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EXAMINING THE UNIVERSITY STUDENTS' ATTITUDES TOWARDS THE TECHNOLOGY ACCORDING TO DIFFERENT VARIABLES*

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ABSTRACT

This study have been made witht he aim of examining the university students' attitudes to wards the technology. At this research, a number of 109 students majoring in coaching departmentanda number of 131 students majoring in physical education teacher training department, a total of 240 students from Kahramanmaras Sütçü Imam University Physical Education and Sport In College Coaching Department comprise the study group. At this research, personal information form is used in order to determin ethevarieties of physical education and sports highschool students' sex, majoring department and grades; and "Scale of Attitude Towards Technology" developed by Akbaba (2002) is used in order to determine the physical education and sports high school students' attitudes to wards technology. T-Test (independentsample) forbinary comparisonsandone-way analysis of variance (ANOVA) test formul tiplecomparison sareused in order to be able to expressthe data numerical, obtained from there search group, by doing frequency of varieties and percentagecalculations with the aim of determination of students' attitude to wards technology and the level of behaviour and how the yareshaped according to different demographic characteristics. As a result, it is identified that according to gender variable the difference between the man and woman groups are statistically meaningful at "Technology Adoption", "Technology and Internet" and " Trustingthe Technology" sub-dimensions; according to the class variable the difference between classes are statistically meaningful at “Technology and Management”, “Technology and Internet” and “TheUse Of Technology" sub-dimensions.

KeyWords: Technology, EducationalTechnology, Attitude

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INTRODUCTION

Technology plays an important role in people's lives. Under recent conditions when using the technology became a must rather than a privilege, people have to gain information, skill, attitude and habitude in order to understand technology, to make use of its benefits and to adapt to its continuous changes and developments. Technology in its broader meaning is to generate necessary and operational structures to rule the nature using the gained skills. More specifically; however, it is a discipline that acts as a connecting bridge between use in science and the product that is obtained through uniting machines, operations, methods, processes, systems, control and administration mechanisms et cetera (Alkan,1998). It also is the practical application used to organize knowledge which is proven to be effective that is used in achieving specific targets, meeting the needs and making the lives easier (İşman, 2008). Through education it is aimed that individuals gain the skills to reach information, organize information, evaluate information, present information and to gain communication skills (Akkoyunlu, 1995). The fast advance of scientific and technological developments resulted in new methods in education and the advance of the old ones through modern technological tools. Therefore, newly found organizations and concepts in education were developed. Technology in terms of education is not the aim of teaching but rather is an auxiliary phenomenon. Educational technology comprises of all the systems, techniques and helps to improve learning process rather than using technology as a tool (Demirel et al., 2001; Akkoyunlu, 1998).

The most important characteristic of this era that is also known as the information age is the extensive use of informational technologies and the fact that production of information is now more important than material production. The qualifications of the individuals that the society needs have also changed. This results in the fact that the individuals now need to interact and communicate more with their environment. The tools that the technological advances brought would play an important role in the accomplishment of individuals' targets. Technology is one of the words that we hear a lot nowadays along with the word science. Although it is not easy to understand, it affects everybody's lives directly or indirectly in a specific level (Güvenç, 2004; Kiper, 2004; Ansal, 2004). Technology is a process where some tools, structures and systems to meet people's demands and requirements are developed and

manipulated (MEB, 2006a). The rapid advances in technological developments also affect educational applications like all other aspects of the society, because there is a close relationship between technology, society and education. The more technology changes the society, the more different the general talent levels of the people become and thus the expectations from education rises (Kurtdede, 2008).

In this study, the attitudes of the physical education students are going to be observed according to gender, department and study year in order to understand if there is a relationship between these variables and their attitude toward technology.

METHODS

Study Group

In this research, the study group comprises of 240- 109 coaching and 131 physical education training- students from Kahramanmaras Sutcu Imam University Physical Education and Sports Department.

Data Acquisition Tools

In this study, in order to identify the genders, departments and the terms of the students a personal information formula was used. Moreover, in order to determine their attitudes towards technology an "Attitude Scale Toward Technology" that is developed by Akbaba (2002) was used. This scale is a 37 items quinary likert scale that is developed by Akbaba in 2002.Scale consists of 9 dimensions which are Embracing the Technology (Items 23-30), Technology and Progress (18, 20, 21, 22, 37), Following Technology (6, 9, 11, 13, 16), Technology and Administration (5, 8, 10, 12), Fear of Technology (14, 17, 19, 35), Technology and Internet (15, 25, 32, 36), Confidence in Technology (31, 33, 34), Technology and Pessimism (1, 3, 7) and Use of Technology (2, 4). items number 1, 3, 5, 7, 10, 12, 14, 17, 19, 21, 24, 26, 27, 28, 30, 32, 35, 36 are inversely graded. For example, in the question "I try to avoid using technology in my daily business", Definitely Agree gets 5 points whereas Agree gets 4, Not Sure gets 3, Disagree gets 2 and Strongly Disagree gets 1. In this scale the more points are gathered, the better is the attitude toward technology. In a reliability analysis of the scale that is done by Akbaba, the Cronback alfa reliability constant of the scale was found as 0.91.

