

## Effect of Using Gadget in the Learning of the Students of Toribio Minor National High School, Margosatubig District

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### ABSTRACT

The effect of level of using gadgets in the learning of the students can have a positive and negative effects on their academic performance depending on how it is utilized and managed by both the students and educators. This study generally aimed to determine the effect of level of using gadget and level of learning on gadget of the students at Toribio Minor National High School. This descriptive survey generally aimed to determine the level of effect using gadget and level of learning on gadget among students of Toribio Minor National High School. A total of 30 students-respondents per grade level from Grade 7 to 12 were randomly chosen as the respondents, having a total of 180 respondents who were systematically surveyed using a semi-structured questionnaire. Based on the gathered data, the respondents are dominated by female (65%) compared to the male (35%). In terms of level of effect and level of learning, among the six grade levels, Grade 11 has the highest mean level of effect of  $3.90 \pm 3.09$  (Some Impact) and level of learning  $3.51 \pm 2.99$  (Some Impact). Grade 8 has the lowest mean level of effect of  $2.96 \pm 2.71$  (Little Impact), while grade 9 has the lowest mean level of  $3.04 \pm 2.77$  (Some Impact). Positive and significant weak relationship was found between the level of effect and learning ( $r=0.17896$ ,  $p=0.0895$ ). This implies that with the increase or decrease. The significant yet weak relationship ( $r=0.17896$ ,  $p=0.0895$ ) of the two levels could imply that with the increase or decrease of the level of effect and learning in former area, the level of effect and learning of the latter area is not significantly affected. This study highlights the importance of level of effect using gadget and level of learning on gadget of the students.

**KEYWORDS** - positive and negative effects, digital distraction, academic performance, addiction, learning styles.

### 1. INTRODUCTION

The widespread use of modern technology had generated a great deal of interest around the world. The reliance of people on these technological gadgets and services had become so great that, without them, they would be unable to achieve their full potential (Biswal, 2014). People relied heavily on electronic devices in our day-to-day lives. Even though they were designed to improve our lives in the first place, it was undeniable that many gadgets had negative effects and had an impact on our quality of life in some way. Brown (2005) said that in today's world, people couldn't live without them, and since they were now considered a necessity, they needed to find ways to lessen their negative effects.

The increasing use of electronic devices and media had a profound effect on our daily lives. The mobile phone industry had seen a rapid expansion in the past five years, with densities increasing dramatically. The adolescent population was using mobile phones more often than ever before. This was due to the increasing relevance of this technology as adolescents developed (Suman et al., 2018). Today, all the academic resources were available online, which was more convenient and flexible than books because a gadget only required network and storage space. This was not a matter where if we wanted to refer to a book we needed resources like space, medium, and availability (Edamana et al., 2019).

Societies' educational systems had recently changed as a result of advances in science and technology. The educators of science had additional responsibilities as a result of the growing significance of skilled individuals not only as users of knowledge but also as producers of knowledge (Gonen et al., 2006). One of the most important things we relied on in the new millennium was gadgets. They were being used more frequently than ever before by the younger generation. Our current generation was appropriately referred to as the "multimedia

generation" due to their obsession with gadgets many of them own multiple devices. They used iPods, mobile phones, video games, and other devices for a significant portion of their day (Nadar, 2022).

Each of us relied heavily on information technologies in our daily lives. Every year, the number of people using gadgets rose rapidly. Everywhere you looked, there were more and more students who couldn't imagine learning without the latest technology. In addition, people were more aware of the significance of modern education and technology knowledge the faster the modern world changed (Bayanova et al., 2019).

For instance, in the Philippines, a Southeast Asian country educational system made a big shift from face-to-face to online classes during the pandemic in 2020, exposing students to too much technology and computer screens. Literature had shown over the years that smartphone addiction and stress eventually affected a person's holistic well-being. There were numerous campaigns and studies on mental health in the Philippines, but little was known about the extent to which this pandemic affected it. (Molina et al., 2021). From elementary to collegiate education, the education system was moving toward the use of technology in the classroom at this time. As a result, educators must recognize that today's students were very different from those who were a generation ago. It was preferable to incorporate the use of smartphones into the teaching and learning process for today's generation. Given that this device had already been utilized by students, it was intriguing to use it as one of the instructional materials that teachers could utilize. Because students already had an interest in using the device, it would be simple for teachers to incorporate it into an instructional resource (Apuke & Iyendo, 2018).

