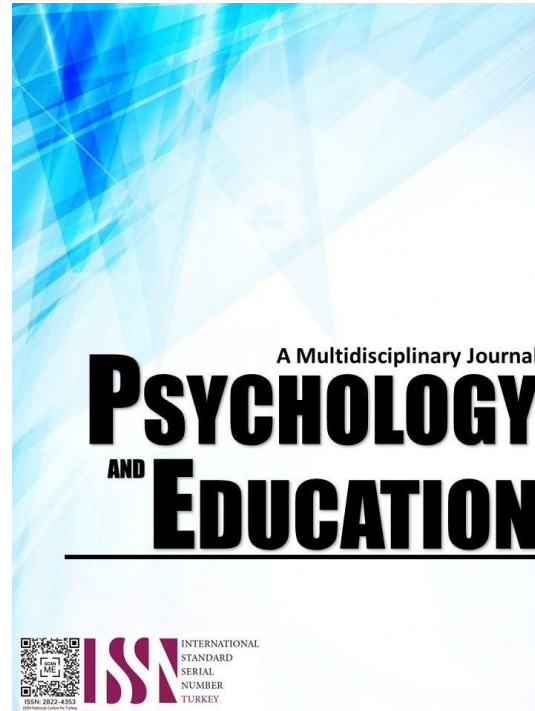


# LEVEL OF UNDERSTANDING ON PLAYING COMPUTER GAMES AND ACADEMIC PERFORMANCE OF LEARNERS



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## Level of Understanding on Playing Computer Games and Academic Performance of Learners

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### Abstract

In modern society, computers have become almost a non-negotiable part of every individual's life. Then this is bound to have both positive and negative consequences on people. Because of this many young children and individuals anywhere can become addicted to playing such games online and offline gaming. It became a huge distraction to the academic performance of the learners by being addicted to computer games. The main goal of this study was to determine the level of understanding on playing in computer games and academic performance of learners in Sultan Palao Ali Memorial Elementary School, SPAMES (127217), Tagoloan District, Division of Lanao del Norte. The study used descriptive-correlational research design. Descriptive research determined the profile of elementary learners of Sultan Palao Ali Elementary School located at Barangay Inagonan, Tagoloan Lanao, Del Norte and the level of understanding on playing in computer games and the academic performance of the respondents. Based on the results of the study, most of the learners at Sultan Palao Ali Elementary School, Tagoloan District, Division of Lanao del Norte, were age ranges from 11 – 13, females and in satisfactory level as to their academic performance. In the level of understanding of playing computer games of the respondents, among the indicators of the level of understanding, the indicator "Playing computer games can enhance the accuracy/speed of my hands), got the highest mean score which can also be interpreted in the agreed level, while the indicator "Playing computer games can increase my empathy and supports my mental well-being) garnered the lowest mean of 1.80, which can be interpreted in the disagreed level in which the respondents believed that playing computer games negatively impacted their health. Further, in correlation, the null hypothesis, which states that there is no significant relationship between academic performance and profile in terms of age, was not rejected, while sex was rejected. At the same time, the null hypothesis, which states that there is no significant relationship between academic performance and the level of understanding of playing computer games, was also rejected. Furthermore, in the regression analysis, the null hypothesis stating that "there is no variable/s best predict the academic performance" was rejected.

**Keywords:** *playing computer games, academic performance, computer games addiction*

### Introduction

In modern society, computers have become almost a non-negotiable part of every individual's life. Then this is bound to have both positive and negative consequences on people. It can be said without a doubt that using a computer has many benefits. However, these days individuals are developing a psychological condition known as computer dependence. Computer dependence can be described as a psychological condition in which an individual uses a computer excessively and impulsively. This behavioral pattern persists even after an individual might face negative consequences in his or her personal, occupational, or social functions. Because of this many young children and individuals anywhere can become addicted to playing such games online and offline gaming. It became a huge distraction to the academic performance of the learners by being addicted to computer games.