Analysis of the Data

The data gathered from 240 students of higher education through surveys are analyzed statistically using SPSS [15,0] program. In order to numerically express the gathered data,

some frequency and percentage analyses are performed on the variables and to characterize how the attitude and behavioral levels vary against distinct demographical traits, t-test (independent sample) is employed for binary comparisons and one-way variance analysis (ANOVA) was used for multiple comparisons.

Table 1. Demographical Descriptors of the Research Group

Gender	n	%
Male	110	45.8
Female	130	54.2
Department		
Physical Education Teaching	131	54.6
Coaching	109	45.4
Year		
1	57	23.8
2	64	26.7
3	59	24.6
4	60	25.0
Total	**240**	**100.0**

It is observed that 45.8% of the research group was male and 54.2% was female, 54.6% was studying in the department of Physical Education Teaching and 45.4% was in Coaching, and 23.8% of the group was freshmen, 26.7% was sophomores, 24.6% was juniors and 25% was seniors.

Table 2. The results of the Analyses on the Research Group according to the gender variable (t-test)

Sub-dimension	Gender	n	X	Sd	t	p
Embracing Technology	M	110	24.90	5.90	-2.339	0.020*
	F	130	26.56	5.15		
Technology and Progress	M	110	17.01	3.95	-1.284	0.200
	F	130	17.63	3.43		
Following Technology	M	110	16.83	4.93	-954	0.341
	F	130	17.40	4.34		
Technology and Administration	M	110	14.63	4.07	-1.574	0.117
	F	130	15.37	3.03		
Fear of Technology	M	110	12.05	3.03	-121	0.904
	F	130	12.10	2.77		
Technology and Internet	M	110	13.66	3.26	-3.566	0.000*
	F	130	15.11	3.03		
Confidence in Technology	M	110	9.26	2.45	-2.443	0.015*
	F	130	9.98	2.11		
Technology and Pessimism	M	110	10.35	2.72	-0.543	0.588
	F	130	10.53	2.51		
Use of Technology	M	110	6.85	2.24	-1.096	0.274
	F	130	7.15	1.98		

*p<0.05

According to Table 2, considering the gathered data, the differences in Embracing the Technology, Technology and Internet and Technology and Confidence are meaningful owing to sexual differences.

Table 3. The results of the Analyses on the Research Group according to the department variable (t-test)

Sub-dimension	Department	n		Sd	t	p
Embracing Technology	PET	131	26.53	5.08	2.249	0.025*
	C	109	24.92	5.98		
Technology and Progress	PET	131	17.52	3.58	0.813	0.417
	C	109	17.13	3.81		
Following Technology	PET	131	17.19	4.39	0.193	0.847
	C	109	17.08	4.89		
Technology and Administration	PET	131	15.46	3.37	2.057	0.041*
	C	109	14.52	3.72		
Fear of Technology	PET	131	12.09	2.76	0.118	0.906
	C	109	12.05	3.04		
Technology and Internet	PET	131	14.87	2.96	2.236	0.026*
	C	109	13.94	3.44		
Confidence in Technology	PET	131	9.57	2.39	-0.602	0.548
	C	109	9.75	2.19		
Technology and Pessimism	PET	131	10.46	2.35	0.073	0.942
	C	109	10.44	2.90		
Use of Technology	PET	131	7.19	1.76	1.336	0.174
	C	109	6.80	2.44		

*p<0.05

According to Table 3, considering the gathered data, the differences in Embracing the Technology, Technology and Internet and Technology and Administration are meaningful owing to departmental differences.

Table 4. The results of the Analyses on the Research Group according to the year variable (ANOVA)

Sub-dimension	Year	n	X	Sd	t	p
Embracing Technology	1	57	25.50	5.45	2.265	0.082
	2	64	26.01	4.79		
	3	59	27.13	5.84		
	4	60	24.55	5.95		
Technology and Progress	1	57	16.96	3.71	1.862	0.137
	2	64	16.98	3.35		
	3	59	18.32	3.60		
	4	60	17.15	3.98		
Following Technology	1	57	17.28	5.02	0.075	0.973
	2	64	17.14	3.99		

	3	59	17.25	4.92		
	4	60	16.91	4.85		
Technology and Administration	1	57	15.36	3.97	3.549	0.015*
	2	64	14.81	3.27		
	3	59	16.01	3.08		
	4	60	14.00	3.63		
Fear of Technology	1	57	12.38	2.97	0.676	0.568
	2	64	12.29	2.90		
	3	59	11.76	2.84		
	4	60	11.86	2.86		
Technology and Internet	1	57	14.24	3.03	3.261	0.022*
	2	64	14.25	2.87		
	3	59	15.52	3.36		
	4	60	13.80	3.40		
Confidence in Technology	1	57	9.21	2.05	0.977	0.404
	2	64	9.85	2.40		
	3	59	9.81	2.26		
	4	60	9.70	2.43		
Technology and Pessimism	1	57	10.71	2.37	1.111	0.345
	2	64	20.21	2.59		
	3	59	10.81	2.86		
	4	60	10.10	2.59		
Use of Technology	1	57	7.07	2.02	3.450	0.017*
	2	64	6.85	1.89		
	3	59	7.67	2.13		
	4	60	6.48	2.24		

*p<0.05

According to Table 4, considering the gathered data, the differences in Technology and Administration, Technology and Internet, and Use of Technology are meaningful owing to differences in the study year.

