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# Investigating preservice computer teachers' attitudes towards distance education

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## Abstract

This study aims to investigate attitudes towards distance education of junior and senior students at Computer Education and Instructional Technologies according to gender, grade level, and participation to distance education course. The sample is 56 students who had lesson related with distance education previously. Data collection tools included student information form and The Scale of attitudes towards distance education. In data analysis, descriptive statistics were performed. Attitudes towards distance education scores were significantly unrelated with gender and grade level ( $p>0.05$ ). On the other hand, students' previous participation to a distance learning course significantly affect their attitudes scores related to distance education ( $p<0.05$ ).

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*Keywords: Distance education attitude;*

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## 1. Introduction

Advances in technology are making an impact on content, learning strategies, and instructional traditions. Wide area networking and the Internet can be combined to enable communication through email, discussion threads, chat rooms, whiteboards, and audio and video conferencing. The use of information and Internet technologies as teaching and learning tools is now rapidly expanding into education. Distance education is one of the most popular learning environments in the information age. Thus, distance education efforts and experiments currently receive enormous attention across the globe. Distance education, as defined by the all educators in this field, is a process in which a distance exists between the person who deliver the instruction and the person of reception. It consists of distance teaching and distance learning. Due to time and other restrictions of life, distance education has become the most popular way for those who are getting their instructions and increasing their knowledge in their area of interest. Also, distance education has enabled people to share information and make teaching and learning processes possible with no time and distance limitations (Dabaj and Başak, 2008).

### 1.1. Review of the related researches on students' attitudes toward distance education

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Özdemir et al. (2009) presented a relationship between preservice teachers' information literacy skills and their attitudes towards distance education. In their study they administered two questionnaires to 235 preservice teachers enrolled in the department of primary school teaching, the department of science teaching and the department of Turkish language teaching in order to examine their attitudes and their literacy skills. They found no significant relationship between participants' information literacy levels and their attitudes towards distance learning. Ateş & Altun (2008) investigated attitudes towards distance learning of junior and senior students at Computer Education and Instructional Technologies according to gender, grade level, participation in distance learning course, experience in using computer, perceived computer competency and learning styles. In their study they utilized demographics form, Kolb's Learning Style Inventory, The Scale of ATDL as data collection tools. They observed that ATDL scores were significantly unrelated with gender and grade level. Other factors that were significantly affect ATDL, previous participation to any distance learning course, experience in using computers and perceived computer competency were found.

One another research investigated on students' attitudes and motivations toward online learning. Findings showed that students' attitudes toward online learning was more positive (Knowles & Kerkman, 2007). Ilter et al., (2005) explored students' perceptions and attitudes towards distance education based on their gender, school types attended, age and access to educational technology such as computer and internet. During the research period a questionnaire was administered to 50 students. The result of the research indicated that students might show positive beliefs towards distance education if appropriate equipment and atmosphere were provided.

A survey which was conducted 61 individual barrier items implemented to students through internet by Muilenburg & Berge (2005). The purpose of the study was determining the underlying constructs that comprise student barriers to online learning. Administrative issues, social interaction, academic skills, technical skills, learner motivation, time and support for studies, cost and access to the internet, and technical problems were identified as important barrier factors. They reported in research that these barrier factors included: gender, age, ethnicity, type of learning institution, online learning skills, effectiveness of learning online, online learning enjoyment, prejudicial treatment in traditional classes and the number of online courses completed. Keller & Cernerud, (2002) examined students' perceptions of e-learning taking students at Fönköpink University in Sweden. 150 students were attended to questionnaire that was included closed and open ended questions. Male students, students with previous knowledge of computers and students with positive attitudes to new technologies were all less positive to e-learning on campus than other students summarized from results. Also findings showed that strategy of implementing e-learning system at the university was more important in influencing students' perceptions than the background variables.

