were male prospective teachers (Table 1). When they are examined with respect to their subject area as in Table 1 , it is seen that prospective teachers of Education Faculty (n=261) 30,4 % of them (n=150) were the students of Classroom Teaching Department , 9,1 % of them were (n=45) the students of Social Studies Teaching Department, 7,5 % of them were (n=37) the students of Psychological Counseling and Guidance, 5,9 % of them were (n=29) the students of Music Teaching Department. When pedagogical formation students (n=232) are examined, it is seen that 22,8 % of them (n=112) were the students of History-Geography, 24,3 % of them were (n=120) either the graduates of Philosophy-Sociology-Psychology departments or fourth year students of these subject areas (see Table 1).

## Data Analysis

The data were analyzed through the SPSS for Windows 20 Program and for the analysis of the data the mean and standard deviation scores were calculated, and independent samples t-test, One-Way (ANOVA), Spearman's rho Correlation, Mann-Whitney U Test, Kruskal-Wallis Test were used. As the data did not show normal distribution, non-parametric analysis technique was used.

### Data Collection Tools

In the present study, the quantitative data were collected through two data collection tools; the "e- Readiness Scale" and "e-Satisfaction Scale".

a) e-Readiness Scale: e-Readiness Scale was developed by Gulbahar (2012). e-Readiness Scale is a five-point-Likert type scale ranging from (5) "almost always" to (1) "almost never" (see Gulbahar 2012). There are twenty-six items on the scale under five sub-scales, namely; Individual Properties (4 item), Access to Technology (4 item), Technical Skills (8 item), Motivation and Attitude (4 item), Factors that Affect Success (6 item). In her study Gulbahar (2012) found a 0.93 Cronbach Alpha reliability score for the whole scale. The reliability coefficient for e-Readiness Scale ranged between .77-.80. In the present study, for the whole scale 0.88 Cronbach Alpha reliability score was found.

b) e-Satisfaction Scale: e-Satisfaction Scale was developed by Gulbahar (2012). e-Satisfaction Scale is a five-point-Likert type scale ranging from (5) "almost always" to (1) "almost never" (see Gulbahar 2012). There are twenty nine items on the scale and the scale has four sub-scales namely; Communication and Usability (7 item), Teaching Process (8 item), Instructional Content (4 item), Interaction and Evaluation (10 item). In her study Gulbahar (2012) found a 0.97 Cronbach Alpha reliability score for the whole scale. The reliability coefficient for e-Satisfaction survey the values were between .91 - .96 which implies the reliability of the scales. In the present study, the researchers found 0.94 Cronbach Alpha reliability score for the whole scale.

In the study, the e-Readiness Scale was used during the fall semester of 2015-2016 academic year before the study group took their courses via distance education program and e-Satisfaction Scale was used during the final examination period of the study group when distance education program was over.

### FINDINGS

The findings on prospective teachers' readiness levels and satisfaction levels about distance education are presented in Tables,2,3,4,5,6,7,8 and 9.

Table 2. Findings about prospective teachers' readiness levels and satisfaction levels

	N	Mean	S	Min	Max
Readiness	493	98,2252	14,62735	58,00	130,00
Satisfaction	493	101,6227	21,79327	40,00	145,00

As seen in Table 2, the level of readiness of prospective teacher towards distance education is above the mean ( $\bar{x}$  = 98,2252). That is to say, the levels of readiness of prospective teachers both in the faculty of education and in pedagogical formation education forming the study group are high. Besides, their satisfaction after distance education is also above the average ( $\bar{x}$  = 101,6227). Satisfaction of prospective teachers towards distance education is mainly at high levels.

Table 3. Findings about readiness levels according to sub-scales of e-Readiness Scale

Sub-Scales	Mean	S	Min	Max
Individual Properties	11,7363	3,46578	4,00	20,00
Access to Technology	15,0771	4,14353	4,00	20,00
Technical Skills	33,6957	5,70807	16,00	40,00
Motivation and Attitude	13,8276	3,54138	4,00	20,00
Factors that Affect Success	23,8884	4,23326	11,00	30,00

In Table 3, it is seen that in Readiness Scale prospective teachers got scores above the average in subscales of "Technical Skills" and " Factors that Affects Success" including information and communication technologies ( $\bar{X} = 33,6957$ ,  $\bar{X} = 23,8884$ ). Their readiness of other subscales of the scale is very close to the mean or a slightly above the mean. In other words, they think that they are pretty good at factors that affect success and technical skills related to distance education than the other factors. Accordingly, prospective teachers find themselves positive in general about individual properties, access to technology, motivation and attitude related to distance education.

