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Evaluation of the primary school level students' attitudes towards mobile phones

Z. Nurdan Baysal[a] *, Senem Seda Şahenk[b], Yeşim Özden Hazneci[c]

[a]*Atatürk Education Faculty, Elementary Teacher Education Department, Marmara University, İstanbul, Turkey*
[b]*School of Foreign Languages, Marmara University, İstanbul, Turkey*
[c]*School of Educational Sciences, Marmara University, İstanbul, Turkey*

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Abstract

The main issue of this study on the usage of mobile phones at the primary school level can be expressed as: "How do the primary school students evaluate mobile phone usage?" The purpose of this study is to determine whether there is a differentiation in the primary students' approach towards mobile phone usage according to their personal characteristics. The sample group of this stusy in which the surveying method was utilized, is 365 5th grade students studying in six different primary schools. Data gathering tools are the "Personal Information Form" and the "Mobile Phone Usage Awareness Scale." The KMO value of the scale has been determined to be .748 and $p<0.001$ The gathered data has been analysed with the frequency, percentage, t-test, unilateral variance analysis and post-hoc scheffe tests.

Keywords: Mobile phone; primary school students; attitudes.

1. Introduction

Mobile phone is the common name given to wireless telephones serving only a section of a country or city via many antennas. The mobile phone technology, which is one of the most widespread tools of communication in our day, is also one of the fastest developing areas of technology. Mobile phones are also a status symbol. Especially for young people, the brand of the mobile phones is an important factor regarding the purchase and within this context, relevant internet clubs are being established and the number of periodicals are increasing (Cushman ve Craig, 1976). The benefits of mobile phones are that they present an opputunity for making voice calls, sending sms messages, providing live chat, music player, video game, internet and telephone banking services, being able to be carried around easily and facilitates communication. Besides the benefits of these miraculous tools, we must also mention certain harms caused by mobile phones These may be listed as headaches, problems concerning hearing and seeing, cancer, appetite, lack of energy, fatigue, lung infections, rubescence on the body, low back and neck pains, attention deficit, a decline in academic success levels, economic harms (Deveci et al, 2007; Ocaktan and Akdur, 2008).

* Z. Nurdan Baysal. Tel.: 05332519741
E-mail address: aseda@marmara.edu.tr

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In the last ten years, the number and variety of the mass communication tools have developed rapidly. Today, majority of the children and youth live in a world full of various mass communication tools (mobile phones, computers, video games, internet) from the day they're born. The mobile phone, as a mass communication tool, functions as a photograph machine, calculator, camera and a laptop computer. Besides this, mobile phones cause certain harms to our healths and the economic life. Despite this, it seems as if this enthusiasm shall go no for a long time to come. When the literature on the subject is examined, it can easily be seen that there are numerous researches regarding the mobile phones' effect on health. Since it can be felt that the age for mobile phone usage is decreasing rapidly, a need for such a study at the primary school level emerged. The main issue of this study can beexpressed in a single sentence as: "How is the mobile phone usage evaluated by primary school students?" The purpose of this study is to examine whether there is a differentiation in the primary students' approach towards mobile phone usage according to their personal characteristics. Within the framework of this main purpose, the attitudes of 5th grade students regarding mobile phone usage and whether these attitudes differentiate according to factors such as sex, age, family's income, academic success and possession of a mobile phone.

2. Method

This is a depictive study and the surveying method has been utilized. Surveying models are approaches which try to depict as situation that used to exist or still exists as they are. The event, individual or object that's subject of the study is tried to be depicted within its own unique conditions and as it is (Karasar, 2008). In this study, an effort has been shown to exhibit the 5th grade students' attitudes towards mobile phones.

2.1. Population and sample

The scope of the study consists of fifth grade students from primary schools in the Kadıkoy district.

The sample regarding the study covers 365 fifth grade students from six primary schools in the Kadıkoy district (Teletaş Primary School, Nezahat Ahmet K. Primary School, Yeni Mahalle Primary School, Kalamış Primary School, Saffet Simavi Primary School, Ülkü Bora Primary School) 188 of the students who participated in this study are female and 177 of them are male. 10 of them are 10, 296 of them are 11 and 59 of them are 12 years old. 44 of the students are from low income, 48 of them are from the lower middle, 67 of them are from the upper middle and 23 of them are from high level income families. 122 of them have high academic successes whereas 232 of them have avarage academic successes and 11 of them are not successful academically. 115 of the 365 students possess mobile phones while 250 of them don't. It is thought provoking that approximately 1/3 of the students own mobile phones at this age.

