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STUDENTS' ATTITUDES TOWARDS WEBCT APPLICATIONS IN SELECTED COURSES

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ABSTRACT

WebCT is one of the widely used web-based learning tools. For enriching teaching and learning courses at tertiary level, WebCT emerges as an important tool. This paper describes attitudes of students at Anadolu University towards WebCT applications in selected courses. Furthermore, the study describes the attitudes of a sample of students towards WebCT and analyzes data to determine the effect of WebCT dimensions on satisfaction, course advising, and course preference on their overall perception and referral of a course. The findings indicate the emergence of four WebCT dimensions. These factors are access and interaction, learning experience, time and compensation, and exam and exercise. The dimensions are positively associated with satisfaction, course advising, and course preference. The results of this research have significant implications for both the web-based learning as a whole, and it would be a contribution to relatively limited literature on the attitudes towards WebCT enhanced courses in Turkey.

Keywords: Edutainment, entertainment, marketing education, experiential learning, e-learning and WebCT

INTRODUCTION

With the widespread use of the World Wide Web (WWW), many institutions of higher education have identified opportunities for developing courses for Web-based learning. In today, online or Web-based learning is becoming an increasingly important part of higher education (Ngai, Poon and Chan, 2007). Development in Web-based learning environments creates new approaches in terms of higher education systems. The use of online course management systems to support both face-to-face and distance delivery of courses has become widespread in higher education (Fletcher, 2005). Universities that adopt such technologies use hybrid delivery methods, and integrate face-to-face, online or distance education One of these hybrid methods is WebCT that is a web-based technology allows instructor to upload his or her teaching materials to a designated web page (Willett, 2002). WebCT is around since the last quarter of 1990's (Morss, 1999). It is used as integrated e-learning system by more than eighty countries in thousand of tertiary institutions. (Aiken et al., 2003).

WebCT helps to eliminate the necessity of instructor's physical intervention in accessing to teaching materials or even having exams. Today's marketing concept and teaching in tertiary levels largely relies on perceptions and expectations of students. In order to do so, it is vita to assess how students perceive WebCT enhanced courses. In the view of these explanations, this study has two main objectives. The first objective is to determine the attitudes towards webCT applications among students who were enrolled

to various advertising and marketing courses. The second objective of the study is to analyze the relationship between constructs that is effective on WebCT use. In particular, the study examines how university students perceive use of these technologies as supportive to face-to-face components of courses.

LITERATURE REVIEW AND RESEARCH HYPOTHESES

WebCT means a web-based course tool that enhances teaching and learning. A WebCT course is available only to students registered to that specific course, and system requires a username and password in order to gain access (Kraemer, 2003). WebCT, developed in the Department of Computer Science at the University of British Columbia, provides course material, exam material, lectures, visual presentations on the web (Clark, 2002; Morss, 1999). In terms of universities' students, WebCT is a significant tool for enriching teaching and learning in courses at many of universities (Hightower, et al., 2008). In addition, Hightower et al. (2008) indicated that these educational technologies, such as WebCT, allow instructors to place course calendars, reading lists, assignments, quizzes, and slides; manage their students' grades; and communicate synchronously and asynchronously with students scattered over a wide geographic area. In other words, WebCT provides increased access to course materials, especially after the instruction session. This technology gives a chance to students with self-paced learning opportunities. Students taking courses by WebCT have advantages of available campus courseware (Lee and MacMillan, 2004).

WebCT and related educational technologies provide network-based tools for exchanging messages between students and instructors, posting assignments, and other services to support education (Aiken et al., 2003).

Web-based learning has considerable advantages over the traditional face to face teaching. Some studies point that students who were having online-based courses were achieved better scores as compare to traditional students (Ngai, Poon and Chan, 2007). The most prominent advantage of Web-based learning lies in its ability and power to create interactivity (Woo and Reeves, 2007). Similarly, WebCT's ability reaches beyond the its traditional advantages such as retrieving course material, having mock exams and such, to be an interactive bridge between instructor and other class mates (Hightower, et al., 2008; Kraemer, 2003; Morss, 1999). Students who enroll a WebCT course were seen in active use of chat room, quiz, calendar, home page, private mail, student presentation, and search tools (Clark, 2002; Morss, 1999). Romanov and Nevgi (2006) revealed that WebCT is an innovative tool in terms of interactivity and it is used more frequently than World Wide Web.

