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Benefits of Online Games on English Language Learning and Learners' Academic Achievement

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Abstract
Online games are becoming recognized as possible aids for language learning and achieving academic success. This study investigates the benefits of online games on English language learning and learners' academic achievement in East II District of Cagayan de Oro City Division. Specifically, the study aimed to describe the respondents' characteristics, assess the level of the benefits of online games, examine the learners' academic achievements, and determine the significant relationship and differences. The respondents of the study were the one hundred fifty students from Junior High School. The study utilized a descriptive correlation method of research and purposive sampling technique. The instrument of this study was a researcher-made survey questionnaire. Descriptive statistics such as frequency, percentage, mean, and standard deviation were used to describe the variables in the study. Further, Pearson-R, t-test and f-test were also used in the analysis of data.
The findings of the study revealed that online games significantly contribute to enhancing student engagement, motivation, and vocabulary retention. Students who actively engaged with online games exhibited higher levels of academic performance, particularly in English language subjects. In conclusion, incorporating online games into educational strategies can significantly boost student motivation, engagement, and language acquisition, leading to improved academic outcomes. It is recommended that teachers and policymakers consider integrating game-based learning strategies into the curriculum to maximize student learning potential.

Keywords: Benefits of online games, English language learning

1.Introduction

Online games are increasingly seen as valuable tools for language learning and academic success due to their engaging and interactive nature. For English language learners, these games can improve vocabulary, listening, reading, and communication skills through immersive environments. As education evolves in the digital age, online games offer an alternative to traditional, often monotonous teaching methods by making learning more enjoyable and motivating.
However, there are concerns about excessive gaming, which may lead to addiction, poor academic performance, and increased stress. While online games can enhance cognitive skills like problem-solving and strategic thinking, they may also reduce attention spans and affect social interactions.

Given the prevalence of internet access among students and their frequent use of online games, this study explores both the benefits and risks of using online games in language learning. The research aims to identify game elements that support learning and determine whether such heightened engagement leads to measurable improvement in English language skills.

Research Questions

This study aimed to determine the benefits of online games on English language learning and the academic achievement of Grade 10 Students in East 2 District, Division of Cagayan de Oro City for the School Year 2024 – 2025. Specifically, this study sought to answer the following questions:

1. How are the respondents distributed in terms of sex, time spent in online games, days spent per week, and most played academic online games?
2. What is the respondents' perception level on the benefits of online games on English language learning considering engagement, motivation, and vocabulary retention?
3. What is the respondents' academic achievement in English, Mathematics, and Science during the First and Second Quarter of School Year 2024 – 2025?
4. Is there a significant relationship between the respondents' perception on the benefits of online games on English Language Learning and their academic achievement?
5. Is there a significant difference in the respondents' perception level on the benefits of online games on English Language Learning and their academic achievement when grouped according to their characteristics?

Significance

This study would be beneficial to various stakeholders. For teachers, it offers insights into the link between online gaming and language learning, enabling them to adjust their teaching methods to better engage students and enhance academic outcomes. Policymakers may use the findings to guide decisions on curriculum design, technology integration, and educational strategies, ensuring the effective and balanced use of online tools in classrooms. Parents can gain a clearer understanding of how online gaming supports vocabulary development, helping them make informed choices about their children's technology use and support a healthy balance between learning and leisure. Students, on the other hand, can become more aware of how their gaming habits impact language learning and academic performance, fostering better time management and self-regulation. Lastly, the study contributes to the existing body of research on educational technology, offering valuable insights for future studies in educational psychology and technology-enhanced learning.

Scope and Limitations

This study explored the benefits of online games on English language learning and academic achievement among Grade 10 students in East 2 District, Division of Cagayan de Oro City, during the School Year 2024–2025. The respondents were 150 Grade 10 students from selected schools. The study focused on the benefits of online games in terms of student engagement, motivation, and vocabulary retention as the independent variables. The dependent variables were limited to the students' academic performance in English, Mathematics, and Science during the first and second quarters. Additionally, the study considered respondent characteristics such as sex, time spent playing online games per day, frequency of gaming per week, and most frequently played academic online games.

2. Literature Review

Respondent's Characteristics

The respondents' characteristics include sex, time spent on online games per day, days spent per week, and most played academic online games. Studies show that boys and girls may be affected differently by gaming, with boys spending less time reading and girls spending less time on homework due to gaming (Diongson, 2024). Males are also more prone to gaming addiction (Sari et al., 2023), though individual experiences vary. Excessive daily gaming can negatively impact academic performance, as seen in lower GPA levels and classroom disengagement (Chafouleas et al., 2021). Students who frequently play games throughout the week, especially immersive ones like Mobile Legends or Valorant, often do so as an escape from stress, which can lead to overindulgence (Aviso, 2021; Arı et al., 2020). Meanwhile, many students play academic online games to improve critical thinking and problem-solving skills, while others play for entertainment. These games can enhance mental and social abilities when balanced properly (Quwaider et al., 2019).