2.2. Data collection instrument

In the study, the "Personal Information Form" consisting of 5 questions and a 3 Likert type "Mobile Phone Awareness Scale" consisting of 35 questions has been utilized. The data collection tools have been applied in the fall of 2006-2007 educational year.

2.2.1. Validity

In the validity analysis applied, the KMO value of the scale has been determined as .748 and $p<.001$ These results manifest that the articles composing the test are suitable for factor analysis and that the measured attribute contains a multidimensionality in the scope that it was chosen. On the other hand, the Bartlett's test determines if there's adequate relationship between the variables and in case $p<.05$, whether there is a meaningful relationship between the variables or not (Sipahi, Yurtkoru ve Çinko, 2006). In the sample, it has been observed that there is a meaningful relationship between the variables which have been determined as $p<.05$.

2.2.2. Reliability

The Factor 1 "Interest in Mobile Phones" sub-dimension of the scale consists of articles 2, 3, 7, 15, 29 and 34. The validity coefficient (Cronbach Alpha) is $\alpha=0.881$. The Factor 2 "The Benefits of Mobile Phones in Daily Lives" sub-dimension consists of articles 5, 6 and 8 and is $\alpha=0.821$. The Factor 3 "Rules Regarding the Usage of Mobile

Phones" consists of articles 1, 8, 9, 10, 11, 12, 25 and 27 and is α=0.891. The Factor 4 "Entertainment Benefits of Mobile Phones" sub-dimension consists of articles 16, 19, 20, 21, 22 and 23 and is α=0.891. The Factor 5 "Damages Caused by Mobile Phones" sub-dimension, which is the final factor, consists of articles 4, 13, 24, 26, 30, 31, 32, 33 and 35 and has been determined to be α=0.823.

2.3. Data analysis

The quantitative data gathered has been analysed using the SPSS packaged statistics program. Frequency, percentage, t-test, unilateral variance analysis and post-hoc scheffe tests have been used for analysis purposes. When the significance level has been determined to be less than .05 ($p<.05$) in all statistical calculations, the differences between the groups of independent variables has been accepted to be significant and the results have been evaluated accordingly.

3. Findings

The results of the t-test analysis regarding the relationship between the sex of the students and the factors of the scale can be observed in the Table 1 below.

Table 1. The t-test analysis regarding the relationship between the sex of the students and the factors of the scale

Factors	**Sex**	***N***	$\bar{x}$	***ss***	***sh***	***sd***	***t***	***p***
Interest in mobile phones (Factor 1)	Female	176	8.50	2.18	0.16	365	1.004	0.316
	Male	187	8.27	2.13	0.15			
Benefits in daily life (Factor 2)	Female	169	8.85	1.67	0.12	365	1.44	0.150
	Male	186	8.61	1.44	0.10			
Rules regarding usage (Factor 3)	Female	173	4.63	1.66	0.12	365	2.980	0.003*
	Male	192	3.21	1.54	0.11			
Entertainment benefits (Factor 4)	Female	170	4.58	1.27	0.13	365	3.794	0.000*
	Male	195	3.25	1.27	0.12			
Damages (Factor 5)	Female	172	6.26	0.77	0.14	365	1.189	0.235
	Male	191	6.39	0.87	0.16			

While a meaningful difference can be observed in favor of the girls between Factors 3 and 4 and the sex of the students participating in the study (N=365), a meaningful difference hasn't been observed regarding Factors 1, 2 and 5. The fact that girls take the rules more into consideration may be caused by the fact that they're raised in a fashion that makes them more inclined to obey the rules. Regarding Factors 1, 2 and 5, it may be said that male and female students have similar attitudes.

The results of the t-test analysis regarding the relationship between the possession of mobile phones by students and the factors of the scale can be observed in Table 2 below.

Table 2. The t-test analysis regarding the relationship between the possession of mobile phones by students and the factors of the scale

Factors	**Possession of Mobile Phones**	N	$\bar{x}$	***ss***	***sh***	***sd***	***t***	***p***
Interest in mobile phones (Factor 1)	Yes	114	8.89	2.06	0.19	365	2.997	0.003*
	No	251	7.22	2.16	0.13			
Benefits in daily life (Factor 2)	Yes	113	8.88	1.53	0.14	365	0.568	0.570
	No	252	8.24	1.57	0.10			
Rules regarding usage (Factor 3)	Yes	114	4.69	1.63	0.15	365	2.551	0.011*
	No	251	3.23	1.55	0.09			
Entertainment benefits (Factor 4)	Yes	113	5.75	1.65	0.15	365	0.189	0.850
	No	252	5.71	1.72	0.11			
Damages (Factor 5)	Yes	115	8.01	1.99	0.18	365	2.190	0.029*
	No	250	9.08	1.94	0.12			

While a meaningful difference can be observed in favor of the students owning mobile phones between Factors 1, 3 and 5 and the sex of the students participating in the study (N=365), a meaningful difference hasn't been observed regarding Factors 2 and 4. Thinking that the percentage of mobile phone possession is higher among students with a higher level of interest in mobile phones, it can be commented that these students know the rules regarding the usage of mobile phones beter since they use these phones in their daily lives. On the other hand, regarding factors 2 and 4, it can be said that the students possessing mobile phones have similar attitudes.

