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Attitudes of the Students at Physical Education (PE) Teaching and Sports Department towards Technology Use in Education

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Abstract

The aim of present study is to investigate the attitudes of the students at physical education teaching (PETD) and sport department (SD) with different demographic characteristics towards the use of technological tools and devices in education (UTTD).The study was carried out over totally 446 subject students (154 females and 292 males) attending PETSD at Atatürk University in the spring semester of 2015-2016educational term. In the scope of the study, students were applied technology attitude scale (TAS) developed by Yavuz (2005).Data were analysed using SPSS 21 software package. Frequency distribution was used in the determination of demographic characteristics, t test in the investigation of the relationship between two independent variables and attitudes towards UTTD and Anova Variance analysis test in the determination of the relationship between variables more than two and attitudes towards UTTD. Difference between the variables was interpreted at p.0,05 significance level. It was stated from the results that there was a statistical significant difference between the attitude of students towards technology use (ASTTU) and the variables of the type of program they attend, age, department and grade while no difference was found for gender. It was seen that 4th grade students had higher ASTTU than that of those at the 1st and 2nd grades. It was seen when considered the variable of age that ASTTU was higher among those ≥ 26 than 20-22. When the departments of students were taken into consideration, ASTTU was found to be higher among the PET students than that of SD. According to the program type, ASTTU among the students at the daytime education was higher than that of those at the night time education. It may be suggested in order to increase the interest of students towards UTTD during educational processto maximum that teachers should use technology more effectively and certificated training should be given to teachers inefficient in technology use and such education should be added in the curricula of different departments.

Keywords: Technology, attitude, Physical Education, sport

Introduction

In today's condition, when considered the use of technology as a need rather than only an awareness, individuals using technology needs to gain compatibility with the developing technology and acquire the qualities like following and adopting innovations. It is aimed for humans through education to acquire the ability of obtaining, analysing and interpreting knowledge (Yılmaz et al., 2010). Perception and transfer of rapidly advancing technology and knowledge seem not to be possible through conventional teaching methods. For such an aim, yearly education programs and teaching methods should prioritize bringing up generations who can express their own opinions are open to development, proliferative, aware of their responsibility and tolerant to criticism rather than those grown up in a forcing and repetitive education approach. In short, student- based education approach should be adopted in place of teacher – based one (Coşkun, 2008).

Innovations in science and technology accompany with some changes in traditional education method. Presence and usability of technology enlarge day by day in educational life (Yılmaz, 2007).The difference between knowledge and technology may resemble that between knowing and doing. In short, science is to know and technology is to do and develop. Use of technology in education is bears the function of preventing individuals from repetition, developing them and creating suitable environment for people to research new knowledge and apply it (Varol,1997).

In this century we live, technology is seen everywhere. Importance of technology especially in educational fields increases day by day. In order to have a productive education and teaching program and bring up equipped students, balance between technology and education should be provided (Barut, 2015).

It is a common view that in the last years rapidly developing technology has caused innovations in traditional education. Integration of advancing technology in education and teaching institutions may cause increase in development level. Therefore, developing technology should be followed simultaneously and put in practice readily in education institutions (Yılmaz, 2006). Need for technology from the preparation and evaluation of educational tools directed educationalists to research and new inventions. In Turkey, technological developments in education are transferred into practice through various projects implemented at especially primary and secondary schools where technological devices were delivered to students for their use (Solak, 2009).

Technological devices and tools used in education from the past to the present can be stated to be web site, acetate, remote education, film, video, computer, smart board, data show, television, published materials and others. In addition, it is true that use of technological equipment has some advantage and disadvantage (Sadık, 1999).

It is a well – known fact that education is inevitably important in the economic, social and politic development of countries. When considered the development, enlightenment and advancement process of nations it is seen that the most important requirement seems to be education for these improvements. Education is among the most important factors to determine the life styles of individual, social welfare status of nations and the political, economic and cultural relationships between them. Advancements and changes in technology may affect education and then the society (Yılmaz, 2012).

With the perception of the importance of education in the life of humans and societies and its contribution to education, a radical differentiation was seen in education systems all over the world (Kaya, 2002).

Education technology is defined to be teaching how people have knowledge and its use in the solution of learning problems and systematic integrity strategies and applications composed of tools, devices, staff, process and methods to turn education and teaching institutions into effective and positive process (Yılmaz, Ulucan, Pehlivan, 2010).