Computer games are more likely to be popular entertainment in new generation of societies and they target different people of different ages. The addiction to the rivalry and excitement of the games makes them the most common entertainment programs for today's children so they do anything to get a higher level of the game, they engage in the game so much that they were completely separate from their surroundings. Challenging the obstacles and reaching a higher level in the game, make the players excited, and losing the game make them anxious. This affects their attention with their school-assigned paper works at home and distracts them inside and outside the school. They rely on their classmates' answers, and instead of doing their assignments, they just play games. Getting back their interest in studying, the researchers would like to gather investigation and analyze better things to apply for them to be more capable and interested in their schooling (Clark, 2018).

The emergence of electronic and computer games poses a significant risk to the younger generation, potentially resulting in psychological ailments and depressive tendencies among this demographic. Historically, children engaged in social play with their peers. However, contemporary children devote a significant portion of their time to computer games once they become familiar with them. Regrettably, these games do not foster emotional or interpersonal connections. The allure of computer games among children has been found to be associated with a range of negative outcomes, including mental, physical, and social difficulties. The aforementioned consequences include the provocation of aggression and hostility, the promotion of excessive weight gain, the potential for epileptic seizures resulting from gameplay, social detachment, and various other forms of physical and psychological harm. The impact of these games has garnered significant attention from psychologists and mental health professionals. The growing prevalence of computer games among young learners has prompted numerous researchers to acknowledge the impact of these games on children who engage with them. Several research studies have been conducted to investigate the impact of computer games on individuals who engage in them. The current study was undertaken to examine the impact of computer game addiction on the physical and mental well-

being of children, as well as its potential influence on their academic achievement, in light of the rising prevalence of this phenomenon.

The Department of Education issued a memorandum No. 093 series of 2022, enjoying all offices and schools to join the observance of the 2022 National Mental Health Month. By joining the observance, DepEd brings together stakeholders and enjoins them to take part in ensuring the mental health and well-being of all personnel, learners, and others concerned both in schools and physical workspaces and online (DepEd, 2022).

As an effective teacher, all the possible skills for grade five and six learners must be mastered as much as possible. The researchers then made a solution and promote such as video games activities for the children and more exercises to promote good motor skills, educate the children on the risks that they can earn in this addiction to games, and let them know the importance of moderation. As a leader and a coach to them, the role of the teacher is to guide and protect the learners on their possible health risks and teach moderation habits. Good interaction between the teacher to her learners would be a great achievement and help to the learners.

The intent of this study was to promote more evidence-based instructional practices of skills activities inside the school and engaged them outside particularly at home to increase positive academic performance outcomes for the learners. Integrate evidence based on the skills that a teacher will impose to help moderate the exposure to computer games, the levels of gaming addiction and mental health, and the relationship between computer gaming addiction and how it affects the academic performance of learners.

The main goal of this study was to determine the level of understanding on playing in computer games and academic performance of learners in Sultan Palao Ali Memorial Elementary School, SPAMES (127217), Tagoloan District, Division of Lanao del Norte. This study was conducted in the 2nd quarter of the school year 2022-2023. The researchers is in the nine years of service and has taught kinder and grade one level and currently assigned as District Schools' Informational Communication Technology (ICT) Coordinator. She has an eagerness to learn and make proper appropriate adjustments for learners of different personalities and backgrounds by proposing to use some activities and strategies for the sake of the learners' need in improving their academic performances also the researchers wanted to have fulfillment in her career in which she can contribute to the educational system.

## Research Questions

This study aimed to determine the level of understanding on playing computer games towards the academic performance among Grade five and Grade Six Learners from Sultan Palao Ali Elementary School, SPAMES (127217), Tagoloan District, Division of Lanao del Norte in the 2nd quarter of School Year 2022-2023. Specifically, the study sought to answer the following questions:

1. What is the profile of the respondents in terms of:
  - 1.1 age; and
  - 1.2 sex?
2. What is the respondents' level of understanding on playing computer games?
3. What is the academic performance of the respondents during the second quarter of the school year 2022-2023?
4. Is there a significant relationship between the respondents' academic performance and the profile?
5. Is there a significant relationship between the respondents' academic performance and the level of understanding on playing computer games?
6. Which of the respondents' profile and level of understanding variables best predict academic performance?

