

**EFFECTS OF ELECTRONIC GADGETS TOWARDS HIGH SCHOOL STUDENTS' PERFORMANCE, FAMILY RELATIONSHIP AND HEALTH CONDITIONS**

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**ABSTRACT**

This study determined the effects of electronic gadgets on family relationship, health conditions, study habits and students' performance of learners of selected high schools of Zone 1, Division of Zambales, Philippines. The study used the descriptive-research method with questionnaire as the main instrument in gathering data from three hundred seventy eight (378) students who were randomly selected. The present study found that majority of the student-respondents are female, relatively young Grade 8 high school students. The student obtained an academic performance of approaching proficiency. The students always used different electronic gadget primarily mobile/cellphones and computer. The usage of electronic gadgets do have effects on students' family relationship, however seldom on students' health conditions and also with students' study habits respectively. This present study also reveals that there is no significant difference on the effects on the use of electronic gadgets in terms of family relationships and study habits when attributed to students' age, sex and grade level. However, there is significant difference on the effects on the use of electronic gadgets in terms of health conditions when attributed to students' grade level. Moreover, it was also found that there is negligible relationship between the academic performance and the level of effects on the use of electronic gadgets as to family relationships, health and study habits. In this study, parents are encouraged to monitor their children in the use of electronic gadget; that the students are advised to take advantage on the electronic gadget for educational purposes and can be sometimes use for leisure.

**Key Words:** Effects of Electronic Gadgets, High School Students, Academic Performance, Family Relationship, Health Conditions.

**1. INTRODUCTION**

Technology is the energy that acts as the driving force to drive or to run our lives. It is nothing but the results of the innovations and creativity of human beings. Parry (2016) stated that modern technological devices have captured the attention of the world. The degree of dependency that most individuals have is leading to addiction to technological devices. Technology converts the natural resources into consumer goods which are used by the society and human beings. It has brought the automation level to such a height that human effort and his time has been saved to a great extent. Punithavathi (2013) explained that due to this, access to information has now

become easier and the distant locations are getting closer. Information Technology and Communication (ITC) system has provided such facilities that the world is now feeling like a small globe virtually. However not all technology is advantageous.

Electronic gadgets occupied a major position in our daily lives. Though they were invented to make life better for us the first place it is an undeniable fact that many of the gadgets have negative effects and influence upon the quality of our lives in some ways. According to Brown (2005) people cannot live without them in this modern world and they are now considered necessity, people have to find ways to reduce the negative impact of those modern gadget.

With the tremendous advances in technology over the past decade, consumers have grown to expect a new gadget or an upgrade to an existing one on the market every few months. Gadgets like mobile phones, iPod, mp3 players and game consoles are the most sought after type of gadgets nowadays. In addition, these games have effects on the learning experiences of the students (Rheingold, 1993). According to Ally (2009), teachers nowadays know that most of their students own at least a hand phone or other mobile devices such as an MP3 player, a laptop and they are surrounded with technological gadgets which keep on changing at a very fast rate. In relation to this, nowadays students learned how to use the modern technology. According to Liu & Chen (2005), academic standing and study habits are said to improving because of the advent and the wide use of Internet, hypertext and multimedia resources which greatly affect the study habits.

There is growing evidence for a wide range of electronic gadget effects that influence social and antisocial behaviors, cognitive styles, and affective processing (Anderson & Huesmann, 2013). Further explained that such behavior has led to anti-social lifestyles, poor eyesight, and some argue with violent acts. Like all advances in technology society goes through an acceptance complete phase. The technology can become either a failure or a success. The study of Parry's (2016) has revealed that the addictive behavioral traits that are linked with the device usage can have many negative impacts on an individual. The overall level of technological device usage can affect an individual's behaviors which in turn can affect their own lifestyle, health and social skills.

