

Investigation of Cyberloafing Levels of High School Students

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Abstract: Cyberloafing is one of the phenomena that negatively affect the efficiency of learning and teaching activities in educational settings. Learners' increased access to information and communications technologies as well as to personal mobile devices in recent years has led to various forms of cyberloafing behaviors among learners. In this context, the purpose of the present study is to investigate the cyberloafing levels of high school students according to gender, the daily usage of social networking sites, the duration of membership to social networking sites and the number of friends on social networking sites. A total of 452 high school students, 219 male and 233 females, participated on a voluntary basis in the study, which was conducted in the descriptive survey model. Descriptive statistics, independent sample t-test and one-way ANOVA test were used in the analysis of the research data. The findings obtained as a result of the analyses indicate that there are statistically significant differences between groups in the high school students' cyberloafing levels in terms of gender, daily usage of social networking sites, duration of membership to social networking sites and number of friends on social networking sites.

Keywords: Cyberloafing, Smartphone, Social networking sites, High school students

Introduction

With the rapid changes and developments observed in technology, information and communication technologies (ICT) have changed our life culture significantly and become an indispensable part of our lives. Computers, tablets and smartphones, which have pervaded all sections of our lives, are the most widely used ICT devices today. These devices offer us internet connection via wired or wireless networks whenever we want. ICT's sometimes make our life easier and sometimes entertain us, and occupy a place in our lives whose absence can easily be felt. People from different age groups, especially young people, use these modern technologies for different and various purposes (Salehan & Negahban, 2013).

It is seen that with the widespread use of rapidly developing internet technology, the rate of internet use is on

the rise among adolescents. The Internet has become a communication and information sharing tool allowing its users to communicate quickly and access all kinds of information easily. Today, the internet has become a part of our lives like the television, which has found its way into every home (Aydoğdu, 2003). Young people seem to take great interest in this new technology. The fact that the internet is in almost all homes makes it easier for users to access the internet. However, in addition to the benefits of this rapidly developing technology, the inappropriate content it may offer to young people and its intended use also cause concerns (Yüksel & Baytemir, 2010).

When the internet is used sensibly and in accordance with its purpose, it provides many benefits such as saving and using time efficiently. Today, especially students completely depend on the internet in terms of making the most of their free time, developing social activities and above all learning. However, adolescents exhibit less sensitivity than adults to the negative effects of the internet and social media due to their young age (Strasburger, Wilson, & Jordan, 2009).

Unnecessary and insensible use of the internet during working or class hours leads to the emergence of cyberloafing behavior, which is one of the major problems at workplaces and schools today. There is a need for internet connection and ICT tools in workplaces and schools in our age. However, some people may use the internet connection and ICT tools for their own personal purposes in schools and workplaces. This phenomenon is called cyberloafing (Demir & Seferoğlu, 2016). It is possible to encounter various definitions of the term as a result of different studies conducted on this subject. In one definition, cyberloafing is defined as individuals' use of the internet connection of the workplace and their computers or their own smart phones for personal purposes during working hours (Lim, 2002; Vitak, Crouse, & LaRose, 2011).

Brubaker (2006) states that cyberloafing, which is generally observed in workplaces, is also encountered in educational environments, and accordingly, some problems are experienced due to the internet use. Likewise, it has been observed in some studies that students engage in personal activities that are not related to the course during the classes held in computer laboratories having internet connection (Lim, 2002; Vitak, Crouse, & LaRose, 2011). In another definition made regarding cyberloafing, it is described as students' using the internet for their own personal affairs during the class hours rather than for educational purposes (Kalaycı, 2010).

It is observed that various studies have been conducted in the relevant literature on cyberloafing. In one of these studies, Tanrıverdi and Karaca (2018) examined according to various variables the cyberloafing and cognitive involvement of young people in class or while studying alone. As a result of the study, a significant difference was found in the students' cognitive involvement and cyberloafing levels according to the interaction of the computer-smart mobile device variables, but no such significant difference was found in terms of the variables of gender-class and daily internet use-parental restriction. In a study they conducted, Blanchard and Henle (2008) found that external loci of control predicted both insignificant cyberloafing and significant cyberloafing behaviors of graduate students. On the other hand, a study by Gerow, Galluch, and Thatcher (2010) investigating internet technologies and cyber laxity in the classroom revealed that multitasking and cognitive

involvement contributed to the intention towards cyberloafing.

