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Analyzing the Attitudes of Physical Education and Sport Teachers towards Technology

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ABSTRACTThe aim of this study was to analyze the attitudes of physical education and sports teachers about towards the use of technology in education and the position of technology in education. In this study, randomly chosen 171 physical education and sports teachers who works in Bursa city center (Mage: 33.47±6.52) took place voluntarily. In the study, data gathering tools and personal information form which was designed by researchers and "Technology Attitude Scale'', which was developed by Yavuz (2005), were used together. During the data evaluation process, statistical frequency and percentage methods were used to identify the distribution of personal information of participants. For normality test, one sample Kolmogorov-Smirnov test was conducted and skevness-kurtois values were examined. To determine significant differences, Kruskal-Wallis and Mann-Whitney U non-parametric tests were done. Consequently, the attitudes of the physical education and sports teachers' who took place in this study on technology showed significant differences according to their gender, ages and their term of duty ($p<0.05$) but did not show significant differences with respect to their administrative tasks ($p>0.05$).

INTRODUCTION

The 21st century is also known as '' information age '' because of the developments in science and technology. In this age, the scope of information and the way of accessing information are rapidly changing; some new channels or ways of accessing information are emerging day by day. (Seferoglu 2009). As a very strong instrument of the Information Age, technology, makes life easier and empower the individual, the community and the professionals against facts and events thereby giving them new responsibilities. (Kisa and Kaya 2006).

Today, the rapid development of technology makes it to be more used in education. Nowadays, technology is more understood as goods and services which includes high quality scientific and technical information (Kol 2012).

In this context, with the developments in technology, the functions which are expected from teachers are also changing. Today, it is expected of teachers to use information technologies and also pass the knowledge to their students because it is more effective and economical. (Ipek and Acuner 2011).

The aim is for individuals to have abilities in accessing, editing, evaluating, presenting of information and communication skills in education. To reach these basic targets, the learning-teaching processes must be effective and last longer for learners. (Yilmaz et al. 2010; Karamustafaoglu 2006).

Technology offers proper education materials (laboratories, libraries, tools, etc.) which are suitable for every stage of education for individual or collective usage by students from primary school to university (Ispir et al. 2007). According to Aklan (1997), development in technology has impacted on education in the following ways; gaining of the necessary general abilities by individuals who will live in technological environments, raising of a labor force who have the necessary properties that are needed by a technological environment, taking the possibilities of technology.

The use of technological products in education motivates the students, makes them to be more attentive so that they can comprehend issues unlike in the traditional teaching methods. Furthermore, individuals gain knowledge on where and how they will use this information except unless they have 'internalized knowledge' by using technology (Kenar 2012). It is incontrovertibly true that individuals, community and the professionals which can produce and use technology and which are integrated with technology will be stronger and better every time. (Meral and Colak 2002; Kisa and Kaya 2006).

The use of technology is not only in using the available and actual technological facilities, but also in using information effectively. In this

context, the effective use of information and communication technologies provides promising solutions about transferring experience and expertise of both open and tacit knowledge. Technologies as facilitated classification, organization and storage of information, also makes better ways of accessing information more and makes the information transfer process easier (Stoddart 2001). It is frequently argued that technology has strategic importance in the inteinstitutional information transfer except internal information transfer (Zhao and Xie 2002).

In this context**,** according to the given information above, we aim to evaluate the attitudes of physical education and sports education teachers towards the use of technology in education.

MATERIAL AND METHODS

Research Group

In this study, randomly chosen 171 physical education and sports teachers who work in Bursa city center (Mage: 33.47±6.52; M work year: 7.66±6.07) took part voluntarily.

Data Collection Tools

In this study, in addition to personal information form which was designed by researchers and ''Technology Attitude Scale'', which was developed by Yavuz (2005) were used as data gathering tools. The technology attitude scale consists of 19 items and 5 factors like, non use of technological instruments in education, the use of technological instruments in education, the effects of technology on education, teaching to use technological material, and evaluating technological material. Cronbachalpha internal consistency coefficient was calculated as 0.86 for this scale. The articles in this scale were evaluated with five ratings such as strongly agree (5), agree (4), undecided (3), disagree (2) and strongly disagree (1).

Evaluation of Data: Initially, it was analyzed that whether the scale used for the sample group is reliable or not. Cronbachalpha internal consistency coefficient was calculated for this scale as 0.67. The items in the scale did not increase the calculated total reliability coefficient, so we maintained the original scale form.

Subsequently, to determine how the data distribution was, one sample Kolmogorov-Smirnov test was applied while Skevness and Kurtois-values were analyzed. According to the analyzed results, the data was not showing normal distribution. Also to identify the distribution of personal information of the participants, statistical frequency and percentage methods were used. Additionally, to identify significant differences, at a significance level of α=0.05,Mann-Whitney U and Kruskal-Wallis tests were applied (Ural and Kilic 2011).