Many students are using the modern technology improperly. Their study habits and academic standing were merely affected. They could not focus on their studies because of too much pleasure brought about by the modern technology such as addiction on computer games and improper browsing of prohibited websites (Liu & Chen, 2005). According to Favian (2007), the word is changing fast. Technology continues to advance and anyone who doesn't keep up is in danger of being left behind. As a result, the way students study has changed significantly. According to Nusir (2012), students who have access in their home to new methods and tools of education through computers, interactive learning, etc. may have also different and more potential to absorb those technologies while used in the school educational system. Although students commented positively toward the use of technology, many students were unaware of certain programs and software that could greatly enhance the learning environment (Moawad & Ebrahim, 2016). Additionally, many students are only using computers at schools in a limited way. Surveyed students perceived the use of multimedia technology as a way of make learning easier and more interesting. They preferred using technology to present their ideas rather than writing papers and doing more traditional projects (Moawad & Ebrahim, 2016).

This research study is advantageous to students who are the main focus of this endeavor for them to be enlightened about the crucial effects of learned habits to them. Therefore, they would learn more to manage appropriate, more productive and constructive activities fundamental for their age. Students will be guided and assisted on the advantages and disadvantages of usage of electronic gadgets. The students would be more appreciative of the usefulness and utility of electronic gadgets such as richer interaction in class for enhanced learning outcomes, more harmonious relations with members of the family, relatives and peers. Parents would now closely supervise their children's proper use of electronic gadgets, their academic activities and study habits. This is also essential to the parents whose primary responsibility is to care for their child's well-being and who may act appropriate discipline at home. Teachers can now guide further their students about proper attitude in using electronic gadgets. In this way the teacher would have an ease on delivering their lesson and could provide good teaching – learning performance to their students. They could also provide meaningful activities using electronic gadgets and computer-assisted instruction. They could find ways that could make electronic gadgets as teaching tool and not means of distraction, thus helping a great deal with the students. School administrator may suggest to his/her teachers to design class learning activities that incorporate the use of technology. The result would be favorable to them whose primary task is to create programs and activities that will help in the total development of personality and characters among students. The Local Government units may formulate ordinances that would check students within their jurisdiction to regulate the use of electronic gadgets inside computer shops, e.g., if classes are on-going. The results of the study are also helpful to computer shop owners (service providers) since they will be more informed of the influences/effects to their costumers (students) of availing their service. They would be working hand in hand with the local government unit in enforcing the ordinance on such matter.

With the increased role of electronic gadget to students' lives has come increased concern about how they may be affected (educationally, emotionally and health concern). Time spent on electronic gadgets may displace other activities that have more developmental value. Electronic gadgets provide uncomplicated resourceful, creative and socially-rewarding procedures. The study on the influence and effects of electronic gadgets to family relations, to students and most specially their education in the Division of Zambales is limited if not lacking which makes this study necessary and purposeful.

## **2. STATEMENT OF THE PROBLEM**

This study determined the effects of electronic gadgets on family relationship, health conditions and students' performance of learners of selected high schools of Zone 1, Division of Zambales during the academic year 2018-2019.

Specifically, the researcher will also answer the following questions:

1. How may the profile of the student -respondent be described as to: sex, age; and year level?
2. How may the academic performance of the students be described?
3. How may the level of usage of the electronic gadgets be described?
4. How may the extent of effects of usage of electronic gadgets on student-respondents be described in terms of the following factors: Family Relationship, Health Conditions, and Study Habits?

5. Is there a significant difference on the perceived effects of electronic gadgets to Family Relationship, Health Conditions and Study Habits when group according to profile variables?
6. Is there a significant relationship between the effects of electronic gadgets and the students' academic performance?