According to McIsaac & Gunawardena (1996), distance education delivers education to students who are not physically present at the site of education delivery. They also claimed that interaction between students and teachers increases in distance education. Moreover, most distance education courses rely on technologies which are either already in place or are being considered for their cost-effectiveness. Distance learning programs have played an increasingly important role in the achievement of universities' goals in recent years, and the trend seems likely to continue (Dewald, Crane, Booth, & Levine, 2000). Arbaugh & Duray (2002) found that students who had more experience in distance education were tend to be more satisfied with learning over the internet.

Personal attitudes are a major factor to affect individual usage of information technology. In other words, understanding users' attitudes toward distance learning facilitates the creation of appropriate distance learning applications for teaching and learning. The purpose of this study is to determine the relationship between different factors in terms of class, gender and attending to one of distance education activity and computer preservice teachers' attitudes towards distance education. Determining students' attitude towards distance education represents an important stage in predicting the adoption of certain behavior. For this aim the main problem is "How computer preservice teachers' attitudes are change towards distance education related with different factors?" is main problem of this research and sub-problems are:

1. What are the students' attitudes towards distance education?
2. Is gender effect significantly of computer preservice teachers' attitudes towards distance education?
3. Is grade level effect significantly of computer preservice teachers' attitudes towards distance education?

4. Is students' previous participation to a distance education activity effect significantly of computer preservice teachers' attitudes towards distance education?

## 2. Methodology

The survey method was used in the present study, which refers to the explanation of events or facts that took place at any time in any group of participants or study sample, to explore computer preservice teachers' attitudes towards distance education related with different factors.

The present study was conducted using a sample of computer preservice teachers attending the Fatih Faculty of Education in Karadeniz Technical University. The sample consists of 56 computer preservice teachers enrolled in Fatih Faculty of Education, Computer and Instructional Technologies Department in Fall 2009. Since having an information about distance education and WEB based educational technologies was determined as precondition for students, sample (n=56) of the study was conducted from third and fourth grade. Sample which was determined through purposive sampling methodology was given in Table 1 with gender and grade properties.

Table 1. Research Sample with Gender and Grade Properties

Grade	Gender					
	Female		Male		Total	
	f	%	f	%	f	%
3	12	63,2	16	43,2	28	50
4	7	36,8	21	56,8	28	50
Total	19	33,9	37	66,1	56	100

*Students information form:* This form consists of 3 questions: Gender, grade level and attending to one of distance education activity before current research.

*Distance education attitude scale:* The Distance Education Attitude Scale is a 5 point Likert-type scales (from 1 which means "strongly disagree" to 5 which means "strongly agree") composed of 35 items. To determine reliability coefficient scale was administered to 456 students. Ateş and Alptun (2008) reported that confidency the scale consisted of one factors and the Cronbach-alpha internal consistency coefficient of 0,8976. For attitude scale Maximum score is 175 and minimum score is 35.

Data that gathered from research instruments was transferred to Statistical Package for the Social Sciences (SPSS) 13.0. Descriptive analysis techniques (frequency and percentage distribution) were used for identify to students' gender, grade level and attending to distance education activity situation. For the purpose of the determine students' attitudes towards distance education related with different factors t-Test was used.

## 3. Findings

### 3.1. What are the students' attitudes towards distance education?

Table 2. Scores that participants' attitudes towards distance education

	N	Ranj	Min	Max	$\bar{X}$	Median	SS
UEYT	56	73	80	153	114,5	116,5	14,19

As seen in Table 2, preservice teachers' attitudes towards distance education was in the medium range ( $X = 114,5$ ). Thus, it can be said that the average attitude score of the computer preservice teacher is going to be "hesitant" regarding distance education. As seen in Figure 1 if average attitude score of the computer preservice teacher was assessed by five range scale, score is going to be 3,27.