T-test analyses have been performed between the ages of the students participating in the study and the factors of the scale but a meaningful differentiation on the .05 level hasn't been discovered between any factors of the scale according to the age variable.

The results of the ANOVA test regarding the relationship between income levels of the students and the factors of the scale can be observed in the Table 3 below.

Table 3. The ANOVA test analysis regarding the relationship between the income levels of the students and the factors of the scale

Factors	**Income Levels**	N	$\bar{x}$	***Ss***	***sh***	***F***	***P***
Interest in mobile phones (Factor 1)	Low (1)	44	8.72	2.43	0.36	0.47	0.751
	Low middle (2)	48	8.16	1.92	0.27		
	Middle (3)	187	8.32	2.08	0.15		
	High middle (4)	67	8.43	2.27	0.27		
	High (5)	23	8.56	2.38	0.49		
Benefits in daily life (Factor 2)	Low (1)	42	9.14	1.55	0.23	2.78	0.027*
	Low middle (2)	48	9.41	1.62	0.23		
	Middle (3)	175	9.55	1.52	0.11		
	High middle (4)	67	9.97	1.65	0.20		
	High (5)	23	8.21	1.12	0.23		
Rules regarding usage (Factor 3)	Low (1)	42	4.11	1.45	0.22	1.030	0.392
	Low middle (2)	48	4.58	1.68	0.24		
	Middle (3)	183	4.34	1.64	0.12		
	High middle (4)	64	4.86	1.46	0.18		
	High (5)	22	4.37	1.58	0.33		
Entertainment benefits (Factor 4)	Low (1)	43	5.88	170	0.26	0.60	0.659
	Low middle (2)	46	5.82	1.80	0.26		
	Middle (3)	177	5.61	1.67	0.12		
	High middle (4)	65	5.66	1.70	0.21		
	High (5)	23	6.08	1.85	0.38		
Damages (Factor 5)	Low (1)	44	8.90	2.12	0.31	0.90	0.460
	Low middle (2)	48	8.58	1.91	0.27		
	Middle (3)	180	9.11	1.95	0.14		
	High middle (4)	64	8.75	2.08	0.26		
	High (5)	23	8.95	1.63	0.34		

A meaningful differentiation can be seen between the income levels of the families and Factor 2 in the Table 3 below. The results regarding the post-hoc scheffe test performed following the ANOVA test in order to study between which family income levels the scale was perceived differently have been stated in the table 4 below.

Table 4. The post-hoc-scheffe test utilized for determining the differentiation according to income level groups according to Factor 2

Factors	**(I) Income**	**(J) Income**	**(I-J) Avarage Difference**	***p***
Benefits in daily life (Factor 2)	Low (1)	Low middle (2)	0.56	0.78
		Middle (3)	0.40	0.73
		High middle (4)	0.29	0.61
		High (5)	0.16*	0.001
	Low middle (2)	Low (1)	-0.56	0.78
		Middle (3)	-0.15	0.81
		High middle (4)	-0.26	0.69
		High (5)	-0.39	0.61
	Middle (3)	Low (1)	-0.40	0.62
		Low middle (2)	0.15	0.68
		High middle (4)	-0.10	0.70
		High (5)	-0.13	0.63
	High Middle (4)	Low (1)	0.29	0.62
		Low middle (2)	0.26	0.77

		Middle (3)	0.10	0.87
		High (5)	0.13	0.79
	High (5)	Low (1)	0.16*	0.001
		Low middle (2)	0.39	0.72
		Middle (3)	0.23	0.75
		High middle (4)	0.13	0.82

According to Table 4, there is a meaningful differentiation between students with low and high incomes regarding the evaluation of Factor 2. When the average scores regarding Factor 2 are examined depending on the income levels of the students participating in the study, it has been determined that students with high income levels find mobile phones to be more beneficial compared to students with low incomelevels. It can be commented that students with high income levels emphasize the benefits of mobile phones compared to their harms since they havemore of a chance to own one.

The results of the ANOVA test regarding the relationship between the academic success levels of the students and the factors of the scale can be observed in the Table 5 below.