Materials and Method

The aim of present study is to investigate the attitudes of the students at PETD and SD towards the use of technology in education and whether there is a difference between the attitudes of students and the variables like gender, age, department, grade, program type.

The study was carried out over totally 446 subject students (154 females and 292 males) at the age of 20 – 26 and attending PETSD at Atatürk University in the spring semester of 2015-2016 educational term.

Independent variables were prepared by the researcher. In order to determine the technology use attitudes of individuals, technological attitude scale developed by Yavuz (2005). Data of the research included the results of Technology Attitude Scale which evaluated ASTTU in teaching and involved 5 different factors e.g.; “state of the use of technological tools in educational fields”, “effects of technology on educational life”, teaching the use of technological tools and the evaluation of technological tools and 19 items. The scale involved 13 positive and 6 negative items. Confidence coefficient was calculated through Cronbach Alpha method to be 0.87.

Five – choice Likert type scale involves “I absolutely don’t agree” (1), I don’t agree (2), I am not sure (3), I agree (4), I absolutely agree (5). The lowest score obtained from the scale was 19 implying the most negative attitudes, the highest score, 95, represented the most positive total score, the score, 57, given to the choice “not sure” represented the neutral attitudes with indefinite directions (Yavuz, S., Coşkun, A.E., 2008).

In the analysis of data, frequency distribution, t test and Anova Variance analysis were used respectively to define demographic characteristics, relationship between two independent variables and more than two variables. LSD test was also used to determine what group causes the differences. SPSS 21 software package was used to apply all these tests and the significance level was adjusted to $p < 0.05$. Alpha was found to be 0.839 in validity and confidence analyses.

Findings

Table 1 represents the frequency distribution of participant students’ demographic characteristics while Table 2 and 3 give the results of Independent- Samples T test to determine the relationship between gender and the types of education program and technology attitude scale. Table 4, 5 and 6 involve the results of One- Way Anova test used to determine the relationship between the variables of students’ age, department and grade and technology use attitude scale.

Table 1. Demographic characteristics of sample participant students

Variable	Distribution	Number	Percentag
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		(N)	e (%)
Gender	Female	154	34,5
	Male	292	65,5
	Total	446	100,0
Age	19 and below	39	8,7
	20-22 years old	269	60,3
	23-25 years old	97	21,7
	26 and above	41	9,2
Departments students attend	Teaching	152	34,1
	Administration	82	18,4
	Training	129	28,9
	Recreation	83	18,6
Grade	1st Grade	120	26,9
	2nd Grade	133	29,8
	3rd Grade	80	17,9
	4th Grade	113	25,3
The type of Program	Daytime	281	63,0
	Night time	165	37,0

Table 2. Comparison of the attitude scores related to technology use for gender variable

Gender	N	X	Ss	t	p
Female	154	59,8247	12,13817	-1,325	,970
Male	292	61,3699	11,47507	-1,302	

According to Table 2, it was seen that there is no statistically significant difference between mean score of technology use attitude scale (MSTUAS) and the gender of students ($p:0.05$). MSTUAS of female students was found to be lower than that of males.

Table 3. Comparison of MSTUAS and the types of program students attend

Types of Program	N	X	Ss	t	p
Daytime	281	63,0178	9,44097	5,284	,000
Night time	165	57,1212	14,08372	4,784	

It is seen from Table 3 that there is statistically significant difference between MSTUAS and the types of the program students attend ($p:0,05$) and MSTUAS of daytime education is higher than that of those at night time program.

Table 4. Comparison of MSTUAS for the variable of age

Age	N	X	Ss	F	P	Difference
19 and below	39	60,9744	12,60427	1,657	,049	4-2
20-22 years old	269	59,9777	11,82741			
23-25 years old	97	61,8866	12,03716			
26 and above	41	63,8537	8,63875			
Total	446	60,8363	11,71775			

It is understood from Table 4 that there is significant difference between MSTUAS and age of students ($p:0.05$). MSTUAS is seen to be higher among those 26 and above than that of 20-22 age group.

Table 5. Comparison of MSTUAS and the departments

Departments	N	X	SD	F	P	Difference
Teaching	152	62,7763	9,03136	3,522	,006	1-2
Administration	82	58,3902	13,47586			
Training	129	61,3798	11,14408			
Recreation	83	58,8554	14,29321			
Total	446	60,8363	11,71775			

When considered Table 5, it is seen that there is statistically significant difference between MSTUAS and the departments the students attend ($p:0.05$). MSTUAS is higher among the students at teaching department than the others.