**Table 4. Findings about satisfaction levels according to sub-scales of e-Satisfaction Scale**

Sub- Scales	Mean	S	Min	Max
Communication and Usability	25,2231	5,65604	7,00	45,00
Teaching Process	28,0690	7,03008	8,00	40,00
Instructional Content	15,0385	3,75095	4,00	20,00
Interaction and Evaluation	33,2921	8,87239	10,00	50,00

As presented in Table 4, prospective teachers' scores were a slightly above the mean in all sub dimensions of satisfaction scale. In the general sense, the levels of satisfaction towards distance education of prospective teachers in the study group are positive.

**Table 5. Findings about the relationship between readiness levels and satisfaction levels**

	N	r	p
Readiness	493	,570	,000
Satisfaction			

Since Readiness and Satisfaction Scales do not show normal distribution (K-S = 0,009;  $p < 0,01$ ), Spearman's rho was used (Spearman's  $\rho = ,570$ ;  $p = ,000$ ). As seen in Table 5, it was determined that there is medium level meaningful relationship between scores taken from Readiness and Satisfaction Scales ( $p = 0,000$ ). This finding shows that the satisfaction levels of the prospective teachers who have high readiness levels towards distance education are also high ( $p < 0,05$ ).

**Table 6. Findings about prospective teachers' readiness levels and their subject area**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4711,917	5	942,383	4,564	,000
Within Groups	100556,091	487	206,481		
Total	105268,008	492			

$p < 0,05$

The mean scores of readiness of prospective teachers towards distance education differ in meaningful level depending on the department they study in ( $F = 4,564$ ;  $p = 0,000$ ). The findings of Scheffe Post hoc test which is done to present the difference between teaching areas presented in Table 7.

**Table 7. Findings about the relationship between readiness levels and scores of their subject area**

	(I)Subject-Area	(J)Subject-Area	Mean Difference(I-J)	Std. Error	Sig.
Readiness	Classroom Teaching	History-Geography	-6,31167	1,79447	,031
		Social Studies Teaching	-10,22500	2,53615	,007

$p < 0,05$

According to the Scheffe Post hoc test done with the purpose of revealing the difference between teaching areas, there is a meaningful difference between the scores ( $p = ,031$ ;  $p = ,007$ ) of History-Geography department prospective teachers and Classroom Teaching and Social Studies Teaching department prospective teachers ( $p < 0,05$ ). The readiness levels of prospective teachers in History-Geography departments towards distance education was found to be pretty higher than those in Classroom Teaching and Social Studies Teaching departments.

**Table 8. Findings about prospective teachers' readiness levels and their education program**

Education Program	N	Mean Rank	Sum of Ranks	U	Z	P
Education Faculty Undergraduate Programs	261	226,11	59015,50			
Pedagogical Formation Program	232	270,50	62755,50	24824,500	-3,454	,001

Mann-Whitney U test was used as non-parametric test because data do not show normal distribution according to the variable of education program in which prospective teacher study ( $K-S = ,031$ ,  $p < 0,05$ ). According to the result, as presented in Table 8, there is a meaningful relationship between the readiness levels towards distance education of the prospective teachers registered in pedagogical formation program and the ones registered in the faculty of education in favour of the prospective teachers of pedagogical formation group ( $U = 24824,500$ ;  $p = ,001$ ;  $Z = -3,454$ ). The prospective teachers' mean scores about their readiness levels was found to be higher than the prospective teachers in pedagogical formation group.

