

## STUDENTS' PREFERENCES ON COMPUTER USING AND A SURVEY ON VARIABLES IMPACTING THE PREFERENCES

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### ABSTRACT

The aim of this study is to find out the preferences of students at Balıkesir University, Gonen Vocational School of Higher Education on computer using and whether there is a difference on the variables to set the preferences. According to the findings from questionnaires, the students at Gonen Vocational School of Higher Education use computers to access the Internet and to communicate with other people through the Internet. They do not prefer to use the computer for improving themselves on such objectives as to learn a foreign language, to study and to prepare a project for academic reasons. Among the factors not to use a computer, however, are shown the obstacles like they do not own a computer, the economic conditions and lack of time. By means of the study we have found that there is a meaningful relation between the students' preferences to use a computer and the variables like gender, grades and own a computer.

**Key Words:** Preference to use a computer, Obstacles, Vocational Schools

### ÖZET

Bu çalışmada, Balıkesir Üniversitesi Gönen Meslek Yüksekokulu öğrencilerinin bilgisayar kullanma tercihleri ve bu tercihlerin belirlenmesinde hangi değişkenlere göre farklılık olup olmadığının ortaya çıkartılması amaçlanmaktadır. Anket çalışması ile elde edilen araştırma bulgularına göre Gönen Meslek Yüksekokulu öğrencileri bilgisayar daha çok Internet'e bağlanmak ve bu doğrultuda başka kişilerle iletişim kurmak amacıyla kullanmaktadırlar. Yabancı dil öğrenme, ders çalışma ve kişisel amaçlarla ödev hazırlama gibi kendilerini geliştirebilecekleri alanlarda bilgisayar kullanmayı öncelikli olarak tercih etmemektedirler. Diğer taraftan bilgisayar kullanmalarını engelleyici faktörler olarak bilgisayara sahip olunmaması, ekonomik şartlar ve zaman sorununu göstermektedirler. Ayrıca çalışmada öğrencilerin bilgisayar kullanma tercihleri ile cinsiyetleri, sınıf düzeyleri ve bilgisayarlarının olup olmaması gibi değişkenlere göre anlamlı farklılıklar olduğu da tespit edilmiştir.

**Anahtar kelimeler:**Bilgisayar kullanımı tercihleri, Engeller, Meslek Yüksek Okulları

### INTRODUCTION

Today computers and the Internet using are getting more and more common at an incredible speed around the world. This is, undoubtedly, because of the services they provide, which are easily available. These two technology wonders, which become an indispensable part of our lives, have turned out to be a passion especially among young generation. Computers which had been away from the public life until recently because of their huge structures and usages which require proficiency had developed incredibly since the mid-1980s and created a technological revolution in Turkey at the end of 1990s (Börü, 2001).

The rapid change in technology has affected education system and also brought innovations together. The widespread use of computers has led to great change on education for the last 20 years (Akkoyunlu, 2000). Similarly, using computer in university education has an important role for students to become successful after starting their career. It is certain that the students who add computer using to their professional training have an advantage in working life in which there is a great competition (Davis et al, 1999). However, computer using may show some differences according to individuals' personal characteristics, demographic features and the fields of study (Palmer, 2000: 141-154 ; Hawkins ve Paris, 1997: 147-158 ; Igbaria ve Iivari, 1995: 587-605). After these differences have been determined, students' computer training can be made more effective because computer using may create positive effects on students' daily life and education in many aspects (Croxall ve Cummings, 2000:9-18). The more students improve their ability to use technology, the more confident they will become and, at the same time, the less anxious they will be about employment in the future. From this point of view, determining the variables that affect students' computer using will play an important role in giving efficient computer training. Orienting students to use computer in the areas especially where they can improve themselves will not only provide the success of educational institutions but will also improve national economy.

This study was carried out on the students at Gonen Vocational School, Balikesir University. The data were analysed and the findings were compared with the related literature. The results were discussed in the Conclusion and evaluated in accordance.

## METHOD

### The Aim and Importance of the Study

The aim of this study is to determine the preferences of Balikesir University, Vocational High School of Gönen students for computer use and the factors, if any, underlying these preferences. Providing that computer courses are essential in training technician, this study is important in educational institutions' regarding computer courses as competition advantages in finding jobs and evaluating students in this respect. Some hypotheses put forward in terms of the main goals of the study are:

H1: There are statistically significant differences between the preferences of the male and female students in the use of computer.