Table 6. Comparison of MSTUAS and the grades

Grades	N	X	SD	F	P	Difference
1 st Grade	120	61,8167	10,58776	6,077	,000	2-4,1
2 nd Grade	133	57,7218	13,34527			
3 rd Grade	80	60,3500	10,87222			
4 th Grade	113	63,8053	10,56177			
Total	446	60,8363	11,71775			

It can be seen when Table 6 is taken into consideration that there is a significant difference between MSTUAS and the grades ($p:0.05$). Students at 2nd grade had lower MSTUAS than the 4th and the 1st grades.

Results and Discussion

Present study investigates the attitudes of the students at PETD and SD with different demographic characteristics towards the use of technological tools and devices in education.

It was determined from the result of the analysis that there is no statistically significant difference between students' gender and MSTUAS ($p:0.05$), which was found to be higher among males than females. From this point of view, it can be stated that gender is not an effective factor on technology use attitudes in education. Şimşek (2015) could not obtain significant differences in the study which compared the use of technology and genders among social sciences teacher candidates. Such a result is in convenience with the result of present study.

It was found that there is a significant difference between the types of program and MSTUAS ($p:0.05$), which was found to be higher among day time attending students than those attending school night time. The reason for this may be that day time students have more time to research and see technological innovations since they start lesson earlier than others with fresh mind and refreshed body while night time students are generally among working people and expected to spend less time for technology use.

It was determined that there is significant difference between MSTUAS and age ($p:0.049$), which was found to be higher among those 26 and above than 20-22.

It was found that there is a statistically significant difference between students' department and MSTUAS ($p:0.006$), which was found to be higher among teaching students than the others. When considered the curricula, students at teaching department get teaching technologies and material design as a subject and therefore they may have higher MSTUAS.

It was determined that there was a significant difference between the grade level of participant students and the average of technology attitude scale score ($p:0.000$). It was observed that the 2nd grade students' average score of attitude towards technology use was lower than those of 4th and 1st grades. It is thought that since 4th grade students got teaching technologies and material design lecture, their attitudes toward the use of technology in education are higher compared to those of lower grade students. In addition, when the exam program of last grade students is taken into consideration, it may be stated that since there is larger need for research and access to more references using technology and they used technology more actively and effectively to remove their deficits in this area.

In literature, Yılmaz (2005) stated that there is a positive relationship between technology use in education and the success and attitude of students. Sevindik (2006) detected a positive relationship between the use of smart classrooms in higher education and academic success and attitudes of students. Gunter, Gunter and Wiens (1998) determined that after being trained, teachers exhibited more positive and less worried attitudes towards studying and learning with computer and technology. Dalton and Hannafin (1986) determined in their study, where they investigated the effect of video, computer supported teaching and interactive video applications on learning performance and attitude that only computer supported teaching is the most effective teaching method and affected significantly the attitude of the students with lower capability. In the study of Yılmaz (2008), where the internet use attitudes of candidate teachers at PET department are investigated, it was determined that candidate teachers had positive attitudes towards internet use and as the experience increases attitudes also change in positive direction. Yılmaz (2007) stated that students attending PE teaching program have positive attitudes in using computer and those experienced in computer more exhibit more favourable attitudes. Yavuz and Coşkun (2008) determined in their study, where they investigated the attitudes and thoughts of primary school teacher candidates about the use of technology in education that there is a positive relation between students' level of using technological tools and devices in education and their attitudes and in the interviews students were found to have positive thoughts related to the use of technology. Yılmaz (2008), reported that university teaching staff at PE and sports education department have positive attitudes toward technology and majority of them found the technological equipment in their schools to be insufficient and they didn't attend any course related to technology. Obay and Özgen (2008), determined in their study where they investigated the attitudes of candidate teachers towards education technologies that the variable of getting the lecture of teaching technologies and material development affected positively the attitudes of candidate teachers towards education technologies. Yılmaz et al. (2010) stated in their study on the determination of the attitudes and opinions of students at PET program towards the use of technology in education that students' use of technological materials in teaching affect positively the attitude scores of students.

Conflict of Interest

The authors have not declared any conflicts of interest.

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