The students' used of smartphones in the classroom had come with both advantages and disadvantages (Rodriguez, 2015; Ifeanyi & Chukwuere, 2018; Mohammadi, Sarvestani, & Nouroozi, 2020). Due to poor infrastructure, a lack of qualified teachers, and inadequate guidance, the Philippines' adoption of educational technologies in secondary education had not been particularly fruitful. The country had a lot of schools that were stuck in the industrial era and constantly fell behind in the digital era. Nevertheless, as one of Asia's youngest demographics (GSMA intelligence, 2014). Parental involvement could be a positive or negative impact on a child's ability to succeed in high school and college. Because they were the ones who introduced the family members to the outside world, including academics, they played a significant role. The amount of parental involvement in a child's education and life was referred to as parental involvement e (Erlendsdóttir, 2010).

The gadgets had an impact on students lived beyond just academics as part of modern technology, online games were becoming increasingly popular, and students had made them part of their daily routine. Due to the variety of behaviors that affect players in a variety of ways and had an impact on their academic performance, online games had presented a number of challenges for students, ranging from their academic behavior to constantly altering their personality in a positive or negative way (Aviso et al., 2020). Online games had presented a number of challenges, from students' academic behavior. Because of this, a number of studied asserted that online gaming had both positive and negative effects. Players could use online games to unwind or relieve stressed, but some of them were overstressed while playing (Maderazo et al., 2020).

Online gaming, social media sites liked Facebook, Twitter, and YouTube, as it continued to expand, it became ingrained in everyone's daily routine, particularly college students. Students' reliance on social media had reached such an extreme leveled that they were unable to considered their growth without it. As a result, every student's reliance on social media was now leading to addiction (Agustino et al., 2020). Online game addiction was recognized as a mental health condition by the world health organization. In the Philippines, excessive online gaming was on the rose. Depression was also becoming more common in the country (Labana et al., 2020). Hence, this study was conducted to determine the effect of using gadget in the learning of the students of Toribio Minor National High School.

## 2. METHODS

### Research Design

This study was a quantitative approach in nature. Specifically, a descriptive-survey method was used in this study. This study used the descriptive method of the survey type of research which describes and interpreted data and characteristics about the population or phenomenon being studied.

### Research Environment

This study was conducted in the Municipality of Margosatubig Zamboanga del Sur, specifically, at Toribio Minor National High School. This particular school has an enrollment of about 1576, a total of 53 teachers are

currently employed in the referred school. Based on the preliminary interview, there are a lot of students who are using gadget at Toribio Minor National High School.

### **Research Respondents**

A total of one-hundred eighty (180) high school students chosen as participants of this study. The selection of the participants based on the solvin's formula, the participants composed of grade 7-12 high school students of Toribio Minor National High School in Gabay, Poblacion Margosatubig Zamboanga del Sur.

### **Sampling Technique**

Specifically, there are two sampling techniques utilized in this study; cluster and stratified sampling techniques. Cluster sampling technique used, so that the researcher determined the numbers of participants in every grade level. Stratified sampling technique also been used, so that the researcher identified the numbers of participants in every section of each grade level.

### **Research Instrument**

Primarily data in terms of the level of effects of using gadgets and level of learning of the student of the Junior and Senior High School departments used to determine the effects of level of using gadgets and level of learning of the students at Toribio Minor National High School (TMNHS). The data were gathered by using a quantitative method, specifically a structured questionnaire. The researcher used two methods, specifically a modified one and one the researcher made in constructing the questionnaire. The questionnaire specifically determined the level of knowledge and awareness on using gadgets among students. However, the questionnaire modified by the researcher, who also included some level indicators for measured the level of knowledge and awareness on effects of used gadgets. In this research, there are two ways of collecting the level of effects of using gadgets and level of learning of the students. For the level of effects of using gadgets, it includes very little impact, little impact, some impact, significant impact, and very significant impact. On the other hand, for the level of awareness, it contains never, very rarely, rarely, frequently, and most frequently. However, considering the health threats of covid-19, mandatory basic covid-19 health protocols had been observed by the researcher during the data collection. Thus, the researcher would utilize Google forms as survey materials that had been distributed through various means, such as email and messenger, to the respondent.

### **Data Gathering Procedures**

The following processes were undertaken that enabled the researcher to gather the data needed in the study. First, the researcher secured permission from the principal of Toribio Minor National High School to conduct this study through a letter-request duly signed by the researcher and research adviser. After securing a permit, the researcher asked from the class advisers for the respondents regarding the list of students in Grade 12. Then, the researcher first met the class advisers for the assurance of the availability of the students. The researcher asked from the students if they are online gamers. If the students are online gamers, they were selected as respondents in this study. Rest assured that the names of the students and the advisers were kept confidential. The field sampling was done for three months (April to June, 2019).