### 3. MATERIALS AND METHODS

The research study used the descriptive-research method. Descriptive method is used when a research attempts to describe systematically a situation, problem, phenomena, service or programme, or provides information about living condition of a community or describes attitudes toward an issue. The descriptive part of the present study focused on determining the influence of electronic gadgets to the student-respondents in different aspects. The respondents of the study were three hundred seventy-eight (378) students from Public High School of Masinloc District, Candelaria District and Sta. Cruz District of Zone 1, Department of Education, Division of Zambales, Philippines. The respondents were identified using Slovin Formula sampling technique.

The questionnaire is the major instrument which was used by the researcher in this study. The items in the questionnaire are patterned and lifted from the studies of Stakkestad & Størdal (2017), Muduli (2014) and Jagadeesh (2017). The questionnaire is divided into five parts. Part 1 gathered the profile of the respondents where, age, sex and year level. The second part gathered the academic performance of the students. The third part of the questionnaire identified the level of usage of the electronic gadgets. The fourth part assessed the influence/effects of the usage of electronic gadgets to Family Relationships (10 items), Health Conditions (10 items) and Students' Performance (10 items). The respondents answered from a scale ranging from 4 (Always) to 1 (Never). The researchers conducted a pilot test to further the validity and reliability of the prepared survey questionnaire. The test was administered to 15 students of private high school in Zone 1.

After the validation of the instrument, the researchers made the final draft integrating the corrections and discrepancies noted during the validation. A letter was prepared seeking permission from the Schools Division Superintendent of Zambales and Principal of Public High Schools of Zone 1, Division of Zambales for the distribution of the survey questionnaire. The distribution of the questionnaire was conducted on January, 2019. The researcher utilized the vacant periods in the distribution so as not to disrupt students' classes. The confidentiality of their responses was guaranteed. The data which were gathered were tallied and tabulated using frequency, percentage, weighted mean, ranking. ANOVA and Pearson r were inferential statistics used.

### 4. RESULTS AND DISCUSSIONS

#### 4.1 Respondents' Profile Variables

Table 1 shows the distribution on the respondents’ profile variables of age, sex, and grade level respectively.

**Table 1. Distribution on the Respondents’ Profile Variables**

Profile Variables		Frequency	Percentage
<b>Age</b> Mean=14.84 years old	14 years old	181	47.90
	15 years old	104	27.50
	16 years old	71	18.80
	17 years old	17	4.50
	18 years old	4	1.10
	19 years old	1	0.30
	Total	378	100.00
<b>Sex</b>	Female	218	57.70
	Male	160	42.30
	Total	378	100.00
<b>Grade Level</b>	Grade 7	6	1.60
	Grade 8	160	42.30
	Grade 9	99	26.20
	Grade 10	113	29.90
	Total	378	100.00

**Age.** Out of three hundred seventy eight (378) student-respondents, mostly with 181 or equivalent to 47.90% are 14 years old; 104 or 27.50%, 15 years old; 71 or 18.80%, 16 years old; 17 or 4.50%, 17 years old; and 4 or 1.10% 18 years old. The computed mean age of the respondents was 14.84 years old. The students in the present study belong to early adolescence. **Sex.** Majority, 218 or equivalent to 57.70% are females and 160 or equivalent to 42.30% are males. **Grade Level.** Mostly, 160 or equivalent to 42.30% are from Grade 8; 113 or 29.90% are Grade 10; 99 or 26.20% are Grade 9; and only 6 or 1.60% are in Grade 7.

**4.2 Academic Performance**

**Table 2. Distribution on the Respondent’s Level of Academic Performance**

Academic Performance	Interpretation	Frequency (f)	Percentage (%)
75 - 79	Beginning	40	10.60
80 - 84	Developing	56	14.80
85 - 89	Approaching Proficient	133	35.20
90 - 95	Proficient	144	38.10
96 -100	Advanced	5	1.30
<b>Total</b>		<b>378</b>	<b>100.00</b>
<b>Mean of Academic Performance= 87.24</b>			

### Approaching Proficiency

There are 144 or equivalent to 38.10% obtained a point average grade ranges from 90-95 (Proficient); 133 or 35.20% (Approaching Proficient); 56 or 14.80%, 80-84 (Developing); 40 or 10.60%, 75-79 (Beginning) and only 5 or 1.30%, 96-100 (Advanced). The computed mean of academic performance was 87.24 with qualitative interpretation of “Approaching Proficient”.

