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The Impact of Electronic Devices on the Female Students' Interpersonal Relationships and Their Academic Achievement

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ABSTRACT

The purpose of this study was to investigate female students' perceptions of using electronic devices and multimedia, and to find the impact of using electronic devices on their relationship and on their academic achievement. The population of the study was selected from 20 schools located in the Mubarak Educational Area in State of Kuwait. The sample size was 271 female students from six grades to twelfth grade. The survey instrument that used to collect information from the sample was developed by the researchers and distributed to all female students via posting an electronic link on the WhatsApp groups. Some of the questions in the survey required a response indicating whether the respondent agreed or disagreed with the statements based on a Likert scale on 5-point, other questions required a response indicating "yes" or "no", and some other questions required students to choose from an exist menu or to choose from drop menu. The information that collected was analyzed by computer's software SPSS, frequencies, percentages, and Chi-Square were calculated. The numbers revealed by this study showed that, in general, female students don't use the social media and the Internet for "cooperation learning" and very rarely to socializing or communicating with their teachers at personal level or even at formal "curriculum-related issues" level. We found that most of the female students use the Internet for socializing with classmates, and a high percentage of them are involved in family groups and girls-only groups. The study concludes with recommendations to the future research.

Keywords: Female students, electronic devices, multimedia, Kuwait

Introduction

The relationship between young students, parents, friends, and teachers is a vital issue in the time of highly accelerated technology. The technology and electronic devices are available everywhere, despite parental control, children, are manipulating rules to fit them with their desires. Adults, parents or teachers, feel that they should make important decision regarding the type of restriction that they could apply to decrease the number of hours that their children devote to the Internet. Hongsanguasri and Kiatrungrit (2014) who studied the use of electronic media by secondary school students showed that all respondents had easy access to multiple types of electronic media, and very little percentage (19 %) reported parental rule about the use of electronic devices.

Today, more than ever, we need to make sure that the technology and electronic devices are serving our children and our students not harming them. Here, the technology has to be used as a tool to access information, facilitate our daily lives in homes, schools, workplaces, and communicate with others efficiently; it has to take into account how they can be used in the teaching-learning process (Scott, 2000).

The fear of technology lies in its impact on the nature of relationships and communication between people in general. The time that our students spend on using multimedia devices is considered high in comparison with the study and productivity time. The easy access and boundaries-free to the internet attracts young students to continue surfing the Internet and to access whatever they request, which may result in negative impacts on children at various levels.

It seems that the main challenge that faces parents and teachers is how to keep the children away from useless use of the technology. Researchers reported that reducing the total time spending on electronic devices and increasing the literacy-related activity would be the potential protective factors of health problems "dyslexic" in children is one of them (He, Shao, Zhou, Ke, Kong, Guo, Song, Zhang, 2014).

It could be highly beneficial if teachers encourage students to use all types of multimedia in the class to serve the educational process; some research has found gender problems in using where male students make more use of in-class technology than female students (Baker, Lusk, Neuhauser, 2012). However, another study by (Fuller & Joynes, 2015) suggests less focusing on whether mobile learning should be implemented in class. Nowell (2012) reported that students get more engagement and the learning would be increased in the classroom if the teachers are available online.

To continue this discussion, we established this research to find out the impact of the electronic devices on female students' relationship and their academic achievement and what are the female students' perspectives toward pros and cons of the multimedia technology.

Problem of the Study

The rapid use of technology multimedia has been followed by a rapid change in social life, political, economic, and educational sectors. De Loen (2015), referred to that as a change in attitudes and individuals' habits. In the schools of the State of Kuwait as well as in many other neighboring countries, one of the implementations and benefits of the electronic devices is to communicate with parents, friends, and teachers and using these devices for curriculum activities. However, there could be other negative uses, these devices could be used negatively for insulting other people, being dishonest, and cheating. Therefore, this study is conducted to explore the nature of using multimedia and electronic devices in the schools of the State of Kuwait through answering the following questions:

RQ1 In what terms are female students using social networks with (teachers, friends, and family)?

RQ2 Is there a statistical significant difference between female students' degree of using social networks and their academic achievement?

RQ3 Is there a statistical significant difference between female students' degree of using social networks and their grade level (six to twelfth grade)?

RQ4 What are the female students' perspectives toward cons and pros of social media networks?