## Methodology

### Research Design

The study used descriptive-correlational research design. Descriptive research determined the profile of elementary learners of Sultan Palao Ali Elementary School located at Barangay Inagonan, Tagoloan Lanao, Del Norte and the level of understanding on playing in computer games and the academic performance of the respondents. It was also a correlational design since it tried to establish the relationship between the respondents' profile, the level of understanding in playing computer games and their academic performance.

### Respondents

This study was conducted in Sultan Palao Ali Memorial Elementary School-SPAMES (School ID: 127217) located at Inagugangan, Patag, Tagoloan, Lanao Del Norte. There were 57 pupils in Grade 5 and 58 pupils in Grade 6 with total of 115 Elementary students' learners who are officially enrolled during the school year 2022-2023. The researchers chose 100 respondents out 115 officially enrolled learners. In choosing the respondents, the researchers used simple-random sampling to determine the sample and actual respondents.

Simple random sampling is a probability sampling method where researchers randomly choose participants from a population. All population members have an equal probability of being selected. This method tends to produce representative, unbiased samples. It helps ensure that the sample mirrors the population. The process proportionately samples from larger subpopulations more frequently than smaller subpopulations (Frost, 2023).

The researchers chose the students in Sultan Palao Ali Memorial Elementary School-SPAMES (127217) because the researchers

wanted to know their level of understanding in playing computer games and its effect of their academic performance and the intervention that could be possible to do.

### Instruments

The researchers used the students' questionnaire data and survey together with the academic grades of the learners for the school year 2022-2023. The data was based also through questionnaire method of selected respondents about the level of understanding in playing on computer games towards their academic performance of Sultan Palao Ali Memorial Elementary School-SPAMES (School ID: 127217), Tagoloan District, and Division of Lanao del Norte.

The questionnaire for the survey and data gathering has two parts. The researchers was eager to find the solutions for this said problem. The first part was the demographic profile of the respondents in terms of age and sex. The second part was on the academic performance of the respondents, and the last part was on the respondents' level of understanding on playing computer games. The questionnaire was translated into Meranao for better understanding of the respondents.

The questionnaire was adapted and undergone reliability analysis. Reliability analysis of the research scale reliability analysis indicates the extent to which the questions asked in the questionnaire research relate to each other, their consistency, and the scale used reflects the problem of interest. The purpose of reliability analysis is to measure the randomness of the data. If the answers to the questionnaire are randomly distributed, it is decided that the survey results are reliable. Reliability analysis is used to test the reliability, coincidence, and consistency of the selected sample. It is decided according to Cronbach's Alpha ( $\alpha$ ) whether or not the result is reliable (Hasbay & Altindag, 2018).

Table 1 presents the reliability analysis of variables. The result shows that the questionnaire consisted of 30 questions on the level of understanding on playing computer games with a Cronbach Alpha value of 0.863 which indicated that all questions were reliable. The threshold value in the literature is much higher than 0.700. This implied that the participating respondents understood the research questions, and similar questions are answered in the same direction.

Table 1. *Reliability Analysis of Variables*

<i>Variables</i>	<i>Number Of Questions</i>	<i>Cronbach Alpha</i>	<i>Interpretation</i>
Level of Understanding	30	0.863	<i>Reliable</i>

### Procedure

The researchers personally visited the selected school covered in the study. The proponent also requested somebody to assist her in the administration and the retrieval of the questionnaires to facilitate the gathering of data. Permissions to conduct the study was obtained from the higher authority, the School Principal. Since the researchers is one of the teachers in this particular school, the said survey questionnaire was distributed after the class session. During the distribution of the questionnaire to the respondents, the researchers further explains the importance and mechanics of how to answer some parts of it. Confidentiality of their answers were assured by the researchers.