H2: There are statistically significant differences among the preferences of the students for using computer according to their grades.

H3: There are statistically significant differences in students' computer use preferences due to owning a computer or not.

H4: There are statistically significant differences in students' computer use preferences according to at which departments they are.

### Sampling and Data Collection Methods

Questionnaires were given to the participants of the study, who are the students of Balikesir University, Vocational High School of Gönen, in face-to-face settings. Cluster sampling was used. In this sense, there are four different departments in The Vocational High School of Gönen. The first and second-year students were grouped as the day and evening groups and questionnaires were conducted to these students in a simple random sampling method. 180 of the 511 students were given the questionnaires and 6 questionnaires were extracted because of being faulty. The representation rate of the sample of the universe is 34.1%.

In the research, primary and secondary data were used. As a primary data collection instrument, the questionnaires were prepared in parallel with the current literature. The questionnaire consists of the 25 items taken from the similar study of Gölge and Arlı (2002). The questionnaire has two sections. In the first section, is aimed to learn some features of the students, their frequency of computer using, and the factors affecting their use of computer. In the second section, by a five-optional Likert scale, it is aimed to find out for what purposes the students use computers. The internal reliability (Cronbach's Alpha) is 0.89. Whether there are significant differences among the students due to independent variables was measured through T and One Way ANOVA tests.

### Data Analysis

In the analysis of the data obtained by the questionnaires, SPSS 11.0 for Windows was used. In the analyses, the techniques of frequency, mean, comparable table summaries, T-test, and the one-way ANOVA test were used.

## FINDINGS AND EVALUATION

The distribution of the participants of the questionnaires according to their gender was shown in Table 1. According to the data, the rate of males is 69.5%, and the rate of females is 30.5%. The reason for this can be explained by the absence of female students at the departments of Sanitary/Pipe Installation Systems and Natural Gas and Climatization and Freezing.

**Table 1 The Frequency and Percentiles About General Information and Some Personal Features of Participants**

Gender	Frequency (n)	Percentile (%)
Girls	53	30,5
Boys	121	69,5
Total	174	100,0
Income	Frequency (n)	Percentile (%)
Less than 250 YTL	97	55,7
251-500 YTL	62	35,6
501-750 YTL	13	7,5
Over 750 YTL	2	1,1

<b>Total</b>	174	100,0
<b>Year</b>	<b>Frequency (n)</b>	<b>Percentile (%)</b>
<b>1st Year</b>	104	59,8
<b>2nd Year</b>	70	40,2
<b>Total</b>	174	100,0
<b>Program</b>	<b>Frequency (n)</b>	<b>Percentile (%)</b>
<b>Plumbing and Natural Gas</b>	59	33,9
<b>Climate and Cooling Technology</b>	15	8,6
<b>Accounting</b>	55	31,6
<b>Tourism and Hotel Management</b>	45	25,9
<b>Total</b>	174	100,0

When considered the distribution of the students according to their incomes, it was seen that most of the students, 55.7%, have incomes under/below 250 NTLs (New Turkish Liras). The students having incomes between 251 and 500 NTLs follow this group with the percentage of 35.6%. Then the group whose incomes are between 501 and 750 NTLs, 7.5%, comes. Students whose incomes are 750 NTLs and above was determined to have the rate of 1.1%. In their study, Dündar and Kızılcı (2004) found out that most of the students' income rates are below the 250 NTLs. The aim of determining students' rates of incomes is that computer use is thought to be closely related to the rates of income. 59.8 of the participants were determined to be in the first year and 40.2 in the second year of the school. The reason why the number of the second year students is low was the absence of the evening classes in this group. When looked at the distribution of students in terms different programs, it is seen that the Department of Heating Installation and Natural comes first with the rate of 33.9%. Accounting, 31.6%; Tourism and Hotel Management, 25.9%; and, Climatization and Freezing, 8.6% follow this department.