**Table 9. Findings about prospective teachers' satisfaction levels and their subject area**

	Subject-Area	N	Mean	$\chi^2$	P
Satisfaction	Classroom Teaching	150	218,56		
	Social Studies Teaching	45	144,54		
	Psychological Counseling and Guidance	37	205,97		
	Music	29	202,78	72,302	,000
	History-Geography	112	325,07		
	Philosophy- Sociology-Psychology	120	271,44		
	Total	493			

Since data do not show normal distribution ( $K-S = ,021$ ,  $p < 0,05$ ), Kruskal Wallis test form nonparametric tests was used. As examined in Table 8, satisfaction of prospective teachers towards distance education differ in meaningful level according to the subject area ( $\chi^2 = 72,302$ ;  $p = 0,00$ ;  $p < 0,05$ ). Looking at the scores according to the subject areas, the mean scores of the prospective teachers in History- Geography department ( $\bar{X} = 325,07$ ) and Philosophy- Sociology-Psychology department ( $\bar{X} = 271,44$ ) are higher than the other departments. Accordingly, the department of History- Geography has the highest score and satisfaction of prospective teachers in Social Sciences Teaching department ( $\bar{X} = 144,54$ ) towards distance education has the lowest score.



**Table 10. T-test results related to prospective teachers' satisfaction levels based on their education program**

Education Program	N	Mean	S	t	sd	p
Education Faculty Undergraduate Programs	261	94,7241	21,69	-7,907	491	,000
Pedagogical Formation	232	109,3836	19,18			

As seen in Table 10, a meaningful difference was found between the prospective teachers' satisfaction levels according to their education program ( $p=,000$ ;  $p<0,05$ ). Accordingly, the levels of satisfaction of the prospective teachers in pedagogical formation group ( $\bar{X} = 109,3836$ ) was found higher than the other prospective teachers registered in the faculty of education ( $\bar{X} = 94,7241$ ).

## DISCUSSIONS AND CONCLUSION

The research aims to identify the readiness and satisfaction of prospective teachers studying in undergraduate programs of teaching in the faculty of education and the ones who comes from different departments and get pedagogical formation education towards distance education which is applied for some courses. It was tried to be learned whether readiness and satisfaction of prospective teachers towards web-based distance education differ depending on the education program type they study in or not. 493 prospective teachers participating in the research stated that they have participated in the distance education process for the first time. 76,5% ( $n=377$ ) of the prospective teachers are women and 23,5% ( $n=116$ ) of them are men. The readiness and satisfaction of the prospective teachers studying in undergraduate programs of teaching in the faculty of education and the ones studying in pedagogical formation program of the same faculty which form the study group towards distance education is mainly at high levels. When the levels of readiness and satisfaction of prospective teachers was examined according to the sub dimensions, it was found that they have got scores above the moderate in sub dimensions of both scales. There are studies finding high readiness level, which support this finding. Cakir & Horzum (2015) found out that the readiness of prospective teachers towards online learning is above the average. In the study of Deveci Topal (2016), it was found high in all the sub dimensions of the scale applied for readiness level to online learning. As opposed to the finding of the present study, there is a study that indicates low e-learning readiness levels of prospective teachers (Enemali, Aliyu & Bulama, 2016). The sub dimensions of the satisfaction scale used in the research are communication and usability, teaching process, instructional content, interaction and evaluation. It was found that prospective teachers are generally satisfied with the subjects including these sub dimensions of distance education presented to them. At the same time this finding can mean that the aims, needs and expectations of prospective teachers are met during the program they participated in. In fact, the universities should develop online courses in such a way that they should meet the aims, needs and expectations of the learners and this fact is considered as an essential and a necessary point during the development of e-learning programs at the universities. In order to increase the quality of online courses, special emphasis should be provided during their development, should support learning outcomes, should give importance the effective integration of technology into learning -teaching process and should provide learner satisfaction (Lee,2009).

Reaching similar results in their research, Rodríguez, Molina, Alonso & Gomez (2015) found out that the most fundamental components in satisfaction of university students towards e-learning are lesson design and content, access to information in the teaching process and visuality and interaction.

In the research, prospective teachers have got higher scores in "technical skills" and factors that affect success" sub dimensions than the other sub dimensions of the Readiness Scale.