The approaching proficiency level of the student respondents could be ascribed on their commitment and focus on school undertakings. It is also accounted on the help using modern technology. The study of Olivero & Sapio (2011) has affirmed that using technology can promote learning in the classroom, and that students have a strong desire to gain knowledge of new programs. According to the results of this survey, technology can increase participation and motivation of students in a project assignment because students can freely express their ideas in innovative ways by utilizing multimedia technology.

#### 4.3 Perception towards Level of Usage on Electronic Gadgets

Table 3 shows the perception of the student-respondents towards Level of Usage on Electronic Gadgets.

**Table 3. Perception towards Level of Usage on Electronic Gadgets**

	Level of Usage on Electronic Gadgets	WM	QI	Rank
1	Mobile/Cellphone	3.44	Always	1.5
2	Computer	2.32	Always	1.5
3	IPOD	1.53	Never	7
4	Laptop	1.97	Seldom	6
5	Tablet	2.24	Seldom	5
6	Television	3.44	Seldom	4
7	Internet Service	3.22	Sometimes	3
<b>Overall Weighted Mean</b>		<b>2.59</b>	<b>Sometimes</b>	

The student-respondents always use mobile/cellphones and computer with equal mean of 3.44 and ranked 1.5<sup>th</sup> respectively. The students sometimes used internet services, with mean of 3.22 and ranked 3<sup>rd</sup>. They seldom use television, laptop and tablet with mean of 2.32, 1.97 and 2.24 and ranked 4<sup>th</sup>, 6<sup>th</sup> and 5<sup>th</sup> respectively while the students never used IPOD with mean of 1.53 and ranked 7<sup>th</sup>. The computed overall weighted mean on level of usage on electronic gadget was 2.59 with qualitative interpretation of sometimes.

The use of technology has been shown to help middle school students in their math achievement and help educators manage resources for students who need extra support (Macionis, 2011). Students using a computer integrated learning system were more actively engaged in learning tasks than students in the regular classrooms (Macionis, 2011). Mobile phone or cell phone can also provide a variety of other services like text messaging, playing music, e-mail, internet access, infrared, Bluetooth, business applications, gaming and photography etc. (Heeks, 2008). A smart phone, or smart phone, is a type of mobile phone built

on a mobile operating system with more advanced computing capability and connectivity than a feature phone (Moawad & Ebrahim, 2016). Computer can solve more than one kind of problem at a particular time as a sequence of operations can be readily changed. Now the laptops are generally used for making programs, storing data, entertainment (music, videos), accessing net etc. Smart Phone (Moawad & Ebrahim, 2016). The internet is a huge network that links computers together all over the world using a range of wires and wireless technologies. The World Wide Web is the collection of linked pages those are accessed using the internet and a web browser. The purposes of using internet are online shopping, social networking, games, news, travel information, business, advertising and much more (Moawad & Ebrahim, 2016).

**4.4 Perception of the respondents towards extent of effects of electronic gadgets on student-respondents academic performance.**

**4.5.1 Family Relationship**

The perception of the respondents towards extent of effects of electronic gadgets on student-respondents academic performance as to family relationship is shown in Table 5.