Purpose of the Study

The general purpose of this study is to determine, in educational environments, the cyberloafing levels of high school students who possess smart phones. In addition, within the scope of the research, whether or not the cyberloafing levels of high school students vary by gender, daily usage of social networking sites, duration of membership to social networking sites and number of friends on social networking sites will be investigated.

Method

Research Model

In this study, the general survey model was used to determine the cyberloafing levels of high school students having smart phones. In the general survey model, in order to make a judgment about a population consisting of many elements, a survey is conducted on the whole population or a group of samples taken from it. The individual or object that is the subject of research is tried to be examined in its own conditions and as it is (Karasar, 2005).

Sample of the Study

The participants of the study were determined via the convenience sampling method from among students who were studying at different high schools in a big city in central Turkey and who owned smart phones. Convenience sampling is a sampling method based on collecting data from volunteering individuals who are easy to reach and meet some simple criteria (Cohen, Manion, & Morrison, 2013). Statistical information about the sample is given in Table 1.

Table 1. Demographics of the Sample

Demographics	Option	N	%
Gender	Female	233	51.5
	Male	219	48.5
Daily usage of social networking sites	Less than 1 hour	169	37.4
	More than 1 hour	283	62.6
Duration of membership to social networking sites	0-1 year	138	30.5
	1-3 years	156	34.5
	More than 3 years	158	35.0
Number of friends on social networking sites	0-100	168	37.2
	100-200	93	20.6
	More than 200	191	42.3
Total		452	100.0

According to Table 1, 233 of the students in the sample are female and 219 are male. When the daily usage of social networking sites by students is examined, it is observed that 169 students stated that they used social networking sites less than 1 hour a day, while 283 students stated that they spent more than 1 hour a day on social networking sites. In terms of duration of membership to social networking sites, it is seen that 138 of the students had been members of social networking sites for 0-1 year, 156 of them for 1-3 years and 158 of them for more than 3 years. Regarding the number of friends on the social networking sites, 168 of the students stated that they had friends between 0 and 100, whereas 93 students said they had friends between 100 and 200 and 191 of them had more than 200 friends.

Data Collection Tool

The research data were collected using the “Cyberloafing Scale”.

Cyberloafing Scale

The “Cyberloafing Scale” was used in order to determine the cyberloafing levels of high school students. The scale developed by Akbulut et al. (2016) consists of a total of 30 items gathered under five factors. The scale is a 5-point Likert-type scale ranging from (1) Never to (5) Always. The factor named “sharing” consists of 9 items, the factor named “shopping” consists of 7 items, the factor named “real-time updating” consists of 5 items, the factor named “accessing to online content” consists of 5 items and the factor named “gaming/gambling” consists of 4 items. The variance explained as a result of the exploratory factor analysis of the original scale developed with 471 university students was 70.44%. The variance explained as a result of the first confirmatory factor analysis performed with 215 undergraduate students was 67.05% whereas the variance explained as a result of the second confirmatory factor analysis performed with 515 social network users was 52.31%. The Cronbach α internal consistency coefficients of the scale were calculated to be .93 for the “sharing” factor, .87 for the “shopping” factor, .93 for the “real-time updating” factor, .94 for the “accessing to online content” factor, .80 for the “gaming/gambling” factor and .95 for the whole of the scale (Akbulut et al., 2016).

Analysis and Interpretation of the Data

The collected data were analyzed using the SPSS software. Prior to the analysis, the normality of the data was examined and as a result of the analysis, it was seen that the skewness and kurtosis coefficients remained within the limits of -1.5 and +1.5. According to Tabachnick and Fidell (2001), if the skewness and kurtosis coefficients remain within the limits of -1.5 and +1.5, it can be said that the scores exhibit a normal distribution. Therefore, it was decided to analyze the data obtained from the scales with parametric tests. Descriptive statistics were used to analyze the data, whereas independent samples t-test was used to determine the differences between paired groups, and ANOVA analysis was used to determine the differences between more than two groups.