This finding shows that the levels of readiness of prospective teachers towards factors that affect success and technical skills are better than the other scales. In general, it can be said that the levels of readiness and satisfaction of all prospective teachers towards distance learning are positive. That the students feel themselves ready and good for this education before entering the learning process with distance education might cause them to be encouraged for this education process, to benefit from this education at the maximum level and to be satisfied with the education at the end (Demir & Yurdugul, 2015; Ilgaz & Gulbahar 2015; Kalelioglu & Baturay 2014; Kaur & Abas 2004; So & Swatman, 2006). "Technical skills" sub dimension of the Readiness Scale includes skills such as using information and communication technologies at a level that could be learned with e-learning, using office programs, having basic skills to use the internet and using the communication tools on the internet and social networking environments. Prospective teachers might have considered that they are more ready for "technical skills" related to e-learning because they already got the skills related to computer and internet since they usually use internet for the purpose of communication, interaction and working in daily life. The reason why they are satisfied with the e-learning process might be that they have good technical skills. In a research supporting this result of the research, it has been stated that the participants of distance education are less satisfied if they have less technical skills and more satisfied with the distance education and be successful if they have good technical skills (Pillay, Irving & Tones, 2007). Thus, it was also emphasized that online learners should have competent skills in using online system to be satisfied and benefit from the e-learning process (Yildirim, 2005). On the other hand, the importance and necessity that today's teachers should gain the skills to use information and communication technologies to enable them to do online study in pre-service trainings have been highlighted (Davis, 2010). Therefore, it has been considered a positive result that prospective teachers in this study think that they are good at technical skills. As Smith & Greene (2013) emphasized teachers of the future should have the necessary technological skills and should use and implement technology effectively in order to meet the educational needs of 21<sup>st</sup> century students. However, Smith & Greene (2013) reported a different finding from the present study. In their study, Smith & Greene (2013) found elementary prospective teachers had low level of using e – learning technologies and they had difficulties in learning and using these technologies. Therefore, they stated that elementary prospective teachers preferred traditional education to online education.

Meanwhile, it has emerged that the sub dimensions of "technical skills" and "Computer self-efficacy" in *diagnostic tool for assessing Tertiary students' readiness for online learning* (TSROL) developed by Pillay, Irving & Tones (2007) have higher reliability and validity than the other scales. Another significant finding revealed in the research is that prospective teachers state that they are ready and sure about "factors that affect success" as in technical skills discusses above than in other factors (individual properties, access to technology, motivation and attitude). This finding shows that prospective teachers are aware that their success will be affected positively by interacting with the teacher all the time, getting support quickly in technical and administrative subject, attending the e-learning process and experiencing the internet technologies which include "factors that affect success". In the present century teachers should have certain skills and implementing and using information and communication technologies are one of these skills. In this study, the prospective teachers stated that they had the necessary skills about implementing and using information and communication technologies during their instruction at their universities. This can mean that they had certain skills that an experienced teacher should have in the present century. In this respect, this findings of the present study can be considered to be different from the other studies in the literature in that the findings of the present study are about e-learning readiness and satisfaction levels of prospective teachers who will be the teachers of the future. Even though prospective teachers in the study group attended in the distance education process for the first time, it has great importance that they know the necessary elements to benefit from the education. This importance emphasized in the study of Sawang, Newton & Jamieson (2013). They also stated that self-assuredness of students in terms of technical skills plays an important role in being prepared to e-learning and adapting to this process. Therefore, they highlighted

**the necessity of providing technical support to students in any subject they need in the process of e-learning. The technical support should be versatile in encouraging students to use internet technologies and gaining experience about the subject by identifying the deficiencies before e-learning.**

**In the research, it was found that a meaningful relationship between readiness levels and satisfaction of prospective teachers in terms of web-based distance education. This finding shows that the readiness and expectations of prospective teachers about distance education have been met at the end of the education process and that they are satisfied with the education process. In the study of Deveci Topal (2016) on university students, it was found out that there is positive meaningful relationship between satisfaction levels and readiness levels of the students for online learning. Gunawardena and Duphorne (2001) found that there is positive relation between satisfaction and the learning approach of readiness. Sahin & Shelley (2008) emphasized in the study to form student satisfaction model in distance education that students having perceptions of distance education and skills to use online tools might lead students to like this education by providing them comfort and benefit in learning via online education, interacting and sharing.**