The same study further indicates that WebCT helps students to communicate with their instructors. Clark (2002) said this tool enables students to chat and to send an e-mail. WebCT has the ability to create numerous discussion conferences both visible to all students as well as limited to student groups, thus permitting private collaborative efforts between student groups (Clark, 2002). In addition to this, students get Access to peers' Works and this may ignite collaborative learning environment and benchmarking. Morss (1999) posits that WebCT enables institutions to provide induction for freshmen and serves as a communication tool. Ngai, Poon and Chan (2007) suggest that despite the wide use of WebCT in many tertiary institutions, the researches aiming to reveal students' attitude toward this learning is rather limited in a global scale. Lu, Yu and Liu (2003) study was about the learning effect of WebCT courses, examples, and students' learning performance. Several other studies were examined the how university students perceive WebCT. (Morss, 1999; Ngai, Poon and Chan, 2007; Wernet, Olliges, and

Delicath, 2000; Withnam et al.,2002). These studies indicate a positive attitude toward the use of WebCT by participating students. In these studies, students were likely to accept using Web-based systems for teaching and learning. Davis (1989) found a relationship between easy use of such technologies and perceived benefit of using them. Ngai, Poon and Chan, (2007) revealed a relationship between technical support perceived ease of use. Another finding of this study indicates a relationship between perceived benefit and perceived ease of use.

There have been many studies of factors that influence learner satisfaction or outcomes (Chiu and Wang, 2008). Carswell and Venkatesh (2002) examined the influence of technological characteristics on learners' outcomes (intention, acceptance, and performance). Lu, Yu, and Liu (2003) pointed out the effect of learning patterns (Chiu and Wang, 2008). The studies found significant relationship between integration and gratification (Woo and Reeves, 2007; Clark, 2002). Kraemer (2003) and Morss (1999) found relationship between gratification and course choice. Similarly, time and compensation, and learning experience can be correlated with these dependent variables. Based on these approaches and researches, the hypotheses as follows:

H1: **WebCT dimensions are positively associated with satisfaction after course.**
H2: **WebCT dimensions are positively associated with course preference.**
H3: **WebCT dimensions are positively associated with course advice.**

METHOD

Research and Questionnaire Design

This paper describes attitudes of students toward WebCT applications in selected courses. Since studies on webCT in advertising and communication courses are quite limited and new, this led researchers to develop a new scale based on previous studies and in dept interviewers' opinions. In this research, to generate items including attitudes about WebCT specifically relating to marketing courses, in dept interviews were conducted with a judgmental sample (27 people) in faculty of communication sciences, and faculty of economics and administrative sciences, Anadolu University.

In constructing the in dept interviews, the students who take the courses by WebCT were selected on the basis of being representing the population in terms of marketing courses. The judgmental sample group was asked to talk about their attitudes and behaviors about WebCT applications relating to the advertising and communication courses. Then, the researcher generated and arranged a total 26 items based on these interviewers and some previous studies (e.g., Morss, 1999; Ngai, Poon and Chan, 2007; Romanov and Nevgi, 2006; Tao, 2008).
Since 4 of 26 items either overlapping with each other or were not directly related with the target constructs of the study were eliminated by two specialists and the researcher. As a result of the elimination, 22 items were determined for the study. Based on the results of these consultations and elimination, the items were revised and the preliminary questionnaire was developed. The questionnaire was further pre-tested on a group of 43 students which were judged to be representative of the target population.The questionnaire consisted of three parts. The first part is comprised of 22 statements related to attitudes towards WebCT. Statements used in this part were adapted from in dept interviews and inspired from earlier studies as cited above. A total of 22 statements were thus presented and respondents were asked to indicate their attitudes on a five-point Likert scale.

Ranging from "5=strongly agree" to "1=strongly disagree". The second part of

questionnaire is related to satisfaction, course preference and course advising after WebCT course. Three statements in this part evaluated five point Likert scale ('1' strongly disagree, '5' strongly agree). The last part included demographic variables and academic characteristics of students.