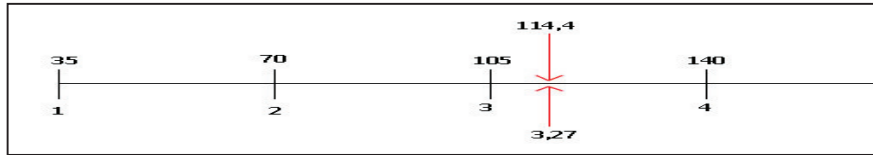


Figure 1. Average of total attitude score

3.2. Is gender effect significantly of computer preservice teachers' attitudes towards distance education?

Table 3. Score of computer preservice teachers related with gender

Gender	N	$\bar{X}$	SS	SD	t	p
Female	19	113,8	13,1	54	0,226	0,822
Male	37	114,7	14,9			

As seen in Table 3, computer preservice teachers' attitudes towards distance education scores were significantly unrelated with gender ( $p > 0,05$ ).

3.3. Is grade level effect significantly of computer preservice teachers' attitudes towards distance education?

Table 4. Score of computer preservice teachers related with grade

Grade	N	$\bar{X}$	SS	SD	t	p
Third	28	110,9	11,5	54	-1,91	0,06
Fourth	28	118,0	15,9			

As seen in Table 4, computer preservice teachers' attitudes towards distance education scores were significantly unrelated with grade ( $p > 0,05$ ).

3.4. Is students' previous participation to distance education activity effect significantly of computer preservice teachers' attitudes towards distance education?

Table 5. Previous participation to distance education activity related with grade level

Grade	Previous Participation to Distance Education Activity				Total	
	Yes		No		f	%
	f	%	f	%	f	%
3	21	37,4	7	12,5	28	50
4	19	33,9	9	16,1	28	50
Total	40	71,4	16	28,6	56	100

As seen in Table 5, %71,4 of participants attended to distance education activity previously but %28,6 didn't. %37,4 of participants who were attended to distance education activity previously are in third grade, likewise %33,9 participants are in fourth grade. Table 6 shows relation between participants' previous participation to distance education activity and attitude towards distance education.

Table 6. Results of computer preservice teachers' attitude related with previous participation to distance education

Attending DE	N	$\bar{X}$	SS	SD	t	p
Yes	40	117,4	11,5	54	2,58	0,012
No	16	107,1	15,9			

As seen in Table 6, computer preservice teachers' attitudes towards distance education scores were significantly related with previous participation to distance education ( $p < 0,05$ ).

#### 4. Conclusion

Students' attitudes toward distance education be close to the unstable level as the results of the study conducted by Ateş and Alptun (2008) showed that their participants had a approximately unstable level attitude towards distance education. In the present study, computer preservice teachers' unstable attitudes towards distance education can be explained by the fact that they believe in the efficiency of face-to-face education and they have inadequate information about distance education or they have inadequate activity with distance education.

Contrary to research that was conducted Ilter et al. (2005) and Richardson (2006) findings of the study indicate that there is no significant relationship between preservice teachers' gender and their attitudes towards distance education. Likewise there is no significant relationship between computer preservice teachers' attitudes towards distance education with grade level. This finding as similar as that was reported at Ateş & Alptun (2008). Since %37,4 of participants who were attended to distance education activity previously are in third grade, likewise %33,9 participants are in fourth grade their experience with distance education is similar. So this statement could occur from this similarity.

Computer preservice teachers' attitudes towards distance education scores were significantly related with previous participation to distance education ( $p < 0,05$ ) as stated in Richardson (2006), Ivers et al. (2005).

This study surveyed students in computer and instructional technology department's only. In addition, students surveyed were at one department and these results can't be generalized to students at other departments. For future research it would be interesting to find out students' attitudes towards distance education who are taking a course on "educational administration and inspection" master program through distance education in Distance Education Center of Karadeniz Technical University. It would also be interesting to investigate the relationships between preservice computer students' attitudes and distance education learners' attitudes who are taking a course on "educational administration and inspection" master program.

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