### Data Analysis

The data were tabulated and interpreted to acquire the actual information needed. The following statistical tools were used in the treatment and analysis of data: Problem 1, Frequency count and Percentage were used in determining the profile and the academic performance of the respondents. Problem 2, Mean and Standard deviation will be used in determining the level of understanding of playing computer games. Problem 3, Pearson r Correlation and Chi-squared Test were used to determine the relationship between the academic performance, profile, and level of understanding of playing computer games. Problem 4, Regression was used to correlate between the academic performance, profile, and level of understanding of playing computer games and the best predictor variable/s.

## Results and Discussion

### Problem 1: What is the profile of the respondents in terms of age and sex?

Table 2. *Age of the Respondents*

<i>Age (in Years)</i>	<i>Frequency Count</i>	<i>Percentage (%)</i>
10 years old and below	11	11.0
11 – 13 years old	84	84.0
14 – 16 years old	3	3.0
17 years old and above	2	2.0
Total	100	100.0

Table 2 presents the age of the respondents. As depicted in the table, the age ranges from 11 – 13 got the highest frequency count with 84 (84.0%), while 17 years old and above got the lowest count with 2 (2.0%). This implied that most of the learners in Grade 5 and Grade 6 of Sultan Palao Ali Memorial Elementary school were in their early adolescence stage. According to Kim, Pope, and Romito

(2021) the ages 11 through 14 years are often referred to as early adolescence. These years are an exciting time of many varied and rapid changes. The child grows taller and stronger and also starts to feel and think in more mature ways.

Table 3. *Sex of the Respondents*

<i>Sex</i>	<i>Frequency Count</i>	<i>Percentage (%)</i>
Male	47	47.0
Female	53	53.0
Total	100	100.0

Table 3 displays the sex of the respondents. The result showed that females got the highest count, with 53 (53.0%), while males got the lowest count of 47 (47.0%). This implied that the majority of the enrollees were female. In the report of Reysio-Cruz (2019) that Filipino women are enrolled in schools at significantly higher rates than men, according to an annual report that measures gender equality in 153 countries. The 2020 Global Gender Gap Report of the World Economic Forum (WEF) found that 71.3 percent of women are enrolled in secondary education and 40.4 percent in college, compared to only 60.2 percent and 40.4 percent, respectively, among men. It also observed that enrollment rates in primary education were roughly identical, with 93.9 percent of girls and 93.7 percent of boys enrolled.

### Problem 2: What is the respondents' level of understanding on playing computer games?

Table 4. *Respondents' Level of Understanding on Playing Computer Games*

<i>Indicators</i>	<i>Mean</i>	<i>±</i>	<i>SD</i>	<i>Description</i>
<i>Playing computer game. . .</i>				
1. is one way to increase my computer literacy.	2.46	±	0.94	Disagree
2. helps me to become more creative and imaginative.	2.73	±	0.81	Agree
3. can enhance the accuracy/speed of my hands.	2.78	±	0.89	Agree
4. can enhance my analytical thinking.	2.68	±	0.94	Agree
5. makes me wiser.	2.08	±	1.02	Disagree
6. can learn new strategies that are helpful in my studies.	2.43	±	0.96	Disagree
7. can increase my self-confidence and self-esteem.	2.49	±	0.95	Disagree
8. gives me a feeling of happiness and well-being.	2.70	±	0.99	Agree
9. can stimulate calm and gentleness.	2.10	±	0.81	Disagree
10. supports positive communication with my family and friends.	1.83	±	0.66	Disagree
11. helps me to manage my time correctly.	2.12	±	0.82	Disagree
12. makes me motivated to study my lessons.	1.96	±	0.74	Disagree
13. is one way to develop my high level of thinking skills.	2.09	±	0.71	Disagree
14. develops my reading and math skills, reading direction, and quantitative analysis.	2.14	±	0.88	Disagree
15. develops my inductive reasoning.	2.45	±	0.91	Disagree
16. improves my ability to rapidly and accurately recognize visual information.	2.42	±	0.94	Disagree
17. can change my attitude through the character on the games.	2.28	±	1.01	Disagree
18. can improve my sense of sight.	1.83	±	0.79	Disagree
19. makes my vision more sensitive to different shades of color.	2.60	±	0.92	Agree
20. increases my empathy and supports my mental well-being.	1.80	±	0.77	Disagree
21. helps me to socialize with other students in person.	2.63	±	0.88	Agree
22. makes me enlighten the difference between reality and fantasy.	2.51	±	0.97	Agree
23. helps me to develop physical appearance, especially in postural, muscular, and skeletal.	2.05	±	0.90	Disagree
24. can help me to destress.	2.34	±	1.06	Disagree
25. can feel a sense of control when gaming.	2.22	±	0.93	Disagree
26. improves my technical skills.	2.37	±	0.87	Disagree
27. develops cooperation and teamwork.	2.65	±	0.94	Agree
28. improves my ability to do multitask.	2.19	±	0.90	Disagree
29. increases my mental flexibility.	2.03	±	0.81	Disagree
30. improves my ability to perform well in school.	2.13	±	0.91	Disagree
Weighted Mean	2.30	±	0.32	Disagree