Sample

The sample group of this study consist students who are taking introduction to advertising, communication management, and advertising planning and management courses enhanced with WebCT components. The sampling method for the study is convenience sampling. In this method, researchers reach to readily accessible subject, and this method is widely used in research studies (Gegez, 2005). The two of the courses subject to the study are administered at Faculty of Communication Sciences. These are introduction to advertising and communication management courses. However, advertising planning and management course is administered at Faculty of Economics and Administrative Sciences. Participants were asked to fill a questionnaire form. A self-administrated questionnaire was applied by two trained researchers assigned to these courses. Self administrated questionnaires are field by respondents in researchers' presence.

In this research, questionnaires were distributed and filled in classes of the two faculties in the university. Due to the sensitivity of the issue, researchers first briefly explained the research purpose, and then proceeded to handing in questionnaires to agreed participants. The explanation and the questionnaire lasted approximately 15 minutes.

A total of 200 questionnaires were distributed, 151 of which were completely responded resulting in a return rate of 75.5 %.

FINDINGS AND RESULTS

Characteristics of Sample

This study consisted of 151 volunteer students taking courses via webct of whom 48.3 % were male and 51.7 % were female. Age distributions of participants are as follows: 21-22 age brackets (56.3 %) is the biggest age group followed by 23-24 age group (21.8 %). The 72.8 per cent of all participants were from Faculty of Economics and Administrative Sciences, and 27.2 per cent of participants were from faculty of Communication Sciences.

As for the frequency of students by the number of courses with WebCT component, 51.7 per cent of student have only one course, 26.5 per cent of the students have two courses, 18.5 per cent indicated that they have three courses, and 3.3 per cent of the students indicated that they have four or more courses with WebCT component. As for the distribution of students by courses, advertising planning and management 59.6 per cent, introduction to advertising 20.5 per cent and Communication management is 19.9 per cent.

Dimensions Underlying WebCT

The researcher should look at measure of sampling adequacy and hypothesis variance (KMO) and covariance matrix of variables (BTS) to apply factor analysis (Zhang et al., 2003) on items underlying the students' attitudes towards WebCT. Kaiser-Meyer Olkin (KMO) was 0.841, indicating that the sample was adequate for factor analysis (Kaiser, 1974). The Bartlett Test for Sphericity (BTS) was 1166.141 ($p < .000$), indicating that the hypothesis variance and covariance matrix of variables as an identity matrix were rejected; therefore, factor analysis was appropriate.

According to principal axis analysis, four factors had an eigenvalue equal to or greater than 1.0 (Kaiser, 1960), explaining a total of 60.884 percent of the variance.

Table: 1
Dimensions and Items of WebCT

Dimensions	Factor Loadings (β)	Mean		Eigenvalues (% of Svariance)	Alp (α)
Access and Interaction **(5 items)**					
I can reach course sources via WebCT	.539	3.23	1.04		
I can caht with m class mates via WebCT	.826	2.80	1.22	6.354	.87
I can upload blogs and my web page	.863	2.96	1.11	(33.444	
I can reach my class mates web pages via WebCT	.869	2.83	1.08		
I can send e-mails via WebCT	.650	3.46	1.16		
Learning Experience (5 items)					
It makes lectures more fun	.651	3.09	1.19		
It helps me to understand the subject	.813	3.28	1.14	2.133	.88
It increases my participation	.807	3.10	1.12	(11.226	
It makes the lecture more visual	.792	3.77	1.02		
It helps group work	.567	3.17	1.12		
Time and Compensation (5 items)					
I can listen audio of a lecture afterwards	.698	3.30	1.21		
I can access to course materials when I am away or at holidays	.509	4.39	0.87	1.636 (8.608)	.69
It is a make up for the course	.739	3.66	1.17		
I can access the links	.509	4.09	0.79		
I can watch lecture videos	.665	3.30	1.24		
Exam and Exercise (4 items)					
I can browse sample assignments	.680	4.15	0.90	1.445	.66
I can have mock exams	.783	3.00	1.13	(7.606)	
I can access the reading materials	.511	4.35	0.84		
I can sit for sample exams	.685	3.26	1.14		
Cumulative % of variance				60.884	
Internal consistency of the scale (19 items)					.88
1=Strongly Disagree 5= Strongly Agree					

These factors were labeled as *"access and interaction", "learning experience",* and *"time and compensation"*, and "*exam and exercise*".

