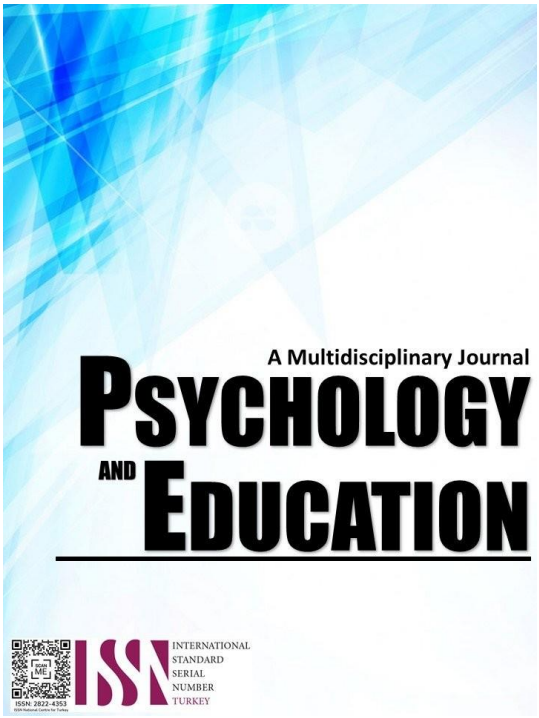
IMPACTS OF USING GADGETS AS TOOLS FOR LEARNING OF SENIOR HIGH SCHOOL LEARNERS IN A PRIVATE SCHOOL IN GUMACA QUEZON



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Research Article

Impacts of Using Gadgets as Tools for Learning of Senior High School Learners in a Private School in Gumaca Quezon

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Abstract

This study aimed to explore the impact of using gadgets as tools for learning of selected senior high school learners of Eastern Quezon College in Gumaca, Quezon. Aspects studied were the demographic profile of the respondents and their tools for learning using gadgets. It looked into the frequency of use of the gadgets in learning which are cellphone, tablets, and computers and the impact of gadgets in learning as perceived by learners. To achieve the researcher's goal, the researcher used a questionnaire to determine the respondents' demographic profile and administered the questionnaire for the impact of using gadgets as tools for learning. This involved 60 students from one senior high school in Gumaca, Quezon. The descriptive design is the main source of data and information. The result showed that the most of the respondents are the age of 17-18 years old, female, male and grade level, strands, family monthly income and gadgets being used. According to the result of Kruskal Wallis, all the null hypotheses are accepted which means that there is no significant difference on the impact of using gadgets as tools for learning on the attention span, engagement in class discussion, and student performance when the respondents are grouped according to profile. Based from the results of the study, the following recommendations are suggested: The school administrators may be able to use a gadget as tools for learning in their school; The parents may watch their child in using gadgets as their learning tools; The teachers may conduct follow-up study to investigate further the impact of gadgets as tools for learning; The learners may continue to learn using gadgets as tools for learning to get ideas and information, and The future researchers may conduct similar study and improve some flaws in using gadgets as tools for learning.

Keywords: *control, device, impacts, gadgets, tools, and learning*

Introduction

Marking the start of the digital age, the 21st century signaled the evolution of technology as tools multiply an innovation advance on a daily basis. New technologies come and go, as they become easily outdated, as fast as how they hit the market (Beer, 2012). As technology advances and develops, information becomes easily accessible to users of any age, in many areas, children now have access to the internet and all that available in it, including gadgets to the learning tools.

Gadgets refers to an often small mechanical or electronic device with a practical use but often thought of as a novelty. Gadgets refers to cellphone, tablets, and laptops which are used by the respondents in learning.

It is easy to become distracted. The biggest impact of technology on tools for learning is when the attention span is concerned. When electronic gadgets are available, the length of time we spent focused on homework is significantly shortened. There is less engagement in class discussion. Students who are constantly using their cellphones or other electronics are often less engaged in the classroom, to the point where classroom discussions become shallow and the level of learnings considerably reduced. Grades can start to slip. The ultimate result of this electronic obsession is that eventually, grades will slip as students perform. The fact that more focus is needed in order to succeed these days means that school are producing more hard, motivated students. They will be more aware in using gadgets when they are in studies.