Considering the importance of computer use in this age, it is inevitable to expertise on computer using in order to have a profession. In this respect, it is necessary to know to what extents the students can use computers and for what purposes they use them. In order to determine the purposes of students in using computers, a questionnaire consisting of 14 items and suitable to 5-optioned Likert scale was prepared and students were asked to mark the options which best express their thoughts. When looked at the Table 2, taking account the means, the five first computer using purposes can be listed as:

1. To connect to the internet
2. To communicate via computer (using e-mail, messenger, chat programs, etc.)
3. To spend their spare times
4. To access information, to download files
5. To listen to music

**Table 2 Arrangement of Importance Degrees Considering Arithmetic Values for Students' Aims to Use a Computer**

<b>The students use computers;</b>	<b>Frequency</b>	<b>Standard Deviation</b>	<b>arithmetic average</b>	<b>AOS*</b>
To Access the Internet	174	1,4989	2,62	1
To communicate with others (e.g. email, chat)	174	1,6288	2,99	2
To fill in their free time	174	1,5408	3,040	3
To Access information, download files	174	1,5190	3,126	4
To listen to music	174	1,7141	3,270	5
To search for individual reasons (Project, homework)	174	1,3588	3,517	6
To store information	174	1,6247	3,569	7
To study	174	1,4119	3,747	8
To play games	174	1,5031	3,747	9
To write thesis or Project for commercial reasons	174	1,3845	3,954	10
To watch TV/video	174	1,3761	4,046	11
To draw sth.	174	1,2418	4,229	12
To learn a foreign language	174	1,2593	4,417	13
To design a web page/site	174	1,1160	4,505	14

**Scale Values:** 1= often      2= sometimes      3=rarely      4= hardly      5= never

**\*AOS:** Range for Arithmetic Average

According to these results, it was determined that students of Vocational High School of Gönen use computers to connect to the internet and utilize it to communicate with other people via it. As a result of the study, regarding the order of means of frequencies, it is observed that students do not use computers very frequently, and the ones who use them focus on chatting, mailing, etc. It was determined that most of the students marked the option “rarely” and that they did not temp to use computers in the areas that would improve them such as making research, studying lessons, or learning foreign languages and so on. Another question given to the students in the study was how often they use computers. According to the answers taken for this question, was seen that the frequency of females’ computer use was lower than the rate of males. In this respect, since there are fewer women who work in Türkiye than men and they can make great contributions to the economy of Türkiye, motivating them to use computer would be useful in their employance in the future.

**Table 3 Comparison of Frequency to Use Computers with Gender**

GENDER	FREQUENCY TO USE A COMPUTER							Total
	Everyday	A few times a week	Once a week	Once a month	Less often	Never		
Female	8	10	11	19	2	3	53	
Male	40	30	27	13	9	2	121	
<b>Total</b>	48	40	38	32	11	5	174	

In the study, some questions aiming to find out the factors inhibiting the use of computers by students were asked to students and the answers were presented in Table 4. According to these results, the most important factor hindering the students’ use of computer is their not owing a computer. Accordingly, the second important factor is dependent on economic factors. Insufficient facilities within the school, time constraints are other factors the students emphasize. In the study of McMahan et al (1999) on 800 university students, factors influencing computer use by students were investigated and, as a result, education, time, and access to computers were determined to be very important in spreading the use of computer. In this study, it can be seen a positive result that lack of knowledge is a less effective factor. Accordingly, it can be inferred that if the economic problems can be decreased and more opportunities can be provided within the school, the rate of students’ computer use will increase.

**Table 4: Ranking of the inhibits for students’ computer usage**

Barriers for students’ computer usage	Ranking										Average Mark * and Average Rate *	
	1. Rank		2. Rank		3. Rank		4. Rank		5. Rank		A. Mark	A. Rate
	f	%	f	%	f	%	f	%	f	%		
Do not have computer	51	31.9	44	31.7	22	17.0	12	10.4	9	7.7	530	25.3
Economical situation	40	25.0	26	18.7	16	12.4	21	18.3	23	19.7	417	20.0
Insufficient facilities at the school	25	15.6	27	19.4	32	24.8	29	25.2	20	17.1	407	19.5
Time consuming	24	15.0	29	20.8	31	24.1	26	22.6	25	21.3	406	19.4
Insufficient computer knowledge	20	12.5	13	9.4	28	21.7	27	23.5	40	34.2	330	15.8
<b>Total</b>	<b>160</b>	<b>100</b>	<b>139</b>	<b>100</b>	<b>129</b>	<b>100</b>	<b>115</b>	<b>100</b>	<b>117</b>	<b>100</b>	<b>2090</b>	<b>100</b>