Methodology

To investigate female students' perceptions of using electronic devices, the researchers used an online survey divided into five sections and consisting of 17 items. These sections were about students' relationship with classmates, teachers, and with family. The first question was divided into three sub questions: personal information about the respondent's school's name, grade, and academic achievement; availability of electronic devices; and type of account the student has selected from the list (Facebook, twitter,

WhatsApp, etc.). The second question was about student's nature of using the Internet in terms of the most usage account from (watching videos, Instagram, WhatsApp, Twitter, Facebook, google plus, YouTube, e-mail, research, and no usage). The second part of the question was about how often the student uses the Internet in terms of homework and assignment. The third, fourth, fifth, and sixth question asked female students about their relationships with colleagues, teachers, family and the community respectively.

The survey designed to collect information from all participants on their perceptions of using technology. Some of the questions required a response indicating whether the respondent agreed or disagreed with the statements based on a Likert scale on 5-point, other questions required a response indicating "yes" or "no", and some other questions required students to choose from an exist menu or to choose from drop menu.

Participants

The population of the study was all female students from sixth grade to twelfth grade in the "Mubarak Educational Area" which is one of six other educational areas in the State of Kuwait. The survey was sent by posting a link of the survey on the WhatsApp groups by assistance from the schools' principals to all female students in the educational district. The post enclosed a welcome message and asks respondents to follow the instructions if they have the desire to respond to the questionnaire.

The sample size was 271 female students who responded to the survey. Table 1 shows the data that was obtained from the female students which gives a general picture of the most frequent electronic devices that female students use.

Table 1

Type of electronic devices that are available in students' hands

Electronic device	Tablet	Mobile	Laptop	Ipod	wii	Play station	Other devices	N/A	Xbox
Availability	175	168	60	46	11	5	5	2	1

Table 1 revealed that the most available electronic device in students' hands are the Tablet (175), Mobile (168), Laptop (60), I pod (46), wii (11). It seems that some of the electronic devices are on the way to be extinction such as Xbox, and PlayStation.

In terms of the nature of using the Internet by female students, Table 2 shows percentage distribution of the sample

Table 2

Percentage of the Female Students' Responses regarding the Nature of Using the Internet and Multimedia Devices

Item	Response	%
I use the Internet to socialize with my classmates	Yes	264 90.8
	No	25 9.2
I exchange family's photos with my classmates	Yes	103 38
	No	168 62
I am a member of a family group	Yes	189 68.7

	No	82	30.3
I am a member of family group for socializing with girls-only	Yes	190	70.1
	No	81	29.9
Is there any sort of control on using the Internet at home	Yes	129	47.6
	No	142	52.4
If the answer is yes, are you committed to it?	Yes	120	44.3
	No	151	55.7
I have nice thoughts and ideas to share on the socializing networks	Yes	168	62
	No	103	38
Total		271	100

Table 2 reveals that (90.8 %) of the responses on the question "I use the Internet to socialize with my classmates" was yes; and (9.2%) of the responses was no. Also, the table shows that a low percentage of the sample (38%) exchange family's photos with classmates; and about (68.7) are a member of a family group. Moreover, a high percentage (70.1%) of the responses is a member of girls-only group; and about (52.4%) of the responses assures that there is no any sort of control on control on using the Internet at home, even though, more than half of the responses do not commit to any sort of control that enforces by the parents. Finally, (62%) of the responses believe that they have nice thoughts and ideas to share on the socializing networks.

Finding

Question 1

In what terms are female students using the Internet (with teachers, classmates, and family)?

To answer this question, frequencies and percentages of the responses were calculated. Table 3 shows the frequencies and percentages of participants' responses on using the Internet.