Benefits of Online Games on English Language Learning

Online games support English language learning by enhancing engagement, motivation, and vocabulary retention. Their interactive features make learning enjoyable, helping students stay focused and interested. According to Guro and Corpuz (2025), gamified learning motivates students by turning lessons into fun, rewarding activities. While Mohammed et al. (2023) found that both digital games and traditional methods can be effective in vocabulary learning, other studies highlight the strong influence of online games on vocabulary and communication skills. When used appropriately, online games can be a valuable tool in developing English proficiency.

Learners' Academic Achievement

Video games are often associated with lower academic performance, and studies by Diongson (2024) and Anderson & Dill (2000) support this, showing a negative link between extended gaming time and academic achievement. However, other research highlights the educational potential of games. Mulhem and Almaiah (2021) found that mobile educational games, especially when supported by learning strategies, can enhance motivation and effectiveness. In English, gamification has been shown to improve engagement and interaction (Bouchrika et al., 2021), supporting skills like critical thinking and communication. In Mathematics, the curriculum focuses on problem-solving and real-world application, while in Science, students explore key concepts to build scientific literacy. Gamified approaches, such as leaderboards and collaboration, have been found to improve student performance and enjoyment (Puritat, 2019; Ependi et al., 2022). This study focuses on three variables: the benefits of online games on English learning (engagement, motivation, vocabulary retention), academic achievement in core subjects, and respondent characteristics like sex, gaming habits, and preferred academic games.

3. Methodology

Research Design

The study employed a descriptive correlational research method to examine the relationship between the benefits of online games on English language learning and learners' academic achievement. Data were collected from six schools in East 2 District: Agusan National High School, Balubal National High School,

Bugo National High School, Palalan Integrated School, Puerto National High School, and Tablon National High School.

Participants

This study respondents were the one hundred fifty (150) Grade 10 students from East 2 District of Cagayan de Oro City Division School Year 2024-2025. These students were enrolled in the schools namely: Agusan National High School, Balubal National High School, Bugo National High School, Palalan Integrated School, Puerto National High School, and Tablon National High School.

Data Collection

The study used a self-made survey questionnaire to gather data on the benefits of online gaming and its impact on English language learning and academic achievement. The questionnaire had three parts: (1) respondents' characteristics, sex, time and frequency of gaming, and most played academic games; (2) benefits of online games on English learning, focusing on engagement, motivation, and vocabulary retention, based on and modified from Mohammed et al. (2023); and (3) academic achievement in English, Mathematics, and Science, based on DepEd Order No. 8, s. 2015. Responses were rated using a Likert scale to reflect students' experiences and perceptions.

Data Analysis

The researcher used on Slovin's formula to obtain the desired number of respondents, which is one hundred fifty (150) Grade 10 students. This was based on the population of the 1492 students and margin of error of 8%. Stratified sampling techniques were employed to get the appropriate number of respondents by school. This was done by dividing the computed sample size by its population.

4. Results and Discussions

Problem 1. How are the respondents distributed in terms of sex, time spent in online games, days spent in online games per week, and most played academic online games?

Table 1
Distribution of Respondents' Characteristics in terms of Sex

Category	Frequency	Percentage
Male	72	48
Female	78	52
Total	150	100

Table 1 shows that the majority of respondents were female (52%), suggesting they are more engaged and willing to participate in academic studies and share insights, possibly enriching the research data. This also reflects a growing interest among females in online gaming, where they view it as both enjoyable and beneficial for learning. In contrast, males comprised 48% and were less participative, potentially limiting the diversity of perspectives. Many male students may focus more on competition and entertainment in gaming rather than its educational value. Encouraging balanced participation and helping students see the learning benefits of games can lead to more inclusive and meaningful research outcomes.

Table 2
Distribution of Respondents' Characteristics in terms of Time Spent in Online Games per Day

Category	Frequency	Percentage
6 hours and above	30	20
4-5 hours	35	23
2-3 hours	50	33
1 hour or less	35	23
Total	**150**	**100**

Table 2 shows that most respondents (33%) play online games for 2–3 hours daily, suggesting they view gaming as a healthy leisure activity that supports stress relief, social interaction, and cognitive skills like problem-solving and critical thinking. This moderate usage allows them to balance academics and personal responsibilities effectively. In contrast, only 20% reported playing for 6 hours or more, indicating fewer students engage in excessive gaming, likely due to awareness of its negative effects such as poor academic performance, anxiety, and reduced physical activity. Overall, guidance is essential to help students manage screen time and choose educational games that support learning.