Findings

Cyberloafing Levels of the High School Students

In order to determine the cyberloafing levels of high school students, the scores which the students received from the sub-dimensions “sharing”, “shopping”, “real-time updating”, “accessing to online content”, “gaming/gambling” and from the total of the scale were examined. Results of the analysis are given in Table 2.

Table 2. Cyberloafing Levels of High School Students

Scale	Sub-dimension	N	Min.	Max.	\bar{X}	SS
Cyberloafing	Sharing	452	1	5	2.73	1.042
	Shopping	452	1	5	1.93	.942
	Real-time updating	452	1	5	1.86	1.013
	Accessing to online content	452	1	5	3.24	1.186
	Gaming/gambling	452	1	5	1.96	.947
Total Cyberloafing		452	1	5	2.38	.774

When Table 2 is examined, it is seen that the average of the scores which the high school students received from the shopping, real-time updating, game/gambling sub-dimensions of the cyberloafing scale and from the whole of the scale falls within the range of “very little”, whereas the mean score from the sub-dimensions of “sharing” and “accessing to online content” falls within the range of “seldom“. According to these results, it can be said that the students’ cyberloafing levels are generally low during learning activities.

Examination of the High School Students’ Cyberloafing Levels by Gender

Whether the high school students’ cyberloafing levels varied according to gender was examined using independent sample t-test, and the results of the analysis are given in Table 3.

When Table 3 is examined, it is seen that there is a statistically significant difference between the scores which the high school students received from the other sub-dimensions and the total, except for the sharing sub-dimension of the cyberloafing scale. According to these results, it can be said that male students in the sample had higher cyberloafing levels than female students in terms of shopping, real-time updating and gaming/gambling sub-dimensions and the total of the cyberloafing scale, while female students had higher cyberloafing levels than their male counterparts in terms of the accessing to online content sub-dimension of the cyberloafing scale.

Table 3. Results of the Analysis regarding the Examination of the High School Students' Cyberloafing Levels by Gender

Scale	Sub-dimension	Gender	N	\bar{X}	SS	t	p
Cyberloafing	Sharing	Female	233	24.21	9.654	-.889	.374
		Male	219	24.99	9.071		
	Shopping	Female	233	12.12	5.669	-4.745	.000
		Male	219	15.02	7.175		
	Real-time updating	Female	233	8.28	4.622	-4.522	.000
		Male	219	10.40	5.290		
	Accessing to online content	Female	233	16.99	5.709	3.007	.003
		Male	219	15.32	6.029		
	Gaming/gambling	Female	233	6.44	3.048	-8.580	.000
		Male	219	9.30	3.948		
	Total Cyberloafing	Female	233	68.04	22.005	-3.237	.001
		Male	219	75.04	23.958		

Examination of the High School Students' Cyberloafing Levels by Daily Usage of Social Networking Sites

Whether the high school students' cyberloafing levels varied according to their daily usage of social networking sites was analyzed via independent sample t-test, and the results of the analysis are given in Table 4.

Table 4. Results of the Analysis regarding the Examination of the High School Students' Cyberloafing Levels according to Daily Usage of Social Networking Sites

Scale	Sub-dimension	Daily usage of social networking sites	N	\bar{X}	SS	t	p
Cyberloafing	Sharing	Less than 1 hour	169	21.27	8.773	-6.032	.000
		More than 1 hour	283	26.57	9.174		
	Shopping	Less than 1 hour	169	12.19	6.332	-3.363	.001
		More than 1 hour	283	14.32	6.634		
	Real-time updating	Less than 1 hour	169	8.32	4.891	-3.247	.001
		More than 1 hour	283	9.90	5.081		
	Accessing to online content	Less than 1 hour	169	14.26	5.812	-5.494	.000
		More than 1 hour	283	17.33	5.705		
	Gaming/gambling	Less than 1 hour	169	7.18	3.741	-2.840	.005
		More than 1 hour	283	8.22	3.772		
	Total Cyberloafing	Less than 1 hour	169	63.22	22.682	-6.035	.000
		More than 1 hour	283	76.33	22.151		