Table 3

Frequencies and Percentages of Participants' Responses on Using the Internet

Items	Response	Frequency	%
I use the Internet for self-learning (doing my homework)	Never	23	8.5
	Rarely	54	19.9
	Sometimes	130	48.0
	Mostly	42	15.5
	Always	22	8.1
I use the Internet for cooperation-learning (doing homework with my classmates)	Never	34	12.5
	Rarely	76	28.0
	Sometimes	49	18.1
	Mostly	57	21.0
I use the Internet for socializing with my teachers	Always	55	20.3
	Never	105	38.7
	Rarely	67	24.7
	Sometimes	58	21.4
	Mostly	27	10.0

	Always	14	5.2
	Never	136	50.2
I use the Internet to communicate with my teachers in curriculum-related issues	Rarely	57	21.0
	Sometimes	47	17.3
	Mostly	16	5.9
	Always	15	5.5
I resend many messages without making sure of the resource's reliability	Never	132	48.7
	Rarely	56	20.7
	Sometimes	58	21.4
	Mostly	25	9.2
	Always	0	0
I am honest in the messages that I exchange with my classmates	Never	11	4.1
	Rarely	17	6.3
	Sometimes	30	11.1
	Mostly	70	25.8
	Always	143	52.8
I send messages that insult others	Never	159	58.7
	Rarely	63	23.2
	Sometimes	24	8.9
	Mostly	17	6.3
	Always	8	3.0
	Total	271	100.0

As shown in table (3), the highest percentage of using the Internet was (48.0%) for "sometimes" I use the Internet for self-learning to do my homework and the lowest percentage was (8%) for "always".

Participants referred at highest percentage (28.0%) that they "rarely" use the Internet for cooperation-learning (doing homework with my classmates), and the lowest percentage (12.5%) have responded with "never" to the same question. In terms of the question "I use the Internet for socializing with my teachers", (38.7%) of the participants responded "never" and the lowest percentage (5.2%) responded "always". Moreover, (50.2%) of the participants referred that they "neve" use the Internet to communicate with the teachers in curriculum-related issues, only (5.5%) of the participants responded that they "always" communicate with their teacher on curriculum-related issues. In terms of the question "I resend many messages without making sure of the resource's reliability" (48.7%) responded "Neve", only (9.2%) responded with "Always". In terms of the question "I am honest in the messages that I exchange with my classmates", (52.8%) of the participants responded "Always" and only (4.1%) responded "Never". The last question was asking whether the participants "send messages that insult others", (58.7%) responded "Never" , and only (3.8%) responded "always".

Question 2

Is there a statistical significant difference between female students' degree of using social networks and their academic achievement?

To answer this question, the frequencies of the responses of the sample study were calculated and (Chi-Square) was applied as seen in Table (4).

Table 4
The relationship between Female Students' Achievement and the Degree of Using Social Networks

Items	Response	Frequency					Chi-Square
		Weak	Acceptable	Good	V. good	Excellent	
I use the Internet for self-learning (doing my homework)	Never	0	2	3	8	9	21.80
	Rarely	0	0	14	20	18	
	Sometimes	1	3	24	44	55	
	Mostly	2	1	6	22	9	
	Always	0	1	5	10	6	
I use the Internet for cooperation-learning (doing homework with my classmates)	Never	0	0	9	10	15	10.61
	Rarely	1	2	13	27	31	
	Sometimes	0	2	8	23	15	
	Mostly	1	1	14	19	17	
I use the Internet to socialize with my classmates	No	0	0	6	10	9	1.30
	Yes	3	7	46	94	88	
I exchange family photos with my classmates	No	3	4	32	64	61	1.94
	Yes	0	3	20	40	36	
I use the Internet for socializing with my teachers	Never	2	5	15	46	36	24.96
	Rarely	0	0	19	19	26	
	Sometimes	1	2	7	26	20	
	Mostly	0	0	4	9	12	
	Always	0	0	7	4	3	
I use the Internet to communicate with my teachers in curriculum-related issues	Never	2	5	24	50	51	8.78
	Rarely	0	0	14	21	19	
	Sometimes	1	1	8	22	15	
	Mostly	0	0	2	6	7	
	Always	0	1	4	5	5	
I have a group limited to my family members	No	0	0	7	41	32	*15.72
	Yes	3	7	45	63	65	
I have family group for girls-only	No	0	2	14	32	30	1.59
	Yes	3	5	38	72	67	
Are there any	No	1	4	23	56	55	2.67