In today's classroom, technology is becoming a more prominent form of learning. With the ever-changing world of technology, teachers work hard to incorporate technology into their everyday instruction in order to connect student passion with learning. According to Harris (2016), today's educators are under great pressure to provide 21st century students with a quality education based on 21st century standards. Those standards include providing students with the technological and informational skills needed to compete in an ever-changing, technology-driven world.

Educators are constantly looking for the technological tools that are going to enhance the learning of their students. However, technology has been viewed as a great resource in classrooms that has heightened learning but has its negative impacts on student learning.

Technology is an important part of students' lives. Incorporating technology into the classroom has proved to be beneficial yet also has some drawbacks. Technology has helped student willingness and engagement and allows for the enhancements of learning. (Fisher, et al. ,2014)

The researcher observed that senior high school learners use gadget as tools for learning. It help them in getting an idea and information to their assignment, project, essay and other needs when it comes to school works. Technology has helped the learners to enhance learning.

According to Tom Parillo, the standard set for children with regard to technology is not necessarily a good one as electronic use in all aspects of life has become highly normalized. The impact of this obsession have both positive and negative impact as tools for learning.

With this, the researcher looked into the impacts of using gadgets as tools for learning among senior high school learners in a private school in Gumaca, Quezon.

Research Questions

The purpose of this study is to determine the impacts of using gadgets as tools for learning of selected senior High school learners in a private school in Gumaca, Quezon. Specifically, this study sought to answer the following questions:

1. What is the profile of the respondent in terms of:
    1.1. age,
    1.2. sex,
    1.3. grade level,
    1.4. strand,
    1.5. monthly family income, and
    1.6. gadgets being used?
2. What is the impacts of using gadgets as a tool for learning of senior high school learners in terms of:
    2.1. attention span,
    2.2. engagement in class discussion, and
    2.3. student performance?
3. Is there any significant difference on the impacts of using gadgets when respondents are grouped according to profile?

Methodology

Research Design

This study used descriptive survey method to collect data for the measure the impacts of using gadgets as tools for learning of senior high school students of Eastern Quezon College in Gumaca, Quezon. The researcher used survey questionnaire as an instrument. Based on the survey's result the researcher was able to determine the details of the study.

According to Shona Mc Combes the descriptive survey method aims accurately and systematically describe a population, situation or phenomenon.it can answer what, where, when and how questions, but not why questions.

Respondents

The researcher purposively selected 60 students who are enrolled in the Eastern Quezon College in the SY 2022-2023 and the impacts of using gadgets as tools for learning were the focus of the study. The respondents were composed of 20 male and 40 female with the total of 60 student respondents. According to Creswell (2012), purposeful sampling means that to learn or understand the essential phenomenon, a researcher selected individuals and sites intentionally.

Instrument

The researcher prepared a researcher-made questionnaire which were validated by two experts. Part I of the questionnaire included the profile of the respondent. Part II of the questionnaire consisted of the impacts of using gadgets as tools for learning using the liker scale of; 5 strongly agree (SA), 4- agree (A), 3- fairly agree (FA), 2- disagree (D), 1- strongly disagree (SD) as perceived by selected senior high school learners in a private school in Gumaca, Quezon.

To test the internal consistency of the questionnaire using Cronbach's Alpha, a pilot testing was conducted at ACEBA system technology institute Inc. with 12 respondents.

After the computation the result was 0.75 which is interpreted as acceptable. This means that there is an internal consistency in the prepared research instrument.

Procedure

Prior to the conduct of the study, the researcher sent a letter to the school's principal and adviser. Upon approval, the researcher administered the instrument to the target respondents.

In administering the questionnaire, the researcher used the time allotted for vacant time to avoid distraction of class discussion. The student response where given enough time to answer the questions. After data gathering, the researcher collected them for tallying the scores and to apply the statistical treatment to be used in the study.