Note: 3.25-4.00 Strongly Agree 2.50-3.24 Agree 1.75-2.49 Disagree 1.00-1.74 Strongly Agree

Table 4 presents the respondents' level of understanding on playing computer games. As seen in the table, results showed that the overall mean acquired by the respondents was 2.30. This can be interpreted that the respondents' level of understanding on playing computer games was in the disagreed level. The highest mean score acquired by the respondents was 2.78 (indicator 3. Playing computer games can enhance the accuracy/speed of my hands), which can also be interpreted in the agreed level. On the other hand, the lowest indicator (20 - Playing computer games can increases my empathy and supports my mental well-being) garnered a mean of 1.80, which can be interpreted in the disagreed level in which the respondents believed that playing computer games had a negative impact to their health.



In 2020, there were an estimated 2.7 billion gamers worldwide, and the number is still rising. This rise in the popularity of video games has led to a significant increase in people experiencing the negative effects of video games. Children's and adolescent's attractions to the computer games cause many mental, physical and social problems for them. Studies show that excessive gaming can lead to poor emotional regulation. Poor emotional regulation contributes to mood problems such as anxiety, depression, and aggression (Adair, 2020).

### Problem 3: What is the academic performance of the respondents during the 2nd quarter of the academic year 2022-2023?

Table 5. *Academic Performance of the Respondents*

Grading Scale	Frequency	Percentage (%)	Description
90 – 100	12	12.0	Outstanding
85 - 89	38	38.0	Very Satisfactory
80 - 84	50	50.0	Satisfactory
Total	100	100.0	

Table 5 presents the academic performance of the respondents. As depicted in the table, the grading scale from 80 - 84 got the highest frequency count with 50 (50.0%), while 90 - 100 got the lowest count with 12 (12.0%). This implied that half of the respondents were at a satisfactory level as to their academic performance. According to Magulod (2018) that in every school setting particularly in education institutions, the academic performance of students is an indicator of a quality learning experience. Academic achievement is measured in the form of students' remarkable scores across their subject courses and the display of learning outcomes.

### Problem 4: Is there a significant relationship between the academic performance and the profile of the respondents?

Table 6. *Relationship<sup>1</sup> Respondents' Academic Performance and their Profile*

Variables	Academic Performance		Remarks	Decision
	X <sup>2</sup> (df)	p-value		
Profile				
Age	7.038 <sup>ns</sup> (6)	0.317	Not Significant	Failed to reject H <sub>0</sub>
Sex	15.306 <sup>**</sup> (2)	<0.000	Significant	Reject H <sub>0</sub>

Note: 1 – based on Chi-squared Test \*\* - P < 0.01 \*\*\* - P < 0.001 ns – P > 0.05 \* - P < 0.05

Table 6 displays the relationship between the respondents' academic performance and their profile. The result showed that the respondents' academic performance had a significant relationship between their profile in terms of sex. Thus, the null hypothesis, which states that there is no significant relationship between the academic performance and their profile in terms of age was not rejected while sex was rejected.