Table 3
Distribution of Respondents' Characteristics in terms of Days Spent in Online Games per Week

Category	Frequency	Percentage
6 days above	35	23
4-5 days	55	37
2-3 days	45	30
1 day	15	10
Total	**150**	**100**

Table 3 shows that most respondents (37%) play online games 4–5 days per week, suggesting they maintain a moderate yet consistent gaming habit that supports relaxation, learning, and social interaction while still managing academic duties. This pattern, especially among female students who play 2–3 hours daily, reflects a balanced approach that may enhance cognitive skills and English learning. In contrast, only 10% play just once a week, indicating minimal engagement likely due to other priorities. While this limits risks of addiction, it may also reduce potential learning benefits. Promoting educational games and healthy play habits can help all students enjoy gaming without compromising academics.

Table 4
Distribution of Respondents' Characteristics in terms of Most Played Academic Online Games

Category	Frequency	Percentage
Action	40	27
Strategy	50	33
Puzzle	45	30

Others: Minecraft Education, Duolingo, and Elevate	15	10
Total	**150**	**100**

Table 4 shows that most respondents (33%) prefer strategy-based academic games like Chess.com and Scrabble GO, which promote critical thinking, problem-solving, and planning skills closely linked to academic success. This preference, especially among female students who play moderately and frequently, suggests that strategic games are both engaging and intellectually beneficial. In contrast, only 10% chose less traditional games like Duolingo and Minecraft: Education Edition, indicating lower interest and perceived relevance. These findings highlight the importance of integrating engaging and structured educational games into classrooms to boost motivation, retention, and learning outcomes.

Problem 2. What is the respondents' perception level on the benefits of online games in English language learning considering engagement, motivation, and vocabulary retention?

Table 5
Summary Distribution of Respondents' Perception Level on the Benefits of Online Games on English Language Learning

Variable	Mean	SD	Interpretation
Engagement	3.48	0.89	Very High
Motivation	3.30	0.82	Very High
Vocabulary Retention	3.24	0.83	High
Overall	**3.34**	**0.85**	**Very High**

Table 5 reveals that respondents have a very high overall perception (mean = 3.34) of the benefits of online games in enhancing their English language learning, especially in terms of engagement (mean = 3.48), which motivates active participation and promotes better retention and application of language skills. Students find online games fun and effective for learning, particularly because they boost interest, focus, and confidence. Although vocabulary retention scored the lowest (mean = 3.24), it was still rated high, suggesting that games do support vocabulary development, though effectiveness may vary. These findings highlight the value of using engaging, learner-centered games to support English learning.

Problem 3. What is the respondents' level of academic achievement in English, Mathematics, and Science during the First and Second Quarter of School Year 2024 – 2025?

Table 6
Summary Distribution of the Respondents' Level of Academic Achievement

Learning Area	Academic Achievement First Quarter			Second Quarter			Overall		
	Mean	SD	Desc.	Mean	SD	Desc.	Mean	SD	Desc.
English	83.27	7.96	S	84.27	7.63	S	**83.77**	**7.80**	**S**
Mathematics	80.97	8.18	S	82.27	7.9	S	**81.62**	**8.04**	**S**

Science	81.93	8.02	S	83.07	7.8	S	**82.5**	**7.91**	**S**
Overall	**82.06**	**8.05**	**S**	**83.2**	**7.78**	**S**	**82.63**	**7.92**	**S**

Table 6 shows that the respondents' overall academic achievement in English, Math, and Science is at a Satisfactory level (mean = 82.63), indicating they are meeting basic expectations but have room for growth. English had the highest average score (mean = 83.77), suggesting stronger performance likely due to better teaching strategies and greater exposure, while Math had the lowest (mean = 81.62), pointing to challenges in comprehension and the need for more engaging, practical instruction. The results highlight the importance of continuous support, targeted interventions, and improved teaching methods to boost student achievement, especially in subjects like Math.

Problem 4. Is there a significant relationship between the respondents' perception on the benefits of online games in English language learning and their academic achievement?