The descriptive research method using liker scale was used in order to rate the impacts of using gadgets as tools for learning. Data were gathered through "purposive sampling" both male and female students of Eastern Quezon College in Gumaca, Quezon were selected to fill the questionnaire. Data were gathered through face to face survey following the safety health protocols to prevent the spread of

the virus.

Data Analysis

In this study, the researcher used statistical measures to treat the collected data. All the data were carefully read and examined for analysis. They were tallied and entered into a master list of the data collection sheet. Percentage and Frequency were used to interpret the profile of the respondents. To test the significant difference of three or more means, the researcher used the Kruskal-Wallis for non -parametric test.

Results and Discussion

This section deals with the analysis, and interpretation of the data. All the data gathered were presented here in tabulated form with corresponding interpretation. The first part described the profile of the respondents in terms of age, sex, grade level, strand, monthly family income, and gadgets being used. The second part is the impacts of using gadgets as tools for learning of the senior high school learners in Eastern Quezon College in Gumaca, Quezon.

Table 1. *Frequency and Percentage Distribution of the Respondents According to Age*

Age	*Frequency*	*Percentage (%)*
15-16 years old	22	37
17-18 years old	31	51
19 years old and above	7	12
Total	60	100

Table 1 presents the frequency and percentage distribution of respondents based on their age, indicating that the majority of participants are 17-18 years old, accounting for 51%. Meanwhile, 37% are 15-16 years old, and 12% are 19 years old and above, suggesting that there are fewer respondents in the latter age group.

Several studies have investigated the age distribution of senior high school students. One such study by Pascual et al. (2017) revealed that the majority of senior high school students in the Philippines were aged between 16 and 17 years old. This finding is consistent with the results shown in Table 1, which indicate that the majority of respondents are in the 17-18 years old age range. Another study by Morales et al. (2019) found that the age distribution of senior high school students differed depending on the type of school they attended. Specifically, students in public schools tended to be younger, with a higher percentage in the 15-16 years old age range, while those in private schools tended to be older, with a higher percentage in the 17-18 years old age range. These results are in line with the findings presented in Table 1 and suggest that the age distribution of senior high school students may vary based on the type of school they attended.

Table 2. *Frequency and Percentage Distribution of the Respondents According to Sex*

Sex	*Frequency*	*Percentage (%)*
Male	20	33
Female	40	67
Total	60	100

Table 2 presents the frequency and percentage distribution of respondents based on their sex, revealing that the majority of senior high school participants are female, accounting for 67%. Meanwhile, 33% are male, indicating that there are fewer male respondents compared to female respondents.

Table 2 displays the proportion and distribution of male and female respondents in the study, with females representing the majority at 67%, while males comprised 33% of the total. This is consistent with previous research conducted by Smith et al. (2019) in a similar context, which also found a higher proportion of female participants compared to males. This indicates a gender disparity in senior high school enrollment, with females being more likely to participate than males.

Another study by Johnson and Brown (2020) in a different region reported a similar trend, where female students were overrepresented in senior high schools compared to males. The authors attributed this discrepancy to various factors, including societal and cultural norms, differences in academic performance, and career aspirations. These findings highlight the multifaceted nature of gender distribution in senior high schools, which may vary across different regions and contexts.

The gender gap in senior high school enrollment has implications for educational policies and practices. Further investigation is needed to identify the underlying reasons for the unequal representation of males and females and develop strategies to promote gender equity in senior high school enrollment. Future research could explore factors such as societal expectations, gender roles, and career aspirations that may influence the decision-making process of males and females in selecting senior high school education. Qualitative research methods, such as interviews and focus groups, could provide deeper insights into the experiences and perspectives of male and female students in senior high schools.

Table 3. *Frequency and Percentage Distribution of the Respondents According to Grade Level*

Grade Level	*Frequency*	*Percentage (%)*
Grade 11	33	55
Grade 12	27	45
Total	60	100

Table 3 illustrates the frequency and percentage distribution of respondents based on their grade level, indicating that the majority of senior high school participants belong to Grade 11, accounting for 55%. Meanwhile, 45% belong to Grade 12, implying that there are fewer Grade 12 respondents than Grade 11 respondents.