types of control on using the Internet at home?	Yes	2	3	29	48	42	
If the answer of the previous questions was "yes" are you committed to it?	No	1	6	27	49	61	8.47
	Yes	2	1	25	55	36	
I resend many messages without making sure of the resource's reliability	Never	0	3	25	54	47	11.88
	Rarely	1	1	13	17	21	
	Sometimes	2	3	9	20	23	
	Mostly	0	0	5	13	6	
	Always	0	3	25	54	47	
I am honest in the messages that I exchange with my classmates	Never	0	0	3	3	5	10.44
	Rarely	0	0	3	9	4	
	Sometimes	0	1	3	11	15	
	Mostly	1	3	10	28	25	
	Always	2	3	33	53	48	
I send messages that insult others	Never	1	3	31	58	61	19.21
	Rarely	0	4	13	22	22	
	Sometimes	1	0	5	12	6	
	Mostly	1	0	1	10	4	
	Always	0	0	2	2	4	
I have my ways and ideas to be employed through socializing networks	No	0	2	19	40	39	2.35
	Yes	3	5	33	64	58	

*Statistically Significant at $(0.05 \geq \alpha)$

Table (4) shows that there is a statistical significant difference ($\alpha \leq 0.05$) between the female students' achievement and using (group) for socializing with family, (Chi-Square) (15.72) which considered statistically significant.

Question 3

Is there a statistical significant relationship between the female students' grades (sixth grade-twelve grade) and the degree of using social networks?

To answer this question, frequencies and Chi-Square were calculated as shown in Table (5).

Table 5

The Relationship between Female Students' Grades and the Degree of Using Social Networks

Items	Response	Frequencies							Chi-Square
		6 th	7 th	8 th	9 th	10 th	11 th	12 th	
I use the Internet for self-learning (doing my homework)	Never	1	6	2	4	4	4	3	*38.97
	Rarely	8	11	12	7	7	5	7	
	Sometimes	22	18	29	31	31	12	13	
	Mostly	2	5	7	12	12	1	7	
	Always	0	2	7	5	5	2	6	
I use the Internet for cooperation-learning (doing homework with my classmates)	Never	3	6	7	8	8	6	2	25.05
	Rarely	8	14	9	20	20	4	16	
	Sometimes	7	6	15	7	7	5	4	
	Mostly	7	7	10	14	14	4	9	
	Always	8	9	16	10	10	5	5	
I use the Internet to socialize with my classmates	No	3	3	8	5	5	3	1	4.39
	Yes	30	39	49	54	54	21	35	
I exchange family photos with my classmates	No	24	27	30	43	43	13	21	7.60
	Yes	9	15	27	16	16	11	15	
I use the Internet for socializing with my teachers	Never	14	11	25	20	20	11	15	26.89
	Rarely	10	11	13	13	13	4	11	
	Sometimes	4	11	8	16	16	7	9	
	Mostly	5	7	4	7	7	1	0	
	Always	0	2	7	3	3	1	1	
I use the Internet to communicate with my teachers in curriculum-related issues	Never	16	21	29	25	25	12	20	26.86
	Rarely	9	10	12	10	10	3	9	
	Sometimes	5	4	7	17	17	7	4	
	Mostly	1	6	3	5	5	0	1	
	Always	2	1	6	2	2	2	2	
I have a group limited to my family members	No	9	12	16	20	20	8	11	1.18
	Yes	24	30	41	39	39	16	25	
I have family group for girls-only	No	12	15	18	18	18	5	6	5.82
	Yes	21	27	39	41	41	19	30	
Are there any types of control on using the Internet at home?	No	20	19	25	28	28	13	25	9.69
	Yes	13	23	32	31	31	11	11	
If the answer of	No	25	21	27	29	29	13	23	10.52

the previous questions was "yes" are you committed to it?	Yes	8	21	30	30	30	11	13	
I resend many messages without making sure of the resource's reliability	Never	17	19	28	30	30	14	17	17.59
	Rarely	6	7	9	14	14	5	9	
	Sometimes	10	12	13	10	10	3	7	
	Mostly	0	4	7	5	5	2	3	
	Always	17	19	28	30	30	14	17	
I am honest in the messages that I exchange with my classmates	Never	0	2	2	1	1	4	0	42.28
	Rarely	3	1	2	3	3	3	4	
	Sometimes	5	9	7	6	6	0	3	
	Mostly	8	9	19	8	8	4	12	
	Always	17	21	27	41	41	13	17	
I send messages that insult others	Never	17	29	34	39	39	15	17	35.17
	Rarely	11	7	10	9	9	8	10	
	Sometimes	5	4	5	4	4	1	4	
	Mostly	0	1	6	3	3	0	4	
	Always	0	1	2	4	4	0	1	
I have my ways and ideas to be employed through socializing networks	No	10	20	18	21	21	10	16	4.39
	Yes	23	22	39	38	38	14	20	

*Statistically Significant at ($0.05 \geq \alpha$)

Table (5) shows that there is a statistical significant relationship ($\alpha \leq 0.05$) between the female students' grades and using the Internet as a self-learning tool in doing school homework, and being honest in exchanging messages with the classmates, the Chi-Square values were (38.97) and (42.28) respectively, which is considered statistically significant.