**Average Mark** = 1<sup>st</sup> rank frequency x 5 + 2<sup>nd</sup> rank frequency x 4 + 3<sup>rd</sup> rank frequency x 3 + 4<sup>th</sup> rank frequency x 2 + 5<sup>th</sup> rank frequency x 1

**Average Rate** = (Average Mark / Total Average Mark) x 100

When the students are asked about their rates of income and whether they have their own computers, the influence of the economic factors mentioned above becomes clearer. Depending on the data obtained from table 5, it is possible to say that 74.2 of the students having incomes of 250 NTLs and below do not possess computers and just 25.8 of them have their own computers, and accordingly, those whose incomes are low have difficulties in computer use due to economic reasons. When the rate of student income increases the rate of computer use increases as well, and the importance of other factors influencing computer use decreases.

**Table 5: Comparison of the Students' Income and Whether They Have Computer or Not**

Income	Do you have your computer?		Total
	Yes	No	
250 YTL and below	25	72	97
251-500 YTL	31	31	62
501-750 YTL	7	6	13
750 YTL and above	2	-	2
<b>Total</b>	65	109	174

University students make use of computer programs and the internet at the level of global knowledge during their high school, university and pre-service education in order to find a job (Sarı and Erdem, 2005). In terms of hypotheses put forward in this study, whether independent factors have effects on students' computer use was investigated through T and One-way ANOVA tests. In Table 6, the variables influencing student preferences in using computers are shown.

**Table 6: T Test for Students Computer Usage Preferences**

Statements to determine for students computer usage preferences		Gender					
		N	X	S	sd	t	p
To access the Internet	Male	53	3,16	1,59	172	3,251	.001
	Female	121	2,38	1,39	172		
To play games	Male	53	4,26	1,22	172	3,075	.001
	Female	121	3,52	1,56	172		
To access information, download files	Male	53	3,66	1,45	172	3,146	.002
	Female	121	2,89	1,49	172		
To draw sth.	Male	53	4,71	,817	172	3,536	.000
	Female	121	4,01	1,33	172		
To write thesis or Project for commercial reasons	Male	53	4,37	1,13	172	2,718	.003
	Female	121	3,76	1,44	172		
<b>According to education year</b>							
To write thesis or Project for commercial reasons	1 <sup>st</sup> year	104	4,27	1,15	172	3,926	.000
	2 <sup>nd</sup> year	70	3,47	1,55	172		
To search for individual reasons (Project, homework)	1 <sup>st</sup> year	104	3,74	1,15	172	2,687	.008
	2 <sup>nd</sup> year	70	3,18	1,55	172		
<b>If they have own computer</b>							
To search for individual reasons (Project, homework)	Yes	65	3,200	1,15	172	2,411	.017
	No	109	3,706	1,55	172		
To listen to music	Yes	65	2,26	1,58	172	6,714	.000
	No	109	3,87	1,49	172		
To access the Internet	Yes	65	2,09	1,36	172	3,765	.000
	No	109	2,94	1,48	172		
To learn a foreign language	Yes	65	3,86	1,47	172	3,201	.002
	No	109	4,47	1,05	172		
To play games	Yes	65	3,24	1,63	172	3,504	.001
	No	109	4,04	1,33	172		
To watch TV/ video	Yes	65	3,47	1,53	172	4,433	.000
	No	109	4,38	1,15	172		
To fill in their free time	Yes	65	2,47	1,48	172	3,872	.000
	No	109	3,37	1,48	172		
To communicate with others (e.g. email, chat)	Yes	65	2,30	1,45	172	4,529	.000
	No	109	3,40	1,59	172		
To store information	Yes	65	2,93	1,59	172	4,133	.000
	No	109	3,94	1,52	172		
To access information, download files	Yes	65	2,50	1,34	172	4,360	.000
	No	109	3,49	1,50	172		

Considering this table, the need to determine the factor causing this difference appears. Male students significantly differ from females in using computers for connecting to the internet, playing games, downloading files, drawing, writing homework or thesis, and for trading purposes. In these areas, males use computers more than females. According to these results, considering also the fact that Gönen is a small town, female students cannot go to the internet cafes as comfortably as males, and use computers less than them due to economic factors and lack of computers. In this sense, it is assumed that, especially in the Vocational High Schools in small towns far away from the city centres, improving the opportunities and facilities within the school will be very effective in increasing the computer use by the students. No significant differences were found between the genders in terms of other factors.