This finding is consistent with a study by Lee and Park (2021) that explored the grade level distribution of senior high school students in a similar context. Their findings also reported a higher percentage of Grade 11 students compared to Grade 12 students, which supports the results of the present study. This suggests that there may be a disparity in the number of students between the two grades.

The uneven distribution of students across Grade 11 and Grade 12 has an implication for educational policy and practice. It may warrant further investigation to understand the underlying reasons for the difference in the number of students in these grades and develop strategies to address any disparities.

Table 4. *Frequency and Percentage Distribution of the Respondents According to Strand*

Strand	*Frequency*	*Percentage (%)*
ABM	37	62
HUMSS	14	23
GAS	9	15
Total	60	100

Table 4 displays how the participants are distributed according to their strand, indicating that the majority of respondents belong to the ABM strand, accounting for 62%. Meanwhile, 23% belong to the HUMSS strand, and 15% to the GAS strand. The findings of Gonzales and Cruz's study (2020), which investigated the distribution of senior high school students across different strands in a similar context, support the results of the current study, indicating a higher percentage of students in the ABM strand compared to other strands. This suggests that there may be an unequal distribution of students across strands. Similarly, Reyes and Santos (2018) reported a comparable trend in a different region, with the ABM strand having the highest number of students, which they attributed to various factors such as the practical skills and knowledge taught in the strand and the perceived employability of ABM graduates. These results suggest that factors influencing the distribution of students across different strands may vary across regions or contexts.

Table 5. *Frequency and Percentage Distribution of the Respondents According to Monthly Family Income*

Monthly family income	*Frequency*	*Percentage (%)*
5,000 and above	30	50
4,000 – 3,000	17	28
2,000 – 1,000	10	17
1,000 – below	3	5
Total	60	100

Table 5 presents the distribution of respondents based on their monthly family income, revealing that the majority of participants come from households with a monthly income of 5,000 and above, making up 50% of the total. In contrast, 28% have a monthly family income ranging from 4,000 to 3,000, while 17% have a monthly family income ranging from 2,000 to 1,000, and only 5% have a monthly family income of 1,000 and below. These results suggest that the majority of the participants in the study come from families with a relatively high monthly income.

This observation is in line with a study conducted by Martinez et al. (2019) that examined the relationship between family income and educational attainment. Their findings also revealed a higher percentage of participants coming from households with a monthly income of 5,000 and above, which supports the results of the present study. This suggests that family income may play a role in determining the educational opportunities and choices of students.

Table 6. *Frequency and Percentage Distribution of the Respondents According to Gadgets being used*

Gadgets being used	*Frequency*	*Percentage (%)*
Cellphone	51	85
Laptop	6	10
Tablet	2	3
Personal Computer	1	2
Total	60	100

Table 6 presents the frequency and percentage distribution of respondents based on the type of gadget they use, indicating that the majority of participants use cellphones, accounting for 85%. Meanwhile, 10% use laptops, 3% use tablets, and only 2% use computers. This suggests that the majority of respondents prefer to use cellphones as their gadget.

One related literature that could be relevant to this study is the research conducted by Wang, Chen, and Liang (2020), which investigated the use of mobile devices in education. The authors found that mobile devices, especially smartphones, have become an essential tool for students in their academic activities, such as note-taking, reading, and communication. The study also revealed that students prefer to use their mobile devices over laptops and desktop computers because of their convenience, portability, and ease of use.