Table 5. The ANOVA test analysis regarding the relationship between the academic success levels of the students and the factors of the scale

Factors	**Success Levels**	N	$\bar{x}$	***Ss***	***sh***	***F***	***P***
Interest in mobile phones (Factor 1)	Highly successful (1)	122	8.40	2.09	0.13	0.101	
	Averagely Successful (2)	230	8.63	1.96	0.59		
	Unsuccessful (3)	11	8.38	2.15	0.11		0.90
Benefits in daily life (Factor 2)	Very successful (1)	120	8.70	1.55	0.14	1.236	
	Averagely Successful (2)	224	8.70	1.56	0.10		
	Unsuccessful (3)	11	9.45	1.36	0.41		0.292
Rules regarding usage (Factor 3)	Very successful (1)	119	5.98	1.39	0.12	5.829	
	Averagely Successful (2)	229	4.99	1.62	0.10		
	Unsuccessful (3)	11	3.08	2.11	0.63		0.003*
Entertainment benefits (Factor 4)	Very successful (1)	119	5.71	1.83	0.16	0.78	
	Averagely Successful (2)	224	5.70	1.63	0.10		
	Unsuccessful (3)	11	5.90	1.92	0.57		0.925
Damages (Factor 5)	Very successful (1)	118	9.23	1.90	0.17	1.959	
	Averagely Successful (2)	230	8.79	1.99	0.13		
	Unsuccessful (3)	11	8.90	2.16	0.65		0.143

A meaningful differentiation can be seen between the academic success levels of the students and Factor 3 in the Table 5 below. The results regarding the post-hoc scheffe test performed following the ANOVA test in order to study between which academic success levels the scale was perceived differently have been stated in the table 6 below.

Table 6. The post-hoc-scheffe test utilized for determining the differentiation according to academic success level groups according to Factor 3

Factors	**(I) Academic Success**	**(J) Academic Success**	**(I-J) Avarage Difference**	***P***
Rules regarding usage (Factor 3)	Very successful (1)	Averagely Successful (2)	-0.44	
		Unsuccessful (3)	1.40*	
	Averagely Successful (2)	Very successful (1)	-0.34	
		Unsuccessful (3)	0.95	
	Unsuccessful (3)	Very successful (1)	1.40*	
		Averagely Successful (2)	0.55	

When Table 6 is examined, it can be observed that highly successful students know the mobile phone usage rules beter compared to unsuccessful students. Since academically successful students may have more knowledge, the fact that they know the rules regarding mobile phone usage better may be considered as an expected result.

4. Discussions

Sağlam, in his study titled "The Effect of Social the Social Studies Course on Developing a Democratic Approach," reached the conclusion that %74.5 of the girls obey the rules always, %12.4 obey the rules most of the time and %10.9 of the girls obey the rules sometimes whereas %4.8 of the boys obey the rules always, %14.2 obey the rules most of the time and %27.4 of the boys obey the rules sometimes. Kuş and Karatekin (2009), in their

article titled "Study of the Students' Competency to Act in Accordance with the School Rules From the Perspective of Certain Variables" reached the conclusion that girls violate the rules more frequently in school compared to girls. The fact that girls obey the rules more frequently compared to boys in Sağlam, Kuş and Karatekin's studies shows parallelism with this study's findings that girls obey the rules regarding mobile phone usage more frequently.
According to Deveci et al's (2007) article titled "The Usage Frequency of Primary School Students of Devices Creating Electromagnetic Fields such as Mobile Phones, Computers, and Television, it has been determined that students who have mobile phones are effected more greatly compared to students who don't from the harms caused by mobile phones.

Also, in Özgüner and Mollaoğlu's (2006) article titled "The Effects of the Magnetic Field on the Organism," the ones who have mobile phones are exposed more to the harms caused by mobile phones compared to the ones who don't.

5. Conclusion and Recommendation

The female students participating in the study know the rules regarding mobile phone usage beter compared to the male students. The attitudes regarding the mobile phone usage has displayed no differentiation in any sub-dimension according to age. Students with high income levels find the mobile phone more beneficial in daily life compared to students with low income levels. It has been concluded that students with high academic success levels know the rules regarding the mobile phone usage better compared to students with low levels of academic success. It has been determined that students who possess mobile phones show more interest in them and know the rules regarding their usage better compared to ones who don't. Howver, students who don't have mobile phones have indicated that mobile phones are harmful more strongly compared to students who have mobile phones.

Based on these results that have been reached, it can be suggested that Ministry of National Education may take precautions in order to raise the level of awareness in students, parents and administrators with a focus on the age students start using mobile phones, the harms of mobile phones and (especially for male students) the rules regarding the usage of mobile phones.

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