### **Ethical Considerations**

A permission letter approved by the school principal was obtained by the researcher. During the conduct of sampling, the research respondents were asked to sign the consent form to signify their voluntary involvement of the study. The researcher took time to explain to the respondents of their right as participants of the study, as such they can stop or refuse to answer some questions should they feel offended or threaten.

### **Statistical Analysis**

The obtain data from the demographic profile of the respondents were computed in terms of its frequency and percentage. Meanwhile, the quantitative data on the effects of level of using gadget and the level of learning of the students were taken and computed together in terms of its mean and standard deviation using Microsoft Excel version 2010 by following a certain formula that was input in the software in getting the mean and standard deviation. These data were further subjected to statistical analysis. Moreover, Pearson's correlation analysis utilized to determine the significant relationship in the effects of level of using gadget and level of learning of the students. The analysis was tested at  $\alpha=0.05$  using Paleontological Statistics Software version 3.17.

## **3. RESULTS AND DISCUSSION**

Toribio Minor National High School is a Department of Education managed partially urban Secondary Public School located in Gabay, Poblacion, Margosatubig, Zamboanga del Sur. Results of the demographic profile of

the students in Toribio Minor National High School are presented in Table 2 in terms of age (in years), sex and grade level. Based on the gathered data the students in Toribio Minor National High School who participated in the study are dominated by female (65%) and male (35%).

The majority of the students are of age ranging from 13-14 years old (33.3%) and the lowest number of respondents being, 11-12 years old was (7.2%), most of the respondents were female (65%). Looking into the age range of the respondents, (33.3%) of the respondents have an age range of 13-14 years old, and (32.2%) of the respondents have an age range of 15-16, followed by an age range of 17 years old above (27.2%). On the other hand, the presence of respondents with the age of 11-12 years old attributed to the fact that there were also 13 number of respondents (7.2%) who participated in this study.

Table 1. Demographic profile of the respondents at Toribio Minor National High School ( $n=180$ ).

Category	Subcategory	Number of Respondents	Percentage (%)
Age	11-12 years old	13	7.2%
	13-14 years old	60	33.3%
	15-16 years old	58	32.2%
	17 years old above	49	27.2%
Sex	Male	63	35%
	Female	117	65%
Year Level	Grade 7	30	16.6%
	Grade 8	30	16.6%
	Grade 9	30	16.6%
	Grade 10	30	16.6%
	Grade 11	30	16.6%
	Grade 12	30	16.6%

Herein, the level of effect of using gadget on this curriculum was determined. Table 2 shows the mean level of effect of using gadgets among students at Toribio Minor National High School, Margosatubig, Zamboanga del Sur. The highest mean was  $3.16 \pm 2.89$  with the verbal interpretation of some impact. On the other hand, the lowest mean was  $2.96 \pm 2.71$  with verbal interpretation of little impact.

Students become verse and more oriented towards the different features and applications that each smartphone is able to often (Noorhidawati et al., 2015). Technological advances can have both positive and negative effects on students. If technology is used properly, there can be many benefits (Azwar et al., 2022). One study by (Widiastuti et al., 2022) found that there was an effect of using gadgets on changes in student's study habits. Though they may not be the only cause of health issues among students, electronic devices do significantly contribute to a number of mental and physical health concerns, including obesity and sleep disorders. Disordered behavior, ocular abnormalities, and so forth (Zakiyah, 1991).

By framing the discussion from the perspective of the technology effects, the students are too obsessing with games and applications in mobile devices such as the gadgets this will also affect the focuses of their learning while in class. They will keep remembering devices connected. In terms of interaction and communication, on the other hand, the students will become even more introverted, less patient, and poor interpersonal and interpersonal communication skills (Siti A'ishah, 2014). Tapia et al. (2022) states that online learning delivery, which relies on gadgets and internet access, is favored by students who have these resources. However, not all students may have equal access to gadgets and the internet, which can result in disparities in the level effect.

Table 2. Mean level of effect of using gadget among students of Toribio Minor National High School, Margosatubig, Zamboanga del Sur.