When the results of the analysis given in Table 4 are examined, it is seen that there is a statistically significant difference in terms of the groups between the scores the students received from all the sub-dimensions and the total of the cyberloafing scale. According to these results, it can be said that the students whose daily social networking sites usage time is more than 1 hour for sharing, shopping, real-time updating, accessing to online content and gaming/gambling sub-dimensions of the cyberloafing scale and for the total of the scale have higher

cyberloafing levels than those who use them less than 1 hour a day.

Examination of the High School Students' Cyberloafing Levels by Duration of Membership to Social Networking Sites

Whether the cyberloafing levels of high school students varied according to the duration of membership to social networking sites was examined by one-way analysis of variance, and the results of the analysis are given in Table 5.

Table 5. Results of the Analysis regarding the Examination of the High School Students' Cyberloafing Levels according to the Duration of their Membership to Social Networking Sites

Scale	Sub-dimension	Duration of membership to social networking sites	N	\bar{X}	SS	F	p	Difference (Scheffe)
Cyberloafing	Sharing	0-1 year ^A	138	2.349	.981	15.810	.000	B>A C>A
		1-3 years ^B	156	2.799	1.016			
		More than 3 years ^C	158	2.999	1.026			
	Shopping	0-1 year ^A	138	1.790	.918	6.815	.001	C>A C>B
		1-3 years ^B	156	1.836	.891			
		More than 3 years ^C	158	2.151	.978			
	Real-time updating	0-1 year ^A	138	1.717	.930	8.076	.000	C>A C>B
		1-3 years ^B	156	1.730	.965			
		More than 3 years ^C	158	2.120	1.082			
	Accessing to online content	0-1 year ^A	138	2.916	1.193	7.486	.001	B>A C>A
		1-3 years ^B	156	3.392	1.125			
		More than 3 years ^C	158	3.362	1.190			
Gaming / gambling	0-1 year ^A	138	1.799	.913	7.159	.001	C>A C>B	
	1-3 years ^B	156	1.870	.953				
	More than 3 years ^C	158	2.180	.935				
Total Cyberloafing	0-1 year ^A	138	2.135	.758	14.508	.000	C>B>A	
	1-3 years ^B	156	2.371	.715				
	More than 3 years ^C	158	2.606	.780				

When the results of the analysis given in Table 5 are examined, firstly, it is seen that the difference emerging in the total of the cyberloafing scale stems from the average scores of the students whose membership duration to social network sites is more than 3 years, between 1 to 3 years and between 0 and 1 year. According to this, it can be said that the students with a membership to a social network site for more than 3 years had higher cyberloafing levels compared to those with 1-3 years and 0-1 year, and the students with a membership to a social network site for 1-3 years had higher cyberloafing levels compared to those with a membership to a social network site for 0-1 year. Secondly, it is seen that the difference in the shopping, real-time updating and gaming/gambling sub-dimensions of the cyberloafing scale is due to the average scores of the students whose membership period to social network sites is more than 3 years, between 1 to 3 years and 0 to 1 year.

Accordingly, it can be said that the students who had been members of social networking sites for more than 3 years had higher levels of cyberloafing for the shopping, real-time updating and gaming/gambling sub-dimensions and the total of the scale than the students whose membership durations were between 1 to 3 years and 0 to 1 year. Third and lastly, it is seen that the difference in the sharing and accessing to online content sub-dimensions of the cyberloafing scale stems from the average scores of the students whose social networking site membership period is more than 3 years, between 1 to 3 years and 0 to 1 year. Accordingly, it can be said that the students with a social networking site membership period of more than 3 years and between 1 to 3 years had a higher level of cyberloafing for the sub-dimensions of sharing and accessing to online content, compared to those with a membership period of 0-1 year.

