

Vocational school students “attitudes toward computer technology” Marmara University sample

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Abstract. Rapid changes in information and information technology nowadays change the social life of the community and have become an important factor affecting the exchange and development of the institutions accordingly. The use of computer technology in all areas such as education, health, communication and banking affect business processes and methods in organizational structure and the education of technically skilled qualified individuals becoming important. The education of qualified individuals in desired qualities is closely related to their attitudes toward computer use. The target of this study was to determine among the students in health and technical programs whether there is a relationship between independent variables such as gender, area of study, use of social media tools and the attitude towards the use of computer technology.

Keywords: Vocational school students; computer use; computer attitude scale; technology use.

1 Introduction

Nowadays, rapid changes in information and information Technologies, has become an important factor affecting society’s social life and accordingly the changes and development of institutions. The rapid development of science and technology also raises the need to adapt to this development in order to meet the needs of society. As in every area, the effective use of technology provides great convenience and advantages in education also, [4].

Computer Technologies, which are used in all areas ranging from education, health, and communications, to banking, affect business processes and methodologies within corporate structures and it is becoming important to train qualified individuals with suitable

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technological knowledge. The cultivation of desired qualified individuals is closely related to their attitudes toward computer use.

Constant increase in information and Technologies in nowadays the rapid developments occurring in technology field, increased the demand for individuals who are equipped with knowledge skills, able to use technology and able to learn on their own.

Effective use of information technologies and social media in information society has increased both corporately and individually. Computer literate became important with widely use of computer Technologies in education, as in all areas. It is expected that students who continue their education in sections with extensive Technologies are dominated by computer technologies.

In order to make education effective, it is not enough for technology to take place alone in the process. To ensure an effective education process, it is necessary for students and teachers to use technology correctly and with suitable teaching contents, [4].

Attitude is defined as, a propensity attributed to an individual and his ideas about psychological objects, feelings and behavior forming on a regular basis, [6]. Attitude is a way of showing a positive or a negative behavior against to any event or people, [14]. In other words, attitude is a regular attitude or a behavior act that people take against certain objects as a result of varied experiences.

In order technology to have effective part in both education and business life, it is required to identify positive and negative attitudes of teachers and students towards technology. If there are negative attitudes, taking necessary precautions becomes an important matter. It is expected that students who are studying in technology integrated sections of universities to dominate on computer technologies, [1]. Especially for teachers who need to use technology effectively on their jobs, it is becoming important to achieve related knowledge and abilities about technology usage in university educations, [2]. Therefore, teacher who use suitable technological tools in education fields and encourage students to use these tools identifies students' interest and attitude towards computer.

In literature, it is observed that there are many studies to determine students' attitudes regarding the use of computer technology in the educational environment, and it is also obvious that limited studies are done to vocational school students who supplies labor demand of industry, [5], [8], [10], [12], [13], [17], [18].

Aim of this study is to determine attitudes of Marmara University Vocational School of Technical Sciences and Vocational School of Health Services students regarding usage of computer Technologies in education. With this purpose, it is tried to determine if attitudes towards computer technology usage in education varies according to variables such as gender, department, and class, having a computer students who are studying in "Medical Imaging Techniques, Fashion Design, Printing and Publishing Technology" programs, which are widely using computer technologies in education.

2 Method

This study is designed appropriate to "Correlative Scanning Model" of scanning models. Correlative Scanning Models are "research models which aims to determine difference and/or difference rate between two or more variables", [9]. In this context, it is examined to determine if there is a relation between gender, education field, having a computer situations and attitudes to use computer technologies of technical sciences and vocational sciences students of vocational schools.

Universe of this study are, students who are studying in Marmara University Vocational School of Technical sciences and Vocational School of Health Services. Sample of this study are, total 165 students who are currently studying in Fashion Design and Printing and Publishing Technologies programs of Vocational School of Technical Sciences and

Medical Imaging Techniques program in Vocational School of Health Services. Sample group is not identified and students who are currently studying in these departments are selected as research scope.

For data collection, form created from 2 sections and named “Attitude Survey Towards Usage of Computer Technologies” is used and it is applied to 2014-2015 years.

Form which is used to collect data about the research is made from two sections. First section is made up of 18 questions and there are questions in order to determine socio-economical characteristic of students such as; age, gender, high school graduation type, literate level of family, and occupation status. Questions about having a computer and using it, and using social media tools are also placed in this part of survey.

In the second part there is “Technology Attitude Scale” made from 19 steps which is developed by Yavuz [16] in order to determine student thoughts towards computer technology usage in education. Scale is made from 13 positive and 6 negative statements, and has five subtitles such as; “not using technologic tools in education field, using technologic tools in education field, and effects of technology in education live, teaching how to use technologic tools, and evaluating technologic tools”. Reliability coefficient of scale was found as 0.8668 in original study, [16]. However, in this study, reliability coefficient of the test is found as 0.94.

Steps in Technology Attitude Scale are evaluated with five ratings which are “strongly agree” (5), “agree” (4), “neither agree nor disagree” (3), “disagree” (2), “strongly disagree” (1). According to this, to the achieved data, values from 5 to 1 are entered to positive outcomes and values from 1 to 5 are entered to negative outcomes.

Evaluation of obtained data is done with SPSS (Portable 'PASW Statistics 18') Statistical Package Program. As statistical analysis technique, frequency distributions are used to evaluate socio-economic information, and “Independent Sample T Test”, “One-Way Anova” and “Tukey HSD Test (Post-Hoc)” are used to evaluate aim/hypothesis statements. During evaluation of data, percentage distribution, [15], [19] frequency distribution, and One-Way Anova, T-Test are used, [3], [7], [9], [11]. In evaluating results and interpreting data, significant value is accepted as $p < 0.05$ and comments are made about having significant difference between groups.

