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Attitudes of distance education students towards web based learning – a case study

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Abstract

The aim of this study is to assess the resistance level, which is taken as a dimension of attitude, of distance education students towards web based learning and to present the relationship of resistance level with age, gender, program and grade level. In the study, the sample includes 432 students from Gazi University Distance Education Vocational School. T-test results for resistance level according to the independent variables; age, gender, program and grade have been presented. Subsequently, implications based on related literature and the results of analysis have been listed. Finally, suggestions for future research have been discussed.

Keywords: Distance education; web based learning; attitude; learner attributes.

1. Introduction

According to Keegan (2002), definition of distance education can be summarized as "teaching and learning in which learning normally occurs in a different place from teaching". He further states that in distance education, materials and support structures are planned and prepared by an educational organization which uses technical media to unite teacher, learner, and content. Keegan's description of the distance education environment highlights various interacting components of distance education such as instructor, students, and content. Information and communication technology (ICT) makes interaction in this environment possible where every component plays a significant role in producing the desired outcome.

Web-based learning has been becoming more widespread in parallel with maturation of ICT. However, it is a challenge to develop Web-based learning that is suitable for the varied needs of different students. Previous research has shown that student learning is influenced by numerous factors, such as age, gender, and socioeconomic status. Also, learner attributes such as interest, attitude, or motivation are some key concepts which are and most probably will be studied by researches in the field of distance education.

Instruction is not merely displaying information; rather it requires an integrated fit that considers the content, individual differences of learners and the delivery method to achieve success (Alexander, 1995; Martindale and

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Ahern, 2001). In web based education, when it is considered that students predominantly study alone, individual differences come into prominence. Current internet technologies make it possible to produce different designs, which take into account individual differences. Individual differences should be taken into account; otherwise students' achievement would be low mainly because the organization of the learning environment would not fit the organization of real life in their minds (Kılıç E., Karadeniz Ş., 2004). One of the individual differences of distance students is "attitude".

In Turkey, there is a growing demand for distance education programs within universities. Distance education has become a viable alternative for those who are unable or unwilling to travel to campus yet still possess the desire to learn in a formal environment. Gazi University Distance Education Vocational School (GUDEVS) can be given as an example. This institution was founded in 2006 and there were 1924 registered students by the 2008-2009 fall semester.

Table 1. Student numbers on the basis of programs in GUDEVS

Program	Number of Students
Knowledge Management	192
Computer Programming	702
Business Administration	638
Accounting	190
Web Technologies-Programming	202
Total	**1924**

The aim of this study is to assess the resistance level, which is taken as a dimension of attitude, of distance education students towards web based learning and to present the relationship of resistance level with age, gender, program and grade level.

Specifically, the study addressed the following questions:

1. Do GUDEVS students' resistance levels towards web based learning differ according to gender?
2. Do GUDEVS students' resistance levels towards web based learning differ according to age?
3. Do GUDEVS students' resistance levels towards web based learning differ according to grade level?
4. Do GUDEVS students' resistance levels towards web based learning differ according to the program they attend?

2. Method

The study utilized descriptive methodology through the application of a case study of sample of distance education students from 5 different programs in GUDEVS. Descriptive methodology is a kind of research method which is used to describe a current or a past situation (Karasar, 1999). A survey was used to assess the resistance level, which is taken as a dimension of attitude, of distance education students towards web based learning. The survey was developed by Erdoğan, Bayram and Deniz (2007). Data were collected from totally 432 distance education students of GUDEVS. %45.8 of the participants is composed of males and the rest (%54.2) females. In addition, %83.5 of the participants is under the age of 26. Participant distribution according to programs and grade levels is given in Table 2. These data were analyzed using T-test.