Gender differences regarding internet users are a potential element that can affect the increase in Internet usage. Although several studies have been conducted to discuss this issue, online gaming seems to be predominant among males (Bouna-Pyrrou et al., 2015; Spilková et al., 2017; van den Eijnden et al., 2018). Compared to females, males typically spend more time playing online games and these findings have been observed in different countries, both in adults (Laconi et al., 2017) and in a sample of adolescents (Wichstrøm et al., 2019).

The quantitative analysis of Leonhardt & Overå (2021) shows that more boys than girls in all age groups spend an average of one hour or more per day playing video games on a computer or console. The gender difference varies between 40% and 54%, depending on age. At age 13, video gaming on computers and consoles decreased by about 20% in both genders. Gaming on smartphones and tablets shows small gender differences. Here, the greatest difference was at age 11, with 45% of boys and 32% of girls gaming for one hour or more on average.

### Problem 5: Is there a significant relationship between the academic performance and the level of understanding on playing computer games of the respondents?

Table 7 displays the relationship between the respondents' academic performance and their level of understanding on playing computer games. The result showed that the respondents' academic performance had a significant relationship between the level of understanding on playing computer games. Thus, the null hypothesis, which states that there is no significant relationship between academic performance and the level of understanding on playing computer games was rejected.

Table 7. *Relationship<sup>1</sup> Respondents' Academic Performance and the Level of Understanding on Playing Computer Games*

Variables	Academic Performance		Remarks	Decision
	r-value	p-value		
Level of understanding	0.014	0.036	Significant	Reject H <sub>0</sub>

Note: 1 – based on Pearson's Correlation \*\* - P < 0.01 \*\*\* - P < 0.001 ns – P > 0.05 \* - P < 0.05

In social life, online games also establish the value of social connectedness and enhance the sense of interaction (McClelland et al., 2011; Snodgrass et al., 2011; Oliver et al., 2016). Sublette and Mullan (2010, p. 20) argue that through online games "socialization may just shift in focus: while real-world relationships eroded for some players." It is further proposed that intimacy in games will also

extend to offline real life, and shared game experience will reinforce offline communication (Kim and Kim, 2017; Lai and Fung, 2019). MOBA games focus on personality development and teamwork in battle (Yang et al., 2014; Mora-Cantallos and Sicilia, 2018b). In other words, electronic space expands social communication to the virtual field and increases team cooperation consciousness, leading to diverse communication ways. Besides, in terms of learning, online games are proven to help students engage in learning activities (Iaremenko, 2017; Schenk et al., 2017; Calvo-Ferrer and Belda-Medina, 2021).

### Problem 6: Which of the profile and the level of understanding on playing computer games best predict the respondents' academic performance?

Table 8. Variable that best predict Respondents' Academic Performance

Indicator	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	78.676	3.197		24.610	0.000
Age	-0.012	0.769	0.001	-0.016	0.988
Sex	2.638	0.720	0.352	3.665	0.000
Level of Understanding	0.078	0.026	0.235	2.981	0.004
R = 0.353      R <sup>2</sup> = 0.124      F = 4.544      Sig. = 0.005					

Table 8 presents the variables that best predict respondents' academic performance. The respondents' academic performance was affected by the sex with  $\beta = 2.638$ ,  $t = 3.665$ , ( $p < 0.000$ ) and level of understanding with  $\beta = 0.078$ ,  $t = 2.981$ , ( $p < 0.004$ ). In addition, this implied that sex and the level of understanding were the predictors that affects the academic performance of the respondents.

The R<sup>2</sup> value of 0.124 implies that 12.4% of the variance in academic performance can be explained by sex and level of awareness. Hence, 87.6% of the respondents' academic performance difference can be attributed to other variables not included in the regression model. The regression analysis is significant, with an F-value of 4.544 with a corresponding p-value of 0.005. Therefore, the null hypothesis stating that "there is no variable/s best predict the academic performance the respondents" was rejected.