Discussion

Using social media and electronic devices has increased dramatically in the last two-decades among youth in general and among younger female students in specific. Therefore, this study was conducted to find the impact of the social media and electronic devices on the interpersonal relationship of female students in the State of Kuwait and whether using social media and electronic devices is related to their academic achievement.

This study revealed that a high number of female students own most of the available electronic devices; Tablets, Mobiles, Laptops, IPod, Wii, Play Stations, Xbox, and rarely to find someone who is not involved in one or more type of social media activities. Some of these devices started to disappear gradually and some others become abundant which provides everybody access to all types of social media and surfing the Internet.

In this study, we made assumptions regarding the nature of using social media and the Internet and whether these devices have any impacts on the female students. We found that most of the female students use the Internet for socializing with classmates, and a high percentage of them are involved in family groups and girls-only groups. However, in terms of parents' observation and control over the Internet, approximately, half of the female students

reported that their parents put some restrictions on the Internet; nonetheless, half of the female students reported that they are not committed to these restrictions. In terms of their participation in the social media, female students believe that they have nice thoughts and ideas to share with their friends.

In terms of the nature of using the Internet, almost, half of the respondents pointed out that sometimes they use it for self-learning and for doing school homework. The numbers revealed by this study showed that, in general, female students don't use the social media and the Internet for "cooperation learning" and very rarely to socializing or communicating with their teachers at personal level or even at formal "curriculum-related issues" level.

Moreover, the study revealed that a small portion of the female students assured that they are aware of resending messages without making sure of the reliability of the resources. Female students also reported that they are honest in exchanging messages with their classmates, and they assured that they rarely insult others through social media networks.

In this study, the results show a significant difference between female students' achievement and their involvement in groups that is limited to family members to the benefit of female students at twelfth grade. This could be one of the benefits of social media networks. The impact of the social and relative relationships may be creating a kind of competition within females in the family group. Also, the maturity of students at this level could be another reason. However, there was no significant difference between female students' achievement and the usage of the Internet for doing homework, cooperating learning, socializing with classmates or teachers, having girls-only groups, or whether there is restriction in using the Internet.

In terms of the relationship between the female students' grade and the degree of using the Internet, the results show that there is a significant relationship between the students' grade and using the Internet for self-learning at eighth grade level, and students' grades and their honesty in exchanging messages with their classmates at the eighth grade level as well.

Limitations

This is a cross-sectional study that investigated the impact of electronic devices on the female students in twenty public schools in State of Kuwait, Mubarak Educational Area, which limits the generalizability of the findings. The use of the online survey was sent by school district to all female students' electronic devices who are member in the group, honesty and settings of the participants in answering the questions of the survey could be another limitation. Also, the time and location of the study could influence the generalization issue, a follow-up study could be conducted on later time to find in depth how these social networks and electronic devices could influence female students' achievement and interpersonal relationships.

Conclusion and Recommendations

The researchers believe the findings of this study have important implications for future research in terms of using electronic devices to help students, parents, teachers of better understanding of the impact of these devices on students' achievement and interpersonal relationships: most of the current generation use the internet and the social networks for socializing with classmates and family members, and they are using the internet for self-learning. It seems that female students believe that the Internet is a helpful a tool that enables them to study and share ideas and thoughts with others on the Internet. However, female students do not accept the Internet to be controlled by parents and they don't commit to this restriction. We recommended that parents should plant the trustful principles with their

children and build a relationship based on the respect and honesty. The Internet should be utilized as a beneficial tool that helps students to communicate with teachers, classmates, and relatives, however, time consuming by using the internet is one of the considerations.

Future research could be conducted to find the impact of the Internet and the electronic devices on male students at the same level and whether the impact differs based on the gender variable.

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