**When the relationship between readiness level and subject areas of prospective teachers was examined, there is not a meaningful relationship in the departments of Psychological Counseling and Guidance, Music, Philosophy- Sociology- Psychology, but there is a meaningful relationship between History- Geography department and Classroom Teaching and Social Sciences Teaching. Readiness levels of prospective teachers in History- Geography departments towards distance education are higher than both Classroom Teaching and Social Sciences Teaching departments. Why? It was found that there is a meaningful relationship between readiness levels of prospective teachers and the education program type they are registered in. Readiness levels of prospective teachers registered in pedagogical formation education program are higher than those of undergraduate students in the faculty of education. What can be the reasons? There are differences between the findings of the present study and the literature. Even though in the present study a significant difference was found between the departments of prospective teachers and their online learning readiness levels, in their study Ibrahim, Silong & Samah (2002) and Cakir & Horzum (2015) found that departments of prospective teachers do not make a significant difference in terms of their readiness levels to online learning.**

**Findings of the relation between satisfaction levels of prospective teachers related to distance education and their subject areas and education program type show similarity to the findings of readiness level and pedagogical formation education has resulted for the in favor of prospective teachers. When it comes to subject areas, satisfaction of the prospective teachers in History- Geography department and Philosophy department is higher than the other departments. These two departments having high satisfaction levels are the departments in pedagogical formation education program. Satisfaction level according to the variable of education program was found higher in the prospective teachers of pedagogical formation education program than in the prospective teachers registered in the faculty of education. The readiness level for the process of web-based distance education and the level of satisfaction at the end of the process are usually high in this study; however, they are higher in the prospective teachers in pedagogical formation education program than in the prospective teachers in the faculty of education. The reason might be said that these students who have different areas than teaching are more prepared to online lessons in teaching education they are provided with pedagogical formation program that they have more expectancy from teaching in these lessons and they are in the opinion of making the most of the process. However, pedagogical formation education is a program giving education to people who have education in different areas than teaching but want to become teachers. This situation might have caused them to be more conscious and prepared for some education courses giving online in the pedagogical formation education they get willingly and to create expectancy in education. When the findings of the study are concerned, the e-learning satisfaction levels of pedagogical**

formation students' had higher e-learning satisfaction levels than education faculty students as most of pedagogical formation students live in different cities where they are away from the city they take courses they have to participate in and prefer online courses. This fact can increase their e-learning satisfaction levels.

The finding in this study related to high readiness and satisfaction levels of prospective teachers in History-Geography departments towards distance education shows similarity to the findings of the research by Mitchell & Forer (2010) with the students of Geography department. In the related study, the students of Geography department stated in their thoughts about traditional lessons and online lessons that online education provides them great flexibility about time even though they find traditional education more popular and that they are satisfied with it. In the meantime, it was revealed that they are really willing to gain the necessary information and skills for e-learning and they adapt this education.

According to the results of the study; the positive status of the prospective teachers related to the internet based distance education applied for some theoretical courses in the teacher education programs in general meaning may indicate that this education may be sustained. The courses are theoretical in the existent distance education program in the faculty of education in which the study has been conducted and they are carried out simultaneously. The number of the courses given via web based distance education could be increased in both the teaching undergraduate programs and the pedagogical formation education programs. However; it should be paid attention that these courses are again theoretical as in the existent application and the distant education should be made simultaneously. In fact, when the literature about the use of web based distance education in teacher education is concerned, it is seen that the implementation of blended learning approach is more effective and beneficial than fully online learning approach (Bicen, Ozdamli & Uzunboylu 2014; Keengwe, & Kang, 2013; Smith & Greene, 2013; Sheffield, McSweeney & Panych, 2015). The comments of the prospective teachers regarding distant education could be taken in detail and deeply via the qualitative study to be conducted for the purpose of supporting the findings of this study patterned as a quantitative study. The data to be attained in qualitative way will be able to ensure more efficient and productive design and application of the distance education used in the training of the teachers.

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