In the factor analysis, the percentage of the variance explained by each factor indicates the relative significance of the factors.

Accordingly, the first factor, termed access and interaction, explained a large part (33.444 %) of the total variance, having a greater significance than the other two factors. The second factor, termed learning experience, explained 11.226 % of the variance. The third WebCT factor, termed time and compensation, explained 8.608 % of the total variance.

Lastly, the fourth factor, labeled exam and exercise, explained 7.606 % of the variance.

The three items with low factor loadings and less reliability were excluded from the study. All four constructs met the criterion that a factor loading should be equal to or greater than 0.50. The Cronbach alpha's were greater than 0.66 and the total of scale reliability was 0.88.

The last factor, exam and exercise, (0.66) had relatively low coefficient score, the third factor was very close to cut-off point (0.70), but the other two factors (access and interaction 0.87, and learning experience 0.77) and total of scale (19 items) had higher scores than the recommended level of 0.70 (Kim, 2003; Nunnally, 1978). (see Table 2). Table 2 showed the correlation coefficients among the dimensions.

The bi-variate relationships indicated that all of the variables significantly correlated (ranged between 0.342-0.510). Dimensions based scales were generated by summating the relevant items.

By running descriptive statistics, mean and standard deviation were found for each factor. According to descriptive statistics, time and compensation (mean 3.75), and exam and exercise (mean 3.69) had higher score (mean 4.50) than other dimensions.

Table: 2

Correlation Matrix and Descriptive (Mean, Std. Deviation)

Dimensions	1	2	3	4
Access and Interaction	1.000			
Learning Experience	.510*	1.000		
Time and compensation	.340*	.446*	1.000	
Exam and exercise	.342*	.362*	.346*	1.00
Mean	3.06	3.28	3.75	3.69
(S.D.)	(0.70	(0.63	(0.77	(0.51
** p < 0.05				

Dimensions' Effects on Satisfaction, Preference and Advice

A multiple regression analysis was utilized to identify the relationship between the four dimensions of WebCT attitudes and satisfaction, course preference, and course advice.

Table: 3

Regression Results on satisfaction, Preference and Advice

Dimensions	Dependent Variable Satisfaction			Model Summary (R^2, Adj R^2, F)
	Std. β	t	p	
Access and Interaction	0.000	-0.008	0.993	
Learning Experience	0.643	10.525	0.000**	R^2=0.512
Time and compensation	0.278	4.545	0.000**	Adj R^2=0.497
Exam and exercise	0.147	2.408	0.017*	F= 34.310**
Constant		52.833	0.000**	
Dimensions	**Dependent Variable Course Preference**			
	Std. β	t	p	
Access and Interaction	0.140	2.050	0.042*	
Learning Experience	0.589	8.633	0.000**	R^2=0.400
Time and compensation	0.204	2.989	0.003**	Adj R^2=0.382
Exam and exercise	0.067	0.977	0.330	F= 21.537**
Constant		34.995	0.000**	
Dimensions	**Dependent Variable Course Advice**			
	Std. β	t	p	
Access and Interaction	0.153	2.412	0.017*	
Learning Experience	0.657	10.354	0.000**	R^2=0.478
Time and compensation	0.174	2.737	0.007**	Adj R^2=0.461
Exam and exercise	0.078	1.237	0.218	F= 29.703**
Constant		37.375	0.000**	
* P<0.05; ** P<0.01				

The enter-variable selection method involving all four dimensions of students' attitudes toward WebCT was conducted. The tolerance referred that there is no presence of multicollinearity problems of each of the predictor (WebCT dimensions) variables

The results of the regression model indicated that the first regression model was statistically significant ($F = 34.310$; $p < 0.01$), and about 50% of the overall satisfaction was explained by the four factors of organic food consumption, as shown in Table 3. The regression coefficients pointed out that the dimensions of learning experience ($\beta = 0.643$; $p < 0.01$) exerted the strongest influence on the overall satisfaction, followed by the time and compensation ($\beta = 0.278$; $p < 0.01$), and exam and exercise ($\beta = 0.147$; $p < 0.05$). According to results in Table 3, the dimensions of learning experience, time and compensation, and exam and exercise indicated a statistically significant relationship with the satisfaction after WebCT course respectively.