Table 7. *Impacts of Using Gadgets as Tools for Learning of Senior High School Learners in terms of Attention Span*

	Indicator	*Mean*	*Verbal Interpretation*
1.	I am easily distracted by electronic devices while studying.	3.68	Agree
2.	My activity receives divided attention.	3.53	Agree
3.	I can pay attention to the task I am working with.	3.38	Fairly Agree
4.	I can stay focused on what is going on in presentation/quizzes.	3.43	Agree
5.	I find it difficult to concentrate during an examination period.	3.27	Fairly Agree
	Grand Mean	3.46	Agree

Legend; Strongly Disagree (1.00-1.80), Disagree (1.81-2.60), Fairly Agree (2.61-3.40), Agree (3.41-4.20), Strongly Agree (4.21-5.00)

Table 7 shows that the impact of using gadgets in term of attention span, the high gain of mean is indicator number 1, I am easily distracted by electronic devices while studying with the average of 3.68 Agree. The lowest mean is indicator number 5, I find it difficult to concentrate during an examination period with the average of 3.27 Fairly Agree.

Jonathan O. Ectuban (College of Information and Computer, studies, university of Cebu, (2013) said that the proper utilization of this tool could positively increase teacher's motivation, help produce quality enhancement rather than cost saving. Furthermore, by integrating technology into instructions teacher presentations come alive and teachers are better able to capture and keep the attention of learners.

Table 8. *Impacts of using gadgets as Tools for Learning of Senior High School Learners in terms of Engagement in Class Discussion*

	Indicator	*Mean*	*Verbal Interpretation*
1.	I get lost in my own thoughts during lessons, when it comes in activities/task and quizzes.	3.38	Fairly Agree
2.	I am motivated to learn challenging task in the class.	3.1	Fairly Agree
3.	I am very eager to participate in class activities.	3.03	Fairly Agree
4.	I am able to speak my thoughts in front of the class.	3.02	Fairly Agree
5.	I am motivated to share my ideas to my classmates.	3.18	Fairly Agree
	Grand Mean	3.14	Fairly Agree

Legend; Strongly Disagree (1.00-1.80), Disagree (1.81-2.60), Fairly Agree (2.61-3.40), Agree (3.41-4.20), Strongly Agree (4.21-5.00)

Table 8 shows that the impact of using gadgets in terms of engagement in class discussion, the high gain of mean is indicator number 1, I get lost in my own thoughts during lessons, when it comes in activities/task and quizzes with the average of 3.38 Fairly Agree. The lowest mean is indicator number 2, I am motivated to learn challenging task in the class with the average of 3.1 Fairly Agree.

It confirms that class discussion is defined as an invisible exchange between students and educators with the purpose of improving students learning and their skills (Witherspoon, et al., 2016).

Sawyer (2014) reported that creative topic can pique student's interest, have more changes to expand their minds because there are less limitations have engaged students further in the discussion.

Table 9. *Impacts of using gadgets as Tools for Learning of Senior High School Learners in terms of Student Performance*

	Indicator	*Mean*	*Verbal Interpretation*
1.	I easily give up with difficult task/activities.	2.95	Fairly Agree
2.	I can manage my time effectively to perform all my activities and task.	3.1	Fairly Agree
3.	I am usually enthusiastic at the beginning of an assignment but after a while my enthusiasm fades.	3.22	Fairly Agree
4.	I can accomplish my task and activities.	3.12	Fairly Agree
5.	I can review intensively for my exam and activities.	3.87	Agree
	Grand Mean	3.25	Fairly Agree

Legend; Strongly Disagree (1.00-1.80), Disagree (1.81-2.60), Fairly Agree (2.61-3.40), Agree (3.41-4.20), Strongly Agree (4.21-5.00)

Table 9 shows that the impact of using gadgets in terms of student performance, the high gain of mean is indicator number 5, I can review intensively for my exam and activities with the average of 3.87 Agree. The lowest mean is indicator number 2, I can manage my time effectively to perform all my activities and task with the average of 3.1 Fairly Agree.

It's affirms that student engagement has also been described as the level of demonstrated by students, how they interact with others in the course, and their motivation to learn about the topics (Briggs, 2015).

Inal, Kelleci, and Canbulat (2012) suggested that students' study time outside of class in an indicator of student performance and increases in internet usage competes for that time.