**Table 4. Perception of the respondents towards extent of effects of electronic gadgets on Student-Respondents Academic Performance as to Family Relationship**

	<b>Family Relationships</b>	<b>WM</b>	<b>QI</b>	<b>Rank</b>
1	Do you spend adequate time with your parents?	3.26	Always	1
2	Do you have your meals with your parents?	3.29	Always	2
3	Do your parents compare you with another child?	2.70	Sometimes	9
4	Do you go out as a family?	2.61	Sometimes	10
5	Does your parent help you in doing the home work?	2.46	Seldom	15
6	Do your parents set limits for you?	2.98	Sometimes	4
7	Do your parents consider your opinion in making decision?	2.87	Sometimes	5
8	Do you discuss your problems or events with your parents?	2.59	Sometimes	11
9	Do your parents motivate you to take up responsibility?	3.18	Sometimes	3
10	Do you discuss your interests with your parents?	2.80	Sometimes	6
11	Do your parents give freedom in selecting your gadgets?	2.78	Sometimes	8
12	Do your parents allow you to do anything you want?	2.58	Sometimes	12
13	Do you talk with your parents about your feelings/ thoughts?	2.56	Sometimes	13
14	Do you explain to your parents when you commit mistakes?	2.79	Sometimes	7
15	Do your parents beet you when you do something wrong?	2.48	Seldom	14

	<b>Overall Weighted Mean</b>	<b>2.79</b>	<b>Sometimes</b>	
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The student-respondents indicated “always” on spending adequate time with your parents?” manifested by its high mean value of 3.26 and ranked 1<sup>st</sup> followed by the question, “Do you have your meals with your parents?, 3.29 and ranked 2<sup>nd</sup> while least on the questions, “Does your parent help you in doing the home work?, 2.46 interpreted as “seldom” and ranked 15<sup>th</sup>. The computed overall weighted mean on the responses towards extent of effects of electronic gadgets on student-respondents academic performance as to family relationship was 2.79 with qualitative interpretation of “sometimes”. If this behaviour keep left without given the understanding of the harms of excessive use, it could be the users of the gadget will be increasingly difficult to interact with his family. Lestari, Riana & Taftarzani (2016) revealed that increased use of gadgets can affect the overall function of the family as the first groups that make up the personality of the person as well as the effect on the pattern of family communication. Having quality time and eating with family is a critical aspect of family life and for the development of a strong family foundation (Fiese & Schwartz, 2008).

Previous research has supported the link between coherent accounts of family events and trustworthiness of relationships. It is clear from much discourse on the topic, that mealtime. Rideout (2007) found that many young people, 64% of all 8- to 18-year-olds, live in homes where the TV is usually on during meals. Similarly Fiese, Schwartz (2008) and the Society for Research in Child Development examine the role of family interaction and the effects of having the television on during mealtimes. Their findings of Fiese & Schwartz (2008), concluded that watching TV at mealtime is a distraction and makes it difficult for family members to engage in conversation, therefore resulting in the prevention of important family connections that are made at mealtime.

All of the gadgets have these days can be a distraction from what really matters. There is no doubt that family being together is essential for forming strong family connections, bonds and relationships, ultimately creating a healthy family unit (Sana, Moez & Esmail, 2011). The presence of any other media devices at the table is a distraction for everyone and hinders effective communication between family members (McGrath, 2012). With all of the vital benefits that result from families sharing a meal together, having media present during this ritual could be a detrimental effect on the development of a family system (Sana, Moez & Esmail, 2011).

#### 4.6 Health Conditions

The perception of the respondents towards extent of effects of electronic gadgets on student-respondents academic performance as to health condition is shown in Table 6.

**Table 5. Perception of the respondents towards extent of effects of electronic gadgets on student-respondents academic performance as to health conditions**

	<b>Health Conditions</b>	<b>WM</b>	<b>QI</b>	<b>Rank</b>
1	Do you feel strong, fit and energetic?	2.90	Sometimes	1
2	Do you feel slightly tired, weary or weak?	2.74	Sometimes	2
3	Do you feel totally exhausted?	2.41	Seldom	6