Dumrique and Castillo's (2017) study found that male individuals exhibit a greater inclination towards gaming as compared to their female counterparts. Additionally, the study observed that females tend to engage in games that necessitate participation of three or more players, such as League of Legends, Clash of Clans, and Crossfire, among others. The impact of engaging in online gaming on academic performance is not necessarily negative as individuals are able to exercise self-regulation and limit their participation accordingly. They know that they need to control themselves in order to function well in their class, that is why they only play games during vacation and weekends with a lot of time compared to when they have classes. Even though they play online games, they know how to socialize well, and they can perform very well when it comes to academic performance. However, it is inevitable not to play even for half an hour, especially when they are accustomed to it. Therefore, it is just a matter of discipline.

Further, Clark (2018) has written the different side of computer games on students' academic performance. She stated that by unleashing video games into the classroom, one can witness increased motivation, collaboration, and even a boost in academic performance. She has even cited numerous notable studies to support her claim and enumerated five impacts that video games have on academic performance. The first is video games can foster cooperation; second, they have cognitive benefits; third, they can increase academic motivation; fourth, they can improve educational mindset; and lastly, they can positively affect cognitive and social health.

In contrast, according to Noreen (2013), the excessive use of the Internet can adversely affect one's physical health, family life, and academic performance. Various academic problems have been caused by Internet addiction of which include the following: a decline in study habits, missing classes, significant drop in grades, poor integration in extracurricular activities and increased risk of being placed on academic probation. Other than this, Internet addicted adolescents often suffer from severe psychological distress, such as depression; compulsivity; anxiety; fear that life without Internet would be boring, empty, and joyless; feeling of self-effacement; as well as feeling of loneliness and social isolation.

## Conclusion

Based on the results of the study, the following conclusions are drawn: Most of the learners at Sultan Palao Ali Elementary School, Tagoloan District, Division of Lanao del Norte, were age ranges from 11 – 13, females and in satisfactory level as to their academic performance. In the level of understanding of playing computer games of the respondents, among the indicators of the level of understanding, the indicator "Playing computer games can enhance the accuracy/speed of my hands", got the highest mean score which can also be interpreted in the agreed level, while the indicator "Playing computer games can increase my empathy and supports my mental well-being) garnered the lowest mean of 1.80, which can be interpreted in the disagreed level in which the respondents believed that playing computer games negatively impacted their health.

Further, in correlation, the null hypothesis, which states that there is no significant relationship between academic performance and profile in terms of age, was not rejected, while sex was rejected. At the same time, the null hypothesis, which states that there is no significant relationship between academic performance and the level of understanding of playing computer games, was also rejected. Furthermore, in the regression analysis, the null hypothesis stating that "there is no variable/s best predict the academic performance" was rejected.

According to Ahmad and Jaafar (2012), computer games, an example of an application system, must provide ideal environments for research in artificial intelligence where complex stimuli and various dynamic agents are used. In addition, computer games provide basic interactive cognitive models. However, the integration of computer games in the learning process needs to be viewed from a positive angle. Designing computer games embedded with learning elements is not an easy task but is an approach perceived to help pupils understand their tasks efficiently. Besides enjoyment, pupils are able to gain cognitive and affective elements through problem-solving, making decisions, making conclusions and working collaboratively with their friends. Pupils not only learn about the subject matter, but they also build up their personality.

The results support the Theory of the Uses and Gratification Theory (UGT), proposed by Cowell (2007) stated that it helps identify companionship preference to the individual gamer who is playing with their friends, it challenges them as well as gives satisfaction, stress relief as needs that playing games meet for young children. It also helps in understanding why young children are likely to engage in online gaming and how their experience plays a more important part in determining the continuance of motivation for the gamers to satisfy their interests and needs.

In light of the findings, as mentioned above and conclusions, the following recommendations are offered: Learners may be encouraged to limit their time spent playing computer games since it affects their performance. They are encouraged to participate in their class and give their attention to their teachers. Parents may be asked to be more involved in their children's education and control their children's time playing computer games.

The School Administrator may encourage to consult the teachers and stakeholders as to what health wellness program should be implemented to counter the effects of playing computer games on the learners' performance.

Teachers may be motivated to use different strategies to make their learners participate in class and form a partnership with the parents and stakeholders to help improve or sustain the class performance. Other researchers are also encouraged to conduct similar studies to identify other related factors affecting the learners' academic performance.

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