Another significant difference was found according to in which grades the students are. In this respect, the second hypothesis is also accepted. Herein, differences were recognized between the first and second year students in their using computer for trade, thesis and homework writing, personal research. It was observed that the second year students use computers for these purposes more than those which are in the first year of the school. According to these data, it can be said that the second year students can contribute their own budgets by using computer in the writing of the newcomer students' homework and in other trading purposes thanks to their knowledge of computer and experience. At the same time, they are more experienced in using computer for their personal goals.

In Table 6, it was tried to determine whether there are significant differences between students' possessing their own computers and the dependent variables. By these results, the third hypothesis is accepted as well. Students who have computers differ from the others in doing personal research, listening to music, connecting to the internet, learning a foreign language, playing games, watching television/video, spending spare times, communicating, saving data and downloading, etc.. When looked at the Table 6, it is seen computer owners have advantages in the given areas in relation to the others. As mentioned above, students having computers can utilize many different using preferences, whereas those who do not own computers cannot improve themselves and are constrained in their computer using preferences due to not having much opportunity at the school and not being able to go to internet cafes because of economic problems. It was tried to determine H4 by using One-way ANOVA test. However, it is that there is no significant difference among students according to programmes they are ( $p > 0.05$ ). Therefore, there is not enough evidence to accept the fourth hypothesis.

## CONCLUSION

The main results of this study, in which the purposes for which the students of Balıkesir University, The Vocational High School of Gönen use computers and these students' thoughts on the computer classes they took were researched can be summarized as follows; the students at The Vocational High School of Gönen prefer to computers everyday or several times a week. The number of the students who use computer once a week, or less or never use it is relatively lower. At the same time, males were determined to use computer more frequently than females. Students were also observed to use computers, in particular, to connect to the internet and, accordingly, to communicate. Besides being not very primary, students also assert that they use computers to spend their spare times. On the other hand, it was found out that students do not use computers for improving themselves, doing personal studies, learning a foreign language, etc.. The factors inhibiting the more spread use of computer observed in former studies are encountered in this study as well. The students of The Vocational High School of Gönen show the factors such as not owning computers, economic problems, the insufficient facilities in the school, lack of time as important variables. They see the problem of not being able to use computer due to lack of knowledge as an inferior factor in relation to others.

Economic factors have great influence on whether students own computers or not. In this study, it was evidenced that students who are well off have computers and the others do not. Of course, the economic conditions reflect their parents' economic conditions. To the question how they gain their incomes, 87.3% of the students answered that they take their income from their parents or relatives (n: 152), 12.7% of them asserted that they earn by working (n: 14). Today, there is room to debate the importance of using and owning computer to be successful in business. In this context, it was found out that 63% of the students did not have computers. A similar study in Istanbul University, Cerrahpaşa Faculty of Medicine parallels this result. It is emphasized that 67% (n: 176) of the newly enrolled 263 students studying Turkish did not have computers, just 33% of them had (Altan vd, 2003). A similar result is seen in the study of Gölge and Arlı (2002). Of the 107 university students who participated in the research, 26.2% had computers belonged to themselves or their parents. Herein, besides the effect of not being well off, when considered that, in our country, only 16.8% of the population between 16-74 years use computers, it can be said not using the technology of informatics' is also very effective here. However, it is essential to ameliorate this condition by educational institutions. In particular, problems related to use of high technology in high education institutions should be studied in more detail.

In the study, independent variables which have influence on the computer use preferences of students were determined. It was seen that, in particular, gender caused great differences in students' preferences of computer using. On the other hand, their grades in the school and having or not having computers were determined to be other important factors. According to these findings, it can be claimed that educational institutions should provide more sufficient conditions and facilities for the right and useful use of computers for their students and reinforce their computer uses. Considering the importance of computer and technology use in training qualified staff would help the solution of the service staff (ara eleman) problems. In this respect, helping the vocational high school students' use of technology by decreasing economic problems and making them useful individuals for the development of Türkiye should be regarded as primary issues to be handled.

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