Examination of High School Students' Cyberloafing Levels According to Number of Friends on Social Networking Sites

Whether the cyberloafing levels of high school students varied by the number of friends on social networking sites was examined with one-way analysis of variance, and the results of the analysis are given in Table 6.

Table 6. The Results of the Analysis regarding the Examination of High School Students' Cyberloafing Levels according to the Number of Friends on Social Networking Sites

Scale	Sub-dimension	Number of friends on social networking sites	N	\bar{X}	SS	F	P	Difference (Scheffe)
Cyberloafing	Sharing	0-100 ^A	168	2.290	.961	27.244	.000	B>A C>A
		100-200 ^B	93	2.915	1.029			
		More than 200 ^C	191	3.031	.986			
	Shopping	0-100 ^A	168	1.592	.782	19.192	.000	B>A C>A
		100-200 ^B	93	2.068	.908			
		More than 200 ^C	191	2.165	1.002			
	Real-time updating	0-100 ^A	168	1.555	.817	16.083	.000	C>A
		100-200 ^B	93	1.841	1.008			
		More than 200 ^C	191	2.142	1.093			
	Accessing to online content	0-100 ^A	168	2.877	1.214	12.930	.000	B>A C>A
		100-200 ^B	93	3.473	1.255			
		More than 200 ^C	191	3.437	1.047			
	Gaming / gambling	0-100 ^A	168	1.652	.799	16.630	.000	B>A C>A
		100-200 ^B	93	1.989	1.005			
		More than 200 ^C	191	2.209	.966			
Total Cyberloafing	0-100 ^A	168	2.018	.693	34.989	.000	B>A C>A	
	100-200 ^B	93	2.508	.719				
	More than 200 ^C	191	2.639	.746				

When the results of the analysis given in Table 6 are examined, firstly, it is seen that the difference in the real-time updating sub-dimension of the cyberloafing scale stems from the average scores of the students whose number of friends on social networking sites is between 0 and 100 and more than 200. Accordingly, it can be

said that the students with more than 200 friends on social networking sites have higher levels of cyberloafing for the real-time updating sub-dimension of the cyberloafing scale compared to those with a score of 0-100. Secondly, it is seen that the difference in the sharing, shopping, accessing to online content, gaming/gambling sub-dimensions and the total of the cyberloafing scale is due to the average scores of the students whose number of friends on social networking sites is between 0 and 100, between 100 and 200 and more than 200. Accordingly, it can be said that the students with more than 200 friends and between 100 and 200 friends on social networking sites have higher cyberloafing levels for sharing, shopping, accessing to online content and gaming/gambling sub-dimensions and the total of the scale than those with 0-100 friends.

Discussion and Conclusion

The present study aimed to determine the cyberloafing levels of high school students with smart phones in educational environments and investigate whether the cyberloafing levels varied according to gender, daily usage of social networking sites, duration of membership to social networking sites and the number of friends on social networking sites.

As a result of the research, it was found that the cyberloafing levels of high school students during learning activities were in the ranges of “Very little”, “Seldom” and “Mostly” in terms of the cyberloafing scale factors and the scale in general. According to these results, it can be said that the students’ cyberloafing levels are generally low during learning activities. Similar to the result of our study, Kalaycı (2010) found in a study conducted with university students that the majority of the students did not engage in extracurricular activities. Likewise, Seçkin and Kerse (2017) found in their study investigating the cyberloafing levels of university students that students exhibited low levels of cyberloafing behavior. Kurt (2011) investigated the cyberloafing behaviors of the students during the laboratory classes in a study he conducted and found that the students exhibited low levels of cyberloafing behavior in general. Contrary to the findings of this study, there are also studies claiming that students’ cyberloafing levels are moderate (Çınar & Cinisli, 2018; Şenel et al., 2019) and above average (Tozkoparan & Kuzu, 2019).