In this study, below hypothesis are generated according to general theoretical frame and related literature.

Hypothesis 1. There is not a significant relation between gender of students and their attitudes towards using computer Technologies in education.

Hypothesis 2. There is not a significant relation between students having a computer and their attitudes towards using computer Technologies in education.

Hypothesis 3. There is not a significant relation between education departments of students and their attitudes towards using computer Technologies in education.

3 Findings

In this section, there are socio-economic information and t-test and variance analysis results about self-qualification perceptions of students from Fashion Design and Printing and Publishing Programs of Marmara University Vocational School of Technical Sciences and Medical Imaging Techniques Program from Marmara University Vocational School of Health Services.

When looked at personal information of students contributed to the survey, it is found out that most is female students (70.9%) and age ranges between 17-20 (90.9%) and they are mostly freshman students (75.2%). According to education field, students are from Fashion Design (44.8%), Medical Imaging Techniques (35.8%), and Printing and

Publishing Technologies (19.4%) programs and most of them are graduated from vocational high schools (93.4%). It is seen that; most of the students are using computer (88.5%), have personal computers (72.1%), and almost half of them use computer everyday (49.1%). Moreover, it is observed that using social media is widely common (89.7%) and Snapchat (22.4%), WhatsApp (14.5%), Instagram (12.1%), Twitter (10.9%) and Facebook (60.1%) are used as social media tools.

It is found that there is a significant difference between students' gender and their attitudes towards computer technologies usage in education, H0 is rejected ($t_{(163)} = -3.289$; $p < .05$). It is seen that this diversity is due to female students ($\bar{x} = 60.97$) (Table 1).

Table 1. Differentiation Status by Gender Attitudes Towards the Use of Computer Technology (T-Test)

Gender	n	\bar{x}	s.s	t	sd	p
Female	117	60,97	17,009	3,289	163	,001
Male	48	51,06	18,880			

It is found that there is not a significant difference between having computer and students attitudes towards computer technologies usage in education, H0 is accepted ($t_{(98,357)} = 0.404$; $p > .05$) (Table 2).

Table 2. Differentiation status by computer technology computer owner attitudes towards the use of being (T-test)

Computer	n	\bar{x}	s.s	t	sd	p
Yes	119	58,31	18,978	0,404	98,357	,687
No	46	57,13	15,786			

It is found that there is a significant difference between education fields of students and their attitudes towards computer technologies usage in education, H0 is rejected ($f = 86.675$, $p < .05$). Therefore, according to education field students' attitudes towards computer technologies usage in education varies. Average of Printing and Publishing Technology (68.31) and Fashion Design (67.51) students are almost same, but average of Medical Imaging Technique (40.71) students is lower than other programs (Table 3).

Table 3. Determination of the students they receive the difference by Department of Education Resources (Post Hoc-Tukey Test)

Department (I)	Depart. (J)	Mean Difference (I-J)	Std. Error	P
Medical Imaging Techniques (MTT)	FD	-26,802*	2,208	,000
	PPT	-27,601*	2,777	,000
Fashion Design (FD)	MTT	26,802*	2,208	,000
	PPT	-,799	2,676	,952
Printing and Publishing Technologies (PPT)	MTT	27,601*	2,777	,000
	FD	,799	2,676	,952

In order to figure out the source of difference in groups Tukey HSD Test is used. According to Tukey HSD Test results which are made to identify difference between education fields of students and their attitudes towards computer technologies usage in education;

- Average difference between MTT and FD students is -26.802 and significance level is lower than 0.05.
- Average difference between MTT and PPT students is -27.601 and significance level is lower than 0.05.
- Average difference between FD and PPT students is -0.799 and significance level is lower than 0.05.

Due to these results, this difference arises from Fashion Design and Printing and Publishing students and these students have higher point in technology attitude scale in comparison to Medical Imaging Techniques students.

This difference can be due to Fashion Design and Printing and Publishing Technologies students having more visual design based classes related with computer usage and this can be evaluated as a different study subject.

According to achieved results, sub-groups are created due to total points students' attitude towards computer technologies usage in education. Here, Medical Imaging Techniques students are single group and Fashion Design and Printing and Publishing Technologies students have similar characteristics and they are together within another group.

4 Conclusion

In scope of this research, which is created according to "Technology Attitude Scale" in order to identify attitudes of students towards computer technology usage in education, the results are;

- Attitude varies according to gender to female favor, female students have higher attitude towards technology than male students.
- According to having computer or not, attitudes of students who have or don't have a personal computer does not varies.
- According to education field, Fashion Design and Printing and Publishing Technologies students have more favor in attitudes towards computer technologies when compared with medical Imaging Techniques students.
- Printing and Publishing Technology students have higher attitude towards technology than Fashion Design students but there is not a significant difference in between.

Following can be suggested based on finding and results achieved as a result of this study:

- Due to increase attitude of male student towards computer Technologies usage in education, course curriculums needs to be reformed.
- Attitudes of Medical Imaging Techniques student towards computer Technologies usage in education can be increased.
- Relation between students' attitudes toward computer Technologies usage in education and their academic success can be researched.
- It needs to be determined if there is a relation between attitudes of students towards computer technologies usage in education and self-qualification perception and worries for computer.

Education systems have been constantly updated to grow people suitable to information society and be a part of information. As a result of this, educational institutions must inform people about the new technologies, must teach them how to use these technologies and they should use these new technologies as well.

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