The second regression model was about effects of WebCT dimensions on course preference. This regression model considered attitude of satisfaction related to WebCT as the outcome variable, and the four dimensions as predictor variables. The regression model was found to be statistically significant ($F = 21.537$; $p < 0.01$) with 38% of overall satisfaction explained by the four WebCT dimensions. The results of regression analysis indicated that the dimensions of learning experience ($\beta = 0.589$; $p < 0.01$), time and compensation ($\beta = 0.204$; $p < 0.01$), and access and interaction ($\beta = 0.140$; $p < 0.05$) indicated statistically significant relationships with the overall WebCT satisfaction. The last multiple regression model was concerned with the relationship between dimensions related to WebCT and course advice.
The regression model was found to be statistically significant ($F = 29.703$; $p < 0.01$) with 46% of overall advice behavior explained by the four dimensions. The regression coefficients indicated that the dimensions of learning experience ($\beta = 0.657$; $p < 0.01$), time and compensation ($\beta = 0.174$; $p < 0.01$), and access and interaction nostalgia ($\beta = 0.153$; $p < 0.01$) indicated statistically significant relationships with the overall WebCT course advice. The results of regression analysis indicated that the dimension of exam and exercise indicated no significant relationship ($p > 0.05$) with advice (Table 3).

DISCUSSION AND CONCLUSION

Nowadays traditional and web enhanced technologies are used interchangeable. But, how we utilize these technologies for the students' benefit requires more and comprehensive research studies. The purpose of this study is to find out students' perception and level of gratification they derive out of WebCT enhanced courses and to understand if they will refer these courses to fellow school mates. This study developed a 19-item scale instrument to evaluate dimensions related to attitudes towards WebCT courses. The factor analysis results showed that dimensions about attitudes towards WebCT could be conceptualized and measured as a four-dimensional construct comprising access and interaction, learning experiences, time and compensation, exam and exercise.

Three regression models showed statistically significant relationship between dimensions and dependent variables. The results of multiple regression analyses indicated that the dimension of learning experiences seemed to exert the strongest influence on overall satisfaction, course preference, and course advice in comparison to other dimensions related to attitudes towards WebCT.

Findings indicate a relationship between integration and course choice and referral

behavior. However, no such relationship is exerted between these factors an course gratification. These findings set a parallel line with interaction and Romanov and Nevgi (2006) study. Nonetheless, gratification has not such similarity.

From a theoretical perspective, this study examines several interesting subjects. It appears that the students' attitudes toward WebCT applications in the courses can be evaluated as a key indicator in determining learning outcomes, word-of-mouth about courses and preferences. Attitudes toward WebCT in some courses also are a significant predictor of interaction and access.

In brief, the results of the current study are of interest to instructors and practitioners in universities. The study further provides some useful insights for managerial applications in higher education. Based on the findings regarding the WebCT applications in courses of advertising, communication, marketing and/or social sciences, it can be suggested that instructors at tertiary level should pay more attention to the web-based learning aspects of courses.

As a result, It is fair to say that WebCT based application in advertising and communication courses is a particularly significant recent implementation of these technologies within Anadolu University, which may serve as a useful example to other universities.

LIMITATIONS AND RECOMMENDATIONS FOR FURTHER RESEARCH

As in many research, this study has some limitations as well. This study is limited to students' perceptions and attitudes toward WebCT enhanced courses. However, an exploratory study that correlates between students who re taking webCT enhanced courses that of those who are not will reveal more reliable results. Another limitation is that, the current study focused specifically on limited number of marketing courses and university students. Future research on web-based learning on university education could be extended to include wider courses, and academic fields, to further explore the extent to which the findings are generalisable.

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