Table 2. Participant distribution according to programs and grade levels

Program	Number of Students	Grade Level
Knowledge Management	61	1
Computer Programming	77	1
Computer Programming	72	2
Business Administration	43	1
Business Administration	70	2
Accounting	44	1
Web Technologies-Programming	65	1
Total	**432**	

3. Results

In this section, the results acquired as a result of the research have been analyzed in the directions of the aim of the study.

Table 3 presents the results related to the first research question (Do GUDEVS students' resistance levels towards web based learning differ according to gender?).

Table 3. Resistance level according to gender and T-test results

Groups	N	X	sd	F	p
Male	198	26.48	6.46		
Female	234	27.28	6.41	1.628	.203
Total	432	26.91	6.44		

Table 3 showed that resistance level did not change according to gender [F(1,430)=1.628; p>0.05].

Table 4 presents the results related to the second research question (Do GUDEVS students' resistance levels towards web based learning differ according to age?).

Table 4. Resistance level according to age and T-test results

Groups	N	X	sd	F	p
Age <26	361	27.13	6.56		
Age >=26	71	25.83	5.69	2.412	.121
Total	432	26.91	6.44		

Table 4 showed that statistically significant difference was not found between resistance level scores of two different age groups. In other words resistance level did not change according to age [F(1,430)=2.412; p>0.05].

Table 5 presents the results related to the third research question (Do GUDEVS students' resistance levels towards web based learning differ according to grade level?).

Table 5. Resistance level according to grade level and T-test results

Groups	N	X	sd	F	p
1	289	26.15	6.18		
2	143	28.46	6.69	12.671	.000
Total	432	26.91	6.44		

Table 5 showed that there is statistically significant difference between resistance level scores of two different grade groups. In other words resistance level changed according to grade level [F(1,430)=12.671; p<0.05]. Resistance level was measured higher in grade 2 students compared to grade 1 students.

Table 6 presents the results related to the fourth research question (Do GUDEVS students' resistance level towards web based learning differ according to the program they attend?).

Table 6. Resistance level according to program and T-test results

Groups	N	X	sd	F	p
1-Knowledge Management	62	24.55	6.266		
2-Computer Programming	149	27.29	6.501		
3-Business Administration	113	28.63	6.343	5.009	.001
4-Accounting	43	26.19	5.897		
5-Web Technologies-Programming	65	25.82	6.197		
Total	432	26.91	6.440		

Table 6 showed that there are statistically significant differences between resistance level scores of students from five different programs. In other words resistance level changed according to program [$F(4,427)=5.009$; $p<0.05$]. Significant differences were seen between programs 1 and 2; 1 and 3; 3 and 4; 3 and 5.

4. Discussion

In related literature, it is stated that attitudes of students towards web based education significantly influences learning (Sanders & Morrison-Shetlar, 2001; Alomyan & Au, 2004). For this reason it is important for organizations serving web based education to consider students' attitudes (Daniels, Tyler, & Christie, 2000). Also many researchers say that there should be more research about learner attitudes towards web based education (Berge, 1997; Stocks & Freddolino, 1998; Kurubacak, 2000; Arslan, 2002, Manzanares, 2004). This study aimed to assess the resistance level, which is taken as a dimension of attitude, of distance education students towards web based learning and to present the relationship of resistance level with age, gender, program and grade level. These learner attributes are related with learner attitudes. Findings of the study showed that grade level and program of students influenced resistance level towards web based learning. Now, it becomes important to find answers to the question "Why these factors affect resistance level?" by additional research findings.

5. Conclusion and Recommendation

According to the findings of this study, resistance level, which is a dimension of attitude, towards web based learning was influenced by grade level of distance education students and program they were attending. In addition resistance level of distance education students towards web based learning did not chance according to age and gender. In order to achieve success in web based education, resistance level of students towards this environment must be decreased. Future research may find solutions for this problem. In addition it becomes important to find out similarities between students in the same program and between students of the same grade level. These students interact with each other during learning process and probably they share ideas about their learning environment. If they influence each other or not in terms of developing attitudes towards web based learning is another subject to be studied on.

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