DISCUSSIONS AND CONCLUSION

The aim of this study was to determine the attitudes of physical education students toward technology and in the light of the data that is gathered through surveys from the study group is evaluated.

The data gathered from the study group was determined to be statistically meaningful in favor of women according to gender variable in Embracing Technology, Technology and Internet and Confidence in Technology. This might be caused by the fact that female students might be using technology more than the male ones to improve themselves and to conduct research. However, Türkeli found in 2011 that the gender variable did not generate any meaningful differences in terms of attitude toward technology in all sub-dimensions. Similarly, in the study of Kışla, Arıkan and Sarsar (2009) with 157 academicians, the use of

information technologies in their classes are investigated, and it was found out that the use of information technologies in the preparation phase, lecture phase and communication stage did not differ meaningfully according to sex; however, it was in the favor of women in terms of lecture management. In the study of Dikbaş (2006) it was seen that the attitude point averages of women was higher than men's. A similar result was obtained in a study by Işık, Karakış and Güler (2010) on master's students and the investigators concluded that this difference was due to the fact that female students had the ability of expressing themselves more freely on web based educational environment. In the study of Çiftçi, Güneş and Üstündağ (2010) on 432 distance learning students; however, there was no evidence of a gender based difference. This results was also seen in some studies in the literature (Ateş and Altun, 2008; Durmuş and Kaya,2011). Nevertheless, in some studies on information technologies it is also concluded that gender is a distinctive variable such as in this study and it is seen that the difference is in the favor of male students (Aypay, 2010; Taylor, Goede and Steyn, 2011; Tella and Mutula, 2008; Link and Marz, 2006; Usluel, 2007; Birgin, Çoker and Çatlıoğlu, 2010).

The data gathered from the study group was determined to be statistically meaningful in favor of physical education teaching students according to departmental variable in Embracing Technology, Technology and Administration and Technology and Internet. This might be cause by the fact that the classes in the physical education teaching department are centered more on students and the students of this department have to follow the actual educational topics by making use of technology. In the same way, when the analysis results of the skills that the university students have on information technologies are examined it is seen that the students have 4.2 out of a 5 likert scale, which means they are highly skilled. Some other studies including university students also drew similar conclusions. In the study of Dinçer and Şahinkayası (2011), it is seen that 89.01% of 440 participant university students are highly computer literate. Gross and Latham (2007) concluded that 55% of the students are middle or highly computer literate. Studies conducted on teaching department students also support these results. In the study of Yurdakul (2011) it was seen that 1.2% of the teaching students showed little use of information technologies, 45% showed middle use and 52.8% displayed extensive use. In a study including 106 teacher candidates conducted by Usta and Korkmaz (2010) it was seen that 24.6% of the participants believed they possessed rookie level computer skills; whereas 39.6% displayed intermediate level and 35.8% showed advanced level of computer skills. In fact, approximately 25% of the teacher candidates are

said to think that they do not possess adequate level of computer knowledge; whereas 75% claim that they possess sufficient knowledge of computers. In another study on 235 teacher candidates which also supports these results, Özdemir, Akbaş and Çakır (2009) calculated the computer skills as 3.95 out of a 5.0 scale. Skills on information technologies play an important role currently in terms of educational activities. Especially, since these technologies started to be used extensively in higher educational institutions, it is clearly seen from the studies that the university students generally display advanced skills in these technologies. Considering these results, it might be said that the integration of technology to classes are necessary and important, especially in higher education. When the situations where other occupational groups need to use technology are considered, the occupational knowledge that the students gain through technologically supported education gains more meaning.

The data gathered from the study group was determined to be statistically meaningful in favor of juniors according to study year variable in Technology and Administration, Technology and Internet and Use of Technology. This might be caused by the fact that physical education students become more curious related to the education level they get in the university and the fact that occupational responsibility increases with increasing grade levels. Although there are some studies with similar findings (Akın and Baştuğ, 2005; Öztürk, 2002; Çiftçi, Güneş and Üstündağ, 2010; Özmusul, 2008; Durmuş and Kaya, 2011), there are also some studies that draw contradictory conclusions (Aydoğdu, 2006; Tor and Erden, 2004; Özhelvacı, 2003). In their study on Primary Level Teaching students, Akın and Baştuğ (2005) claim that the use of technology increases from the first year to the third one; however, this use decreases in the last grade.

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