It was found in the present study that the male students had higher cyberloafing levels than the female students for shopping, real-time updating and gaming/gambling sub-dimensions and the total of the cyberloafing scale, and the female students had higher cyberloafing levels than the male students for the accessing to online content sub-dimension. When the literature is examined regarding this finding, it is generally seen that male students engage in more cyberloafing in educational environments than females (Askew, 2012; Balcı & Gülnar, 2009; Baturay & Toker, 2015; Kalaycı, 2010; Knight, 2017; Şenel et al., 2019; Tozkoparan & Kuzu, 2019; Yılmaz et al., 2015). In one of these studies, Baturay and Toker (2015) investigated the effects of some demographic variables on cyberloafing activities in educational environments and found that male high school students had higher cyberloafing levels than girls. Contrary to these results, there are also studies arguing that there is no significant gender difference in the cyberloafing levels of male and female students (Gezgin, Kamalı-Arslantaş,

& Şumuer, 2018; Bağrıacık-Yılmaz, 2017). In one of these studies, Gezgin, Kamalı-Arslantaş, and Şumuer (2018) examined the cyberloafing levels of vocational and technical high school students according to different variables and found that there was no significant difference in terms of gender in the cyberloafing levels of the students.

As a result of the examination of the students' cyberloafing levels according to the daily usage of social networking sites, it was found that the students whose daily social networking site usage was more than 1 hour had higher cyberloafing levels than the students whose daily social networking site usage was less than 1 hour. In support of this finding of the research, Özcan, Gökçearsan, and Yüksel (2017) found that the students' cyberloafing levels increased in parallel with an increase in their daily use of social networking sites. Similarly, Dursun, Dönmez, and Akbulut (2018) argued that there was a statistically significant relationship between cyberloafing and time spent on different social networks.

As a result of the examination of the cyberloafing levels of the students according to the duration of membership to social networking sites, the students who had been members of social network sites for more than 3 years were found to have higher levels of cyberloafing in general than those having memberships for 1-3 years, and the students who had a membership to the social networking sites for 1-3 years were found to have higher levels of cyberloafing compared to those who had a membership for 0-1 year. Although there is no directly comparable result in the literature regarding this finding, it is known that young people generally use the internet for watching and sharing videos on social networking sites, adding photos, commenting and receiving news (Garrett & Danziger, 2008). Considering that students with more internet usage experience in years have been members of social networking sites for longer time, it can be deduced that internet use experience is a determinant for social media membership. Therefore, the results of studies in the literature investigating whether cyberloafing levels vary by internet experience are considered important in terms of this finding of the research. As a matter of fact, it was found in a study by Baturay and Toker (2015) that high school students who had been using the internet for more than nine years in terms of internet experience did more cyberloafing than those who had been using the internet for nine years or less. Similarly, a positive relationship was found in a study by Liberman et al. (2011) between internet experience and cyberloafing. In conclusion, it can be said that experienced internet users tend to use various productive environments offered by the internet like social networking sites, and this tendency may cause cyberloafing activities.

As a result of an examination of the cyberloafing levels of the students according to the number of friends on the social networking site, it was found that the students with more than 200 friends on social networking sites and those with 100 to 200 friends had higher levels of cyberloafing in general than those with 0-100 friends. It is stated in some studies in the literature that the duration of social networking site usage will increase with an increase in the number of friends on social networking sites (Ellison, Steinfield, & Lampe, 2007; Kayri & Çakır, 2010; Moore & McElroy, 2012). In one of these studies, Ellison, Steinfield, and Lampe (2007) state that the frequency of Facebook usage is related to the duration of Facebook usage and the number of Facebook friends. Kayri and Çakır (2010) conclude in their study that there is a positive and significant relationship between the

duration of Facebook usage and the frequency of Facebook usage. Likewise, Moore and McElroy (2012) found in their study that there is a positive relationship between the duration of Facebook usage and the number of Facebook friends. Bağrıacık-Yılmaz (2017), on the other hand, state in their study that surfing Facebook is the most common cyberloafing behavior among students. In conclusion, it can be said that there is a statistically significant relationship between cyberloafing and time spent on different social networks (Dursun, Dönmez, & Akbulut, 2018).

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