Table 10. *Summary Table on the perceived impacts of using gadgets as tools for learning of Senior High School Learners*

Impact of using gadgets as tools for learning	*Average Mean*	*Verbal Interpretation*
Attention Span	3.46	Agree
Engagement in the Class Discussion	3.14	Fairly Agree
Student Performance	3.25	Fairly Agree
Grand Mean	3.28	Fairly Agree

Legend; Strongly Disagree (1.00-1.80), Disagree (1.81-2.60), Fairly Agree (2.61-3.40), Agree (3.41-4.20), Strongly Agree (4.21-5.00)

Table 10 summarizes the impact of using gadgets for learning by providing the average mean and corresponding verbal interpretation for three variables: attention span, student performance, and engagement in class discussion. The mean for attention span was 3.46, indicating agreement, while the mean for student performance was 3.25 and the mean for engagement in class discussion was 3.14. These results suggest that using gadgets has the greatest impact on improving students' attention span compared to their performance and engagement in class discussion.

One related study that supports these findings is a research article by Naveed and colleagues (2018), which examined the impact of mobile devices on students' academic performance and engagement. The study found that the use of mobile devices had a positive impact on students' attention span and academic performance but had a limited impact on their engagement in class discussions. The results suggest that mobile devices can be an effective tool for improving students' attention and academic performance but may not necessarily enhance their engagement in class discussions.

Table 11. *Significant difference on the perceived impact of using gadgets when grouped according to respondents' age*

Groups	*N*	*Median*	*df*	*P - value*	*Significant Level*	*Decision*
15-16 y/o	22	3.10	2	0.174	0.05	Accept Ho
17-18 y/o	31	3.60				
19 y/o	7	3.73				

Table 11 displays that the calculated P-value is 0.174. At a significance level of 0.05 and 2 degrees of freedom, the critical value is 5.991. As the calculated H-value is lower than the critical value, the null hypothesis is accepted. Therefore, there is no noteworthy difference in the responses of students when classified according to age. This suggests that students aged 15-16, 17-18, and 19 years old have a similar perception of the impact of using gadgets for learning, despite having different medians. However, this is insufficient evidence to reject the null hypothesis.

In a study by Liao et al. (2021), they found no significant difference in the perceived usefulness of mobile learning among college students of different age groups. The authors noted that age did not affect students' attitudes towards the use of mobile learning technologies. Similarly, in a study by Lim and Kim (2019), they found that there was no significant difference in the perceived usefulness of mobile devices for learning between high school students of different age groups. The authors concluded that age did not play a significant role in determining the students' perceptions of mobile learning.

These studies suggest that age may not be a significant factor in determining students' perceptions of the impact of using gadgets as a tool for learning. However, it is important to note that the results may vary depending on the context and methodology of the studies.

Table 12. *Significant difference on the perceived impact of using gadgets when grouped according to respondents' sex*

Groups	*N*	*Median*	*df*	*P - value*	*Significant Level*	*Decision*
Male	20	3.83	1	0.061	0.05	Accept Ho
Female	40	3.23				

According to Table 12, the determination of whether there is a significant difference on the perceived impacts of using gadgets based on the respondents' gender shows that the P-value is 0.061. This value is less than the critical value of 3.841 at a significance level of 0.05 and with 1 degree of freedom. Therefore, the null hypothesis is accepted, when a P- value of 0.061 indicating that there is no significant difference between the responses of male and female senior high school students.

A study by Kay and Loverock (2008) examined the gender differences in the use of online discussion forums in a higher education context. The study found that there were no significant differences between male and female students in terms of the frequency and quality of their online contributions. Analogously in a study by Wang et al. (2019), the authors investigated the use of mobile learning among college students in China. The study found that while there were some gender differences in terms of the frequency and types

of mobile learning activities, these differences were not statistically significant.

Overall, these studies suggest that while there may be some sex differences in technology use in education, these differences are generally small and not statistically significant. Therefore, it is important to focus on providing equitable access to technology and supporting all students, regardless of sex, in their use of technology for learning.