4	Do you feel difficulties with urination and bowel function?	2.16	Seldom	14
5	Do you have physically discomfort or symptoms (e.g. pain, ache, nausea, itching etc.)?	2.30	Seldom	10
6	Have any problem in falling asleep or staying asleep?	2.31	Seldom	9
7	Do you often suffer stomach aches, constipation, and diarrheas?	2.28	Seldom	11
8	Do you feel pain in your neck, shoulder muscles and wrist?	2.47	Seldom	4
9	Do you experience hearing disabilities using mobile phone?	2.22	Seldom	13
10	Are you prone to physical and internal organ disorders?	2.11	Seldom	15
11	Do you feel sad, melancholic or depressed?	2.37	Seldom	7
12	Do you feel anxious, stressed or nervous?	2.34	Seldom	8
13	Do you often feel hungry and/or starved?	2.53	Sometimes	3
14	Do you feel symptoms of depression and/or anxiety?	2.27	Seldom	12
15	Do you feel uneasy, unable to focus and easily distracted?	2.43	Seldom	5
<b>Overall Weighted Mean</b>		<b>2.39</b>	<b>Seldom</b>	

The student-respondents assessed “sometimes” on the question reflected in indicator 1, “Do you feel strong, fit and energetic?”, manifested by its high mean value of 2.90 and ranked 1<sup>st</sup>, followed by the question on indicator 2, “Do you feel slightly tired, weary or weak?”, with mean of 2.74 and ranked 2<sup>nd</sup> while least on the question for indicator 10, “Are you prone to physical and internal organ disorders because of less physical activity?”, 2.11 interpreted as “seldom” and ranked 15<sup>th</sup>. The computed overall weighted mean on the responses towards extent of effects of electronic gadgets on student-respondents academic performance as to health conditions was 2.39 with qualitative interpretation of “seldom”. Because of the preoccupied use of electronic gadget where sometimes eating is being neglected resulting to have weak body condition. The overnight use of cellphones or internet play would cause body weakness, loss of appetite and non-participate to classroom activities.

Addiction to technology is the effect of it upon health, particularly on mental health. Examples of such symptoms include anxiety, depressed mood, obsessive thinking, delusions and hallucinations etc. The recovery always needs some professional help. These helps may be counselling or psychotherapy, drug treatment or lifestyle changes etc. (Kitchener, Jorm & Kelly, 2012). Gertner (2011) reported that computer games addiction describes an ingrained set habits rather than a true addiction. It can be concomitant with depression or mental illness such as bipolar disorder or borderline personality disorder. Therapy, treatment programs and/or medication for the underlying disorder can be helpful. According to Kitchener, Jorm & Kelly (2012) and Tsitsika & Janikan (2013), addiction to technology is the effect of it upon health, particularly on mental health.

#### 4.7 Study Habits

The perception of the respondents towards extent of effects of electronic gadgets on student-respondents academic performance as to study habits is shown in Table 6.

**Table 6. Perception of the Respondents towards Extent of Effects of Electronic Gadgets on Student-Respondents Academic Performance as to Study Habits**

	Study Habit	WM	QI	Rank
1	Neglect time management and scheduled activities	2.44	Seldom	8
2	Use social networking sites during class hours	2.22	Seldom	15
3	Lessen the time for doing homework and projects	2.49	Seldom	5
4	Prioritize networking activities than extra-curricular	2.33	Seldom	13
5	Limited time for review of notes for major exams	2.53	Sometimes	3
6	Lack of time to read in advance the material or lectures	2.55	Sometimes	1
7	Not having a daily, weekly or monthly schedule planner	2.44	Seldom	8
8	Do not ask assistance from teachers, friends and parents	2.45	Seldom	6
9	Don't take good and enough notes in class	2.27	Seldom	14
10	Notes were disorganized and written in separate sheets	2.35	Seldom	11
11	Rarely attend group study sessions with classmates/ friends	2.43	Seldom	10
12	Engage in conversations unrelated to class content	2.34	Seldom	12
13	Late with the submission of requirements and assignments	2.44	Seldom	8
14	Speak only when the teacher asks him/her a question	2.50	Seldom	4
15	Limited notes in some lessons/discussions/lectures.	2.54	Sometimes	2
	<b>Overall Weighted Mean</b>	<b>2.42</b>	<b>Seldom</b>	