Table 7
Result of the Test on Relationship Between the Respondents' Level of Perception on the Benefits of Online Games on English Language Learning and their Academic Achievement

Benefits of Online Games	**Academic Achievement** **First Quarter** **r-value** **p-value** **Interpretation**	**Second Quarter** **r-value** **p-value** **Interpretation**	**Overall** **r-value** **p-value** **Interpretation**
Engagement	0.27 0.01 S	0.75 0.01 S	0.65 0.01 S
Motivation	0.83 0.02 S	0.74 0.02 S	0.79 0.02 S
Vocabulary Retention	0.43 0.01 S	0.96 0.01 S	0.70 0.01 S

Table 7 shows a significant relationship between the benefits of online games engagement, motivation, and vocabulary retention—and students' academic achievement across the first and second quarters, with all variables having p-values below the 0.05 significance level. This means students who find online games engaging, motivating, and helpful in retaining vocabulary tend to perform better academically. Engagement was strongly linked to improved focus and participation, motivation encouraged consistent effort, and vocabulary retention supported comprehension and learning. These findings highlight that when balanced properly, educational online games can positively impact academic performance by making learning more enjoyable and effective.

Problem 5. Is there a significant difference in the respondents' perception level on the benefits of online games on English language learning and their academic achievement when grouped according to their characteristics?

Table 8
Difference in the Respondents' Perception Level on the Benefits of Online on English Language Learning Games when Grouped According to their Characteristics

Respondents' Characteristics	**Benefits of Online Games on English Language Learning**		
	Engagement	**Motivation**	**Vocabulary Retention**
	r-value f-value Interpretation	r-value f-value Interpretation	r-value f-value Interpretation
Sex	0.19 0.07 NS	0.97 0.01 S	0.39 0.02 S
Time Spent on Online Games	0.95 0.01 S	0.19 0.02 S	0.64 0.01 S
Days Spent on Online Games per Week	0.75 0.01 S	0.75 0.01 S	0.95 0.02 S
Most Played Academic Online Games	0.87 0.01 S	0.40 0.02 S	0.75 0.03 S
Overall	**0.69** **0.03** **S**	**0.58** **0.02** **S**	**0.68** **0.02** **S**

Table 8 shows a significant difference in students' perceptions of the benefits of online games in English learning based on sex, time spent, days played per week, and most played academic games. Boys and girls perceive the benefits differently, likely due to varying interests and learning styles. The amount of time and number of days spent playing also influence perceptions moderate gameplay supports engagement and vocabulary retention, while excessive gaming may affect academic focus. Additionally, students who play educational and interactive games show better learning outcomes than those who play games mainly for entertainment. These results highlight the importance of balance and choosing the right games to enhance learning.

Table 9
Difference in the Respondents' Level of Academic Achievement when Grouped According to their Characteristics

Respondents' Characteristics	Academic Achievement		
	English	**Mathematics**	**Science**
	r-value F-value Interpretation	r-value F-value Interpretation	r-value F-value Interpretation
Sex	0.65 0.03 S	0.95 0.01 S	0.81 0.01 S
Time Spent on Online Games	0.95 0.01 S	0.84 0.03 S	0.94 0.0301 S
Days Spent on Online Games per Week	0.79 0.02 S	0.81 0.01 S	0.94 0.01 S
Most Played Academic Online Games	0.93 0.03 S	0.93 0.02 S	0.85 0.03 S
Overall	**0.83** **0.02** **S**	**0.88** **0.02** **S**	**0.89** **0.02** **S**

Table 9 reveals a significant difference in students' academic achievement when grouped by sex, time spent on online games, days played per week, and most played academic games. Female students tend to perform better, suggesting gender influences learning styles and study habits. The amount of time and days spent gaming also impact academic performance, with excessive play affecting focus, sleep, and productivity. Most played academic games also influence outcomes, as some promote critical thinking and collaboration more effectively than others. These findings highlight the importance of balance, time management, and selecting quality educational games to support student learning.

5. Conclusion and Recommendations

Conclusion

Online games help students hold their interest and make lessons more exciting and engaging. The high level of engagement emphasizes that teachers can make their lessons more fun and effective by using well-chosen online games. In addition, students feel they achieve the most in their English subject compared to other areas. This emphasizes that students are more confident and motivated when learning English. And with this confidence, they develop even better language skills and overall academic success. Significant academic benefits can result from integrating online games into the learning process. Playing online games can significantly improve students' performance in English.

Recommendations

Based on the study's conclusions, it is recommended that teachers closely monitor students' use of online games to ensure this support and enhance academic achievement. Teachers are encouraged to integrate academic games that boost vocabulary retention and help students effectively recall words and meanings. Game-based learning strategies should also be adopted to strengthen students' mathematical skills. In both Science and Mathematics, incorporating online games that provide immediate feedback can support vocabulary development as well as subject proficiency. Additionally, school administrators are urged to support and promote the use of educational online games as effective tools for improving student performance.

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