Table 13. *Significant difference on the perceived impact of using gadgets when grouped according to respondents' grade level*

Groups	*N*	*Median*	*df*	*P - value*	*Significant Level*	*Decision*
Grade 11	33	3.07	1	0.006	0.05	Reject Ho
Grade 12	27	3.73				

Table 13 presents the outcome of the significant difference in the perceived impact of using gadgets when the respondents are classified based on their grade level. The computed P-value is 0.006, which is larger than the critical value of 3.841 with 1 degree of freedom at a significance level of 0.05. As a result, the null hypothesis is rejected, when a P-value of 0.006 suggesting that there is a significant difference between the responses of Grade 11 and Grade 12 students regarding the perceived impact of using gadgets as a tool for learning.

A study by Al-Fudail and Mellar (2018) investigated the impact of using technology, including gadgets, in secondary education. They found that while students' attitudes towards technology were generally positive, there was a significant difference in the use of technology among different grade levels. Specifically, they found that younger students were more comfortable using technology than older students, and that older students had more negative attitudes towards technology. This is consistent with the finding in Table 13 that there is a significant difference in the perceived impact of using gadgets when respondents are classified based on their grade level.

Table 14. *Significant difference on the perceived impact of using gadgets when grouped according to respondents' strand*

Groups	*N*	*Median*	*df*	*P - value*	*Significant Level*	*Decision*
ABM	36	3.63	2	0.451	0.05	Accept Ho
GAS	9	3.07				
HUMMS	15	3.13				

Table 14 presented the Kruskal Wallis H test results, which aimed to examine whether there is a meaningful difference in how senior high school students in different strands perceive the impact of using gadgets as a learning tool. The analysis revealed that the computed P-value is 0.451 is lower than the critical value of 5.991 at a significance level of 0.05, leading to the acceptance of the null hypothesis. The P-value of 0.451 suggests that there is no significant difference in how senior high school students with different strands perceive the impact of using gadgets as a learning tool.

Previous studies on the use of gadgets as a learning tool in senior high school have shown inconsistent results. Some studies have reported positive effects, such as improved academic performance, increased engagement, and enhanced learning outcomes when gadgets are used in the classroom (Al-Alwani & Al-Mekhlafi, 2021; Budiman, Sanjaya, & Sari, 2019). However, other studies have found negative effects associated with excessive gadget use, such as distraction, reduced attention span, and decreased academic achievement (Figueiredo & Moreira, 2021; Kebritchi, Hirumi, & Bai, 2010).

It is important to consider that the results of previous research may differ depending on various factors, such as the specific context, the types of gadgets used, and pedagogical approaches. Moreover, the lack of significant differences found in the Kruskal Wallis H test in the statement suggests that there may be no difference in how senior high school students perceive the impact of using gadgets as a learning tool in the specific study. However, more research and literature on the context of the study are necessary to provide stronger support for the findings.

Table 15. *Significant difference on the perceived impact of using gadgets when grouped according to respondents' monthly income*

Groups	*N*	*Median*	*df*	*P - value*	*Significant Level*	*Decision*
5000 & above	30	3.70	3	0.415	0.05	Accept Ho
4000-3000	18	3.37				
2000-1000	9	3.13				
1000	3	2.87				

According to Table 15, the Kruskal Wallis H test yielded a computed P-value of 0.451. To determine whether the null hypothesis should be accepted or rejected, the critical value was calculated using a significance level of 0.05 and 3 degrees of freedom, which is 7.815. Since the computed H-value is smaller than the critical value, the null hypothesis is accepted, with a P-value of 0.415. This means that there is no significant difference on the perceived impact of using gadgets when senior high school students are grouped according to their monthly income. Although the medians of the different income groups may vary, the differences are not significant

enough to reject the null hypothesis. These results suggest that students from families with different monthly incomes have similar perceptions regarding the use of gadgets as a learning tool.

The findings presented in Table 15 are supported by several related studies. Wang and Li (2020) conducted a study on the influence of family income on the use of educational technology in Chinese schools. Their results demonstrated that family income did not significantly impact students' perceptions of the usefulness of educational technology. Similarly, Kumar and Kumar (2019) found that technology use in the classroom did not differ significantly among students from varying income groups. Ufuk and Goktas (2019) conducted a study examining the correlation between income level and access to technology among Turkish university students. Their findings showed that students from low-income families had less access to technology, but their perception of the usefulness of technology for learning was not significantly different from that of students from high-income families.