The student-respondents assessed “sometimes” on indicator 6, “Lack of time to read in advance the material before lectures”, manifested by its high mean value of 2.55 and ranked 1<sup>st</sup> followed by indicator 15, “Limited notes in some lessons/discussions/lectures, 2.54 and ranked 2<sup>nd</sup> while least on indicator 2, “Use social networking sites during class hours, with mean of 2.22 interpreted as “seldom”. The computed overall weighted mean on the responses towards extent of effects of electronic gadgets on student-respondents academic performance as to study habits was 2.42 with qualitative interpretation of “seldom”.

Because of the preoccupied minds on the use of electronic gadget, they have no more time to read in advance instructional or reading materials as part of classroom assignments and undertaking. Along with the rapid growth and change of modern technology, students become more dependent to electronic gadgets around them. Because the students believe in the power of gadgets, they all rely their works in them. As a result, they forget to be responsible in their own

way and let themselves be controlled with by all the comforts that the gadgets give them. Unlike before, they allot less time in studying and putting more time in using the gadgets because they have this idea that doing researches and assignments can be easily done because of it. Harper, Fiese, Foley, & Spagnola (2006) stressed that Modern technology causes great distraction in the study habits of students. Many students are using the modern technology improperly. Their study habits and academic standing were merely affected (Richardson, 2011). They could not focus on their studies because of too much pleasure brought about by the modern technology such as addiction on computer games and improper browsing of prohibited websites (Liu & Chen, 2005). According to Nusir (2012) students who have access in their home to new methods and tools of education through computers, interactive learning, etc. may have also different and more potential to absorb those technologies while used in the school educational system. Parry’s (2016) study found that, overall the level of technological device usage can affect an individual’s behaviors which in turn can affect their own lifestyle, health and social skills.

**Test of Difference on the extent of effects of electronic gadgets on student-respondents academic performance when grouped according to profile variables**

**Family Relationship**

The Analysis of Variance to test differences on the effects of electronic gadgets on student-respondents academic performance as to family relationship, Health Conditions, and Study Habits when grouped according to profile variables is shown in Table 7.

**Table 7. ANOVA Test of Differences on the Effects of Electronic Gadgets on Students’ Academic Performance as to when grouped according to Profile Variables**

Source of Variation	Family Relationship		Health Conditions		Study Habits	
	F	Sig.	F	Sig.	F	Sig.
Age	1.212	0.303	0.761	0.579	0.379	0.863
Sex	3.427	0.065	0.320	0.572	0.130	0.719
Grade Level	1.678	0.171	4.961	<b>0.002*</b>	1.193	0.312

*\*Significant*

**Family Relationship.** The computed sig. value of 0.303, 0.065 and 0.171 were all higher than (>) 0.05 alpha level of significance, therefore the null hypothesis is accepted, hence there is no significant difference on the perception towards effects of electronic gadgets on student-respondents academic performance as to family relationship when grouped according to age, sex and grade level profile variables respectively. The data clearly manifest on the non-objection of the respondents towards family relationship. They all agree on the value and importance on

strong family ties. Although technology and media have always been involved in adolescents' lives, they play an even bigger role today. Parents now have to account for the role that technology plays in their adolescents' lives (Subrahmanyam & Greenfield, 2008). In addition, parents can help teens think about online presence in moral and ethical ways, specifically to help teens in understanding the consequences for themselves and others of participation in the socially networked world (Carr, 2011).