Grade Level	Level of Using Gadget (Mean ± SD)	Interpretation
Grade 7	3.16±2.89	Some Impact
Grade 8	2.96±2.71	Little Impact
Grade 9	3.10±2.80	Some Impact
Grade 10	3.16±2.89	Some Impact

**Verbal Interpretation:**

1.0-1.99-	Very Little Impact
2.0-2.99-	Little Impact
3.0-3.99-	Some Impact
4.0-4.99-	Significant Impact
5.0 above-	Very Significant Impact

The mean level of learning of using gadget was determined. Table 3 shows the mean level of learning of using gadgets among students at Toribio Minor National High School, Margosatubig, Zamboanga del Sur. The highest mean was 3.19±2.92 with the verbal interpretation of Some Impact. On the other hand, the lowest mean was 3.04±2.77 with verbal interpretation of Some Impact.

The use of technology-enhanced learning materials, such as instructional videos or augmented reality applications, can support the learning of specific skills and increase students' knowledge levels and confidence (Egilsdottir et al., 2022; Mukhtarkyzy et al., 2022). It is important to note that the effectiveness of gadget use in learning depends on how it is used (Azwar et al., 2022). Technology devices may affect the learning performance of the students in negative result if they failed to use property those devices in a right way (Mayer et al., 2008).

When using technology for too long, it is widespread practice to utilize books to discourage pupils from learning (Sari and Mitsalia, 2016). The explanation above shows that there is explanation of using gadgets and students' social behavior, senior high school equivalent, Behavior is the same as behavior, the word behavior is defined as a form of attitude, and a person's inner attitude is done consciously (Zakiyah, 1991).

Not surprisingly, learning with mobile device become widespread globally, and would eventually integrate with mainstream education in the near future (Unesco, 2013). Considered a disorder characterized by difficulties in self-regulation, mindful awareness training maybe considered a tool of enhancing self-regulation.

Table 3. Mean level of learning using gadget among students of Toribio Minor National High School, Margosatubig, Zamboanga del Sur.

Grade Level	Level of Using Gadget (Mean ± SD)	Interpretation
Grade 7	3.17±2.88	Some Impact
Grade 8	3.05±2.82	Some Impact
Grade 9	3.04±2.77	Some Impact
Grade 10	3.19±2.92	Some Impact

**Verbal Interpretation:**

1.0-1.99-	Very Little Impact
2.0-2.99-	Little Impact
3.0-3.99-	Some Impact
4.0-4.99-	Significant Impact
5.0 above-	Very Significant Impact

The data on the level of effect and learning per area were further subjected to statistical analysis using Pearson's Correlational Analysis to determine the relationship between the level of effect of using gadget and level of learning using gadget among students in Toribio Minor National High School. As presented in Table 4 below, positive and significant weak relationship was found between the level of effect and learning of the students ( $r=0.17896$ ,  $p=0.0895$ ). This implies that with the increase or decrease in the level of effect and learning, both levels are were significantly affected, either significantly increase or decrease. The significant yet weak relationship ( $r=0.17896$ ,  $p=0.0895$ ) of the two levels could imply that with the increase or decrease of the level of effect and learning in former area, the level of effect and learning of the latter area is not significantly affected.

Table 4. Pearson Correlation results on the relationship in the level of effect of using gadget and level of learning using gadget of the students.

**Note:** Pearson's Correlation Coefficient ( $r$ ), Strong relationship ( $r > 0.70$ ), Moderate relationship ( $r > 0.50$ ), Weak relationship ( $r < 0.50$ ), shows significant relationship ( $p < 0.05$ ).

#### 4. CONCLUSION

This study was able to determine the significant relationship between the level of effect of using gadget and level of learning of the students. Based on the results of research and discussion, Grade 10 has the highest mean level of effect using gadgets and level of learning using gadget. In terms of level of effect using gadget Grade 8 has the lowest mean level and Grade 9 has the lowest mean level in terms of level of learning using gadget. Use gadget selectively and purposefully encourage students to use gadgets during learning activities. For instance, gadgets can be used to research information, enhance comprehension through interactive tools, or facilitate note-taking. However, excessive and indiscriminate use of gadgets may lead to distraction and reduce learning outcomes. Monitor gadget use and provide guidance parents and educators should monitor students' gadget use and provide guidance to help them develop healthy and productive gadget habits. It is recommended that educators establish clear guidance on gadget use in class and communicate those to students and parents. Encourage moderation in gadget use to avoid overuse and potential negative impacts, such as reducing attention span, increase stress, and sleep impairments. Overall, a balance and responsible approach to gadget use in learning can help to optimize learning outcomes and support healthy gadget habits for students.

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