RESULTS AND DISCUSSION

In Table 1, there is distribution of participant teachers' personal information. According to the analysis,75.4% of participants are (n=129) male, 43.9% of participants are (n=75) between the ages of 24-30, 83% of them have no administrative tasks (n=142) and, 38% of the participants (n=65) work in high school.

Table 1: Distribution of participants' personal information

		Frequency	*Percentage*
Sex	Male	129	75.4
	Female	42	24.6
	Total	171	100
Age	24-30	75	43.9
	31-40	67	39.2
	41 and above	29	17
	Total	171	100
Do You Have Administrative Tasks?	Yes	29	17
	No	142	83
	Total	171	100
Organisation/ Type-degree of School	Primary school	35	20.5
	Secondary school	71	41.5
	High school	65	38
	Total	171	100

The attitudes of participants about technology in education, differs significantly in favor of the male participants in the area of no use of technological instruments in education, and differs significantly in favor of the female participants in the area of the use of technological instruments in education. The effects factor of technology in education and teaching through the use of technological material is ($P<0.05$). However, there is no significant difference ($p>0.05$) in the level of evaluating technological material.

Table 2: Mann-Whitney U Test results according to sex

	Sex	*N*	*Mean square*	*U*	*p*
Non usage of technological instruments in education	Male	129	90.29	2156.	0.04
	Female	42	72.83		
The use of technological instruments in education	Male	129	81.	2064.5	0.01
	Female	42	101.35		
The effects of technology on education	Male	129	80.53	2003.5	0.01
	Female	42	102.8		
Teaching using technological material	Male	129	79.71	1897.	0.00
	Female	42	105.33		
Evaluating technological material	Male	129	82.38	2241.	0.08
	Female	42	97.13		

Table 3: Kruskal-Wallis test results according to age

	Age	*N*	*Mean square*	*Degrees of freedom*	*Chi-square*	*p*
Non usage of technological instruments in education	24-30	75	79.56	2	10.811	0.00
	31-40	67	81.46			
	41 and above	29	113.14			
The use of technological instruments in education	24-30	75	91.49	2	1.740	0.41
	31-40	67	82.10			
	41 and above	29	80.79			
The effects of technology on education	24-30	75	92.19	2	2.208	0.33
	31-40	67	82.08			
	41 and above	29	79.05			
Teaching using technological material	24-30	75	92.51	2	2.363	0.30
	31-40	67	80.74			
	41 and above	29	81.33			
Evaluating technological material	24-30	75	87.25	2	0.232	0.89
	31-40	67	83.81			
	41 and above	29	87.83			

Table 4: Mann-Whitney U test results according to administrative tasks

	Do you have administrative tasks?	*N*	*Mean square*	*U*	*p*
Non usage of technological instruments in education	Yes	29	97.98	1711.5	0.14
	No	142	83.55		
The use of technological instruments in education	Yes	29	81.74	1935.5	0.60
	No	142	86.87		
The effects of technology on education	Yes	29	75.1	1743.	0.18
	No	142	88.23		
Teaching using technological material	Yes	29	76.53	1784.5	0.25
	No	142	87.93		
Evaluating technological material	Yes	29	91.29	1905.5	0.51
	No	142	84.92		

The attitudes of participants towards technology in education, according to their ages, in the area of non usage of technological instruments in education, differ significantly in favor of the participants who were 41 years and above ($p<0.01$).

The attitudes of participants towards technology in education did not show a significant difference according to their administrative tasks ($p>0.05$).

The attitudes of participants towards technology in education, in the area of non-usage of technological instruments in education , differed significantly in favor of the participants who have worked for 11 years and above ($p<0.01$).

This result is in contrast with some other studies in literature. Deniz et al. in 2006, during their study, which they made with candidate teachers, did not find significant differences ac-

cording to sex between the mean attitudes of the participants.

Apart from that, it can be said that, participants, whose ages are 41 and above and who have worked for 11 years or more seem not to use technology in education field.

The impact of Education technologies on education and teaching is about both the teachers' and candidates having the information and ability in the use of technology. (Erdemir et al. 2009).

Training administrators and teachers who will play primary roles for adoption of new technologies and implementation is as important as to equip educational institutions with the technological materials. It is not enough to meet the technology and the personnel who will implement new technologies. Rather, it is also a necessity for teachers to have abilities in the area of organizing learning activities via technology and as well as new teaching methods (Akpinar 2003). In a case where teachers cannot develop their abilities in the area of using the available technology, they may face various difficulties during the transfer of the content of educational programs through traditional ways and devices (Aksoy 2006).

CONCLUSION

In this study, our aim is to analyze the attitudes of physical education and sports teachers towards the use of technology in education and the position of technology in education. According to the results, it is understood that male participants tend not to use technology in education field. Whereas, female participants tend to use technology and generally think that technology is effective in educational life. Again, it can be said that female participants generally think that teaching of how the technology will be used in education is necessary.

The use of technologies can increase teachers' capacity to provide support, choice and ûexibility to students. It can also directly support the learning of individual students with wide differences in their abilities to see, hear, speak, move, read, write, understand, attend, organize, engage and remember things.

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