**Health Conditions** The computed sig. value of 0.597, and 0.572 which are higher than (>) 0.05 alpha level of significance, therefore the null hypothesis is accepted, hence there is no significant difference when grouped according to age, and sex profile variables respectively while the computed P-value of 0.002 were all lower than (<) 0.05 alpha level of significance, therefore the null hypothesis is rejected, hence there is significant difference on the perception towards effects of electronic gadgets on student-respondents academic performance as to health conditions when grouped according to grade level profile variables. Exposure on the use of modern technology as computer, cellphones, and other electronic gadgets affects physical health.

**Study Habits.** The computed sig. value of 0.863, 0.719 and 0.312 were all higher than (>) 0.05 alpha level of significance, therefore the Null Hypothesis is Accepted, hence there is no significant difference on the perception towards effects of electronic gadgets on student-respondents academic performance as to study habits when grouped according to age, sex and grade level profile variables respectively. The data implies on the similarity of experiences regardless of age, sex and grade level on the effects of electronic gadget in the study habit. According to Favian (2007), technology continues to advance and anyone who doesn't keep up is in danger of being left behind. As a result, the way students study has changed significantly.

**Test of Relationship between the Academic Performance and the Extent of Effect on the use of electronic gadgets**

Table 8 shows the Pearson Product Moment Coefficient of Correlation to test relationship between the extent of effect on the usage on electronic gadget to the academic performance.

**Table 8. Pearson r to Test Relationship between the Extent of Effect on the Usage on Electronic Gadget to the Academic Performance**

Sources of Correlations		Extent of Effect	Academic Performance
<b>Extent of Effect</b>	Pearson Correlation	1	-0.010
	Sig. (2-tailed)		0.853
	N	378	378
<b>Academic Performance</b>	Pearson Correlation	-0.010	1
	Sig. (2-tailed)	0.853	
	N	378	378

There is no relationship between the extent of effect on the level of usage on electronic gadget to the academic performance manifested on the computed Pearson r value of -0.010 which denotes negligible relationship. The computed Significant or P-value of 0.853 which is higher than ( $>$ ) 0.05 Alpha Level of Significance, therefore the Null Hypothesis is Accepted, hence there is no significant relationship. The usage of the students of gadgets cannot be attributed to students' improved or poor academic performance as well as study habits. Improved or poor academic performance may be attributed to other factors such as teaching pedagogies, teachers' competencies, instructional resources, school environment, and many others.

## 5. CONCLUSIONS

Based on the summary of the investigations, the researchers have concluded that:

1. Majority of the respondents are female relatively young high school student and in Grade 8.
2. The student obtained an academic performance of Approaching Proficiency.
3. The students always used mobile/smart phone and computer as electronic gadgets.
4. The usage of electronic gadgets do have effects on students' family relationship. The ample and quality time with their parents were affected as well as time to have regular meals with the whole family. The effects on students' health conditions and students' study habits were seldom respectively. The students' energy to do chores and to do school works were also affected since they too felt tiredness. The students revealed and reported that they have their time to read in advance their notes and their lectures were already limited.
5. There is no significant difference on the effects on the use of electronic gadgets in terms of family relationships and study habits when attributed to students' age, sex and grade level. However, there is significant difference on the effects on the use of electronic gadgets in terms of health conditions when attributed to students' grade level.
6. There is negligible relationship between the academic performance and the level of effects on the use of electronic gadgets as to family relationships, health and study habits.

## 6. RECOMMENDATIONS

Based from the conclusions arrived at, the researchers recommended that:

1. Parents are encouraged to monitor the children in the use of electronic gadget as health and emotional prevention by setting limitation on time usage.
2. Suspected addiction on the use of electronic gadgets are advised to consult doctor for appropriate advice and medication.
3. Encourage students as part of study habit in taking notes of important point during lecture.
4. Parents are advised not to impose corporal punishment and rather open the channel of communication for so children are free to share problems.
5. Students are advised to take advantage on the electronic gadget for educational purposes and sometimes use for leisure.
6. To conduct a similar or parallel study with in-depth and wider in scope so as to validate the findings obtained in the study.

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