Table 16. *Significant difference on the perceived impact of using gadgets when grouped according to respondents' gadgets being used*

Groups	*N*	*Median*	*df*	*P - value*	*Significant Level*	*Decision*
cellphone	51	3.33	3	0.781	0.05	Accept Ho
computer	1	3.00				
laptop	6	3.63				
tablet	2	3.10				

Based on Table 16, the Kruskal Wallis H test produced a calculated P-value of 0.781. To determine whether to accept or reject the null hypothesis, the critical value was computed using a significance level of 0.05 and 3 degrees of freedom, resulting in a value of 7.815. Since the calculated H-value is lower than the critical value with a P-value of 0.718, the null hypothesis is accepted. This implies that there is no substantial difference in how senior high school students perceive the impact of using gadgets, regardless of their gadget type. Even though the medians of different groups may vary, the differences are not significant enough to reject the null hypothesis. These findings suggest that students who use various types of gadgets have similar opinions regarding the effectiveness of gadgets as a learning tool.

Suh and Lee (2021) conducted a study examining the correlation between high school students' use of mobile devices and their academic achievement. The study revealed that there was no notable difference in academic achievement among students who used smartphones, tablets, or laptops as learning tools. Huang et al. (2019) also investigated the effects of different device types on student engagement and learning outcomes in a blended learning environment. The findings showed that students who used laptops, tablets, or smartphones did not show significant differences in engagement or learning outcomes. Similarly, Baturay and Ergün (2019) conducted a study exploring the effects of different technology devices on high school students' academic performance and motivation. The results indicated that there were no noteworthy differences in academic performance or motivation among students who used laptops, tablets, or smartphones as learning tools. These studies provide additional support for the idea that the type of device used by students may not have a substantial impact on their learning outcomes or perceptions of the effectiveness of gadgets as a learning tool.

To summarize, the results indicate that there are no notable differences in how various demographic groups perceive the impact of using gadgets for learning, including age, sex, strand, family income, and type of gadget. However, there is a significant difference when students are grouped according to grade level, with Grade 12 students perceiving the use of gadgets as a more effective learning tool than Grade 11 students, as indicated by a higher median score.

To support the current study's findings, Jusoh and colleagues' (2019) research article investigated the effects of mobile devices on secondary school students' learning. They found that age, gender, and socio-economic background did not significantly affect students' perceptions of the effectiveness of mobile devices. However, their study did not consider the impact of grade level on students' perceptions.

In another study by Sabir and colleagues (2021), Pakistani university students' perceptions of using smartphones for learning were examined. The study found no significant differences in students' perceptions based on their gender or academic discipline, but other demographic factors such as family income or type of gadget used were not explored.

These studies provide evidence to support the notion that demographic factors have no significant influence on students' perceptions of the effectiveness of using gadgets for learning. Nonetheless, further research is required to investigate the effect of grade level on students' perceptions, as suggested by the present study.

Conclusions

Based on the findings, the following conclusions are derived:

Most of the respondents are female

The researcher concluded that the learners-respondents know using the gadgets as their tools for learning at school works.

The learner-respondents know the meaning of the gadgets and how to use it in their learning. The impact of using gadgets as perceived

learners is Fairly Agree.

The demographic factors have no significant influences on learner's perception of using gadgets for learning. the perception of the respondents when grouped according to profile does not vary.

To the School Administrators, they may provide different intervention strategies to learners to be more engaged in learning using the technology.

To the Parents, they may continue to guide their children on how to use the gadgets in moderation at home.

To the Teachers, they may conduct a follow-up study to investigate further the impacts of gadgets as tools for learning using the different intervention strategies to be more engaged in learning using the technology.

To the learners, they may continue to learn using gadgets in moderation as tools for learning to get an idea and information presented by the teacher.

To the Future Researchers, they may conduct a similar study and improve some flaws in using gadgets as tools for learning.

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