



Impact of Player Unknown's Battlegrounds (PUBG) Method Toward Vocabulary Mastery for Senior High School Students

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Abstract

This research aimed to investigate the impact of the *Player Unknown's Battlegrounds* (PUBG) game on students' vocabulary acquisition. The study adopted an ex post facto experimental design using a post-test-only approach to assess the vocabulary mastery of twelfth-grade students at *SMK Rosma Karawang*. A total of 34 students were selected and divided into two groups: those who regularly played PUBG and those who did not engage with the game. Data collection was conducted through a standardized vocabulary proficiency test, and statistical analysis was performed using SPSS 26 with an independent sample t-test. The findings reveal a significant difference between the two groups, with the PUBG-playing group demonstrating superior vocabulary mastery compared to their non-playing peers. These results suggest that exposure to PUBG, which contains a wide range of English-language terms in real-time gameplay contexts, contributes positively to vocabulary development. Furthermore, the interactive and immersive nature of the game fosters incidental learning, where students acquire new words through context rather than formal instruction. This underscores the potential of digital games as supportive tools in English language teaching, especially for vocabulary enrichment. The novelty of this study lies in its focus on recent data to capture current gaming trends and their educational implications. This research contributes to the development of game-based learning methods in teaching English at the high school level by offering empirical support for integrating popular digital games into the curriculum to enhance student engagement and language acquisition outcomes.

Keywords: PUBG, vocabulary mastery, online games.

INTRODUCTION

English language skills are very important in the era of globalization. A good command of *English* provides the opportunity to study science and technology from other, more developed countries (Sari et al., 2022 in Agung et al., 2023). In addition, the ability to communicate in *English* can open up opportunities for cross-border collaboration (Agung et al., 2022). Therefore, *English* language skills play an important role in the progress of a nation.

One method that can be used is learning *English* through games. The use of games in the *English* learning process has several benefits: teachers can present the material in a more interesting way; students can more easily understand and remember the vocabulary taught; and more active interactions between teacher and students cause students to become more motivated to learn (Sahrawi et al., 2018 in Agung et al., 2023). Apart from that, the use of

games in class can create student-centered learning so that students can play a more active role in the learning process. The class atmosphere becomes more enjoyable, which can increase students' interest in learning (Anisa et al., 2020 in Agung et al., 2023).

To understand *English* well, it is important for a person to acquire and comprehend vocabulary. *English* vocabulary is the basis for mastering reading, writing, listening, and speaking skills. The more vocabulary a person acquires, the better his understanding of a language, especially *English* (Ratnalestari, 2023).

Vocabulary learning is a difficult task, so extra effort is needed to understand, generate, and manipulate target words. Learning vocabulary through games has received considerable attention to help and encourage learners to understand the target language more quickly. Interactive activities can be both fun and informative until games and education fuse together. Students who have learned through games tend to develop positive attitudes and learn more while they are engaged in learning (Donmus, 2010 in Perkasa et al., 2020). According to Agnieszka Uberman, vocabulary acquisition is considered increasingly important in language learning. Vocabulary is like bricks needed to build a house; words are needed to build language. Words here mean vocabulary, which is an important part of language learning, especially for beginners. Vocabulary mastery is basic knowledge for learning more about *English*.

Vocabulary is very important in learning *English*. It is one of the keys to success in speaking *English* (Nurteteng & Nopitasari, 2019 in Saputro & Rusli, 2020). This is important in *English* language teaching because without sufficient vocabulary, students cannot understand others or express their thoughts. There are many ways to learn vocabulary, one of which is through games. One game that can help in learning vocabulary is *Player Unknown's Battleground (PUBG)*.

As stated by Ashraf (2014), current observations show that online games have created an interactive and motivating context in which students can easily and unknowingly share their knowledge. Also, because of the demands and responsibilities they face while playing, online games are effective for vocabulary acquisition. This means that online games can influence students, and without realizing it, increase their vocabulary. Since *English* online games require students to understand vocabulary, students who play such games can develop good vocabulary.

Kusumawardani (2015) said that "online games are digital games or games that can only be played when the device is connected to the internet

network, allowing users to connect with other players accessing the game simultaneously.” This means online games can only be played when connected to the internet, where players can interact with one another online. Many online games have been created and developed among the community, such as *PUBG*, *Mobile Legend*, *Counter-Strike Online*, *Moba*, etc. Online games are liked by many people, including men and women, of various ages, with students being the most frequent online game users. Currently, many students play online games without regard to time and place, often playing for hours both day and night.

The internet has revolutionized how people access information, work, study, and communicate. It has transformed industries, created new forms of media, and connected people globally in unprecedented ways. However, it has also introduced challenges like cybersecurity threats and privacy concerns. According to Strauss et al. (2016), the internet is a vast network of interconnected devices. Certain computers within this network store files, such as web pages, that are accessible to other computers on the network.

According to Aflah (2023), the entertainment industry, especially the gaming sector, is also being influenced by technological developments, with notable progress made recently. Modern games can now serve as tools for education, as demonstrated by the rise of various learning methods that incorporate games, often referred to as educational games. At the same time, traditional games involve agreed-upon rules that players must adhere to during gameplay. In terms of content and format, these games can also serve as tools for indirect learning. One example of such a conventional game is *PUBG Mobile*.

Based on the researcher’s observations about online games, game players can learn *English* through games, especially in learning vocabulary. For example, *PUBG*. *PUBG* is a game developed by Chinese and Korean companies named Tencent and Krafton, respectively. *PUBG PC* was developed by Krafton, and *PUBG Mobile* was developed by Tencent. This game can be played on Android or iOS phones. It has really caught the attention of gamers, especially those who like fighting games. *PUBG* can be played solo, in duos, or in squads of four people. This game features fast chat in *English* and missions that must be completed in *English*. Through the game, players can expand their *English* vocabulary because most of the language used is *English*.

According to Rixon (1992 in Yusuf, 2021), a game is play governed by rules or as an activity carried out by cooperating or competing decision-makers seeking to achieve their objectives within a set of rules. This means a game is

an activity used to achieve a goal, with rules provided. Using games, people can interact and communicate with others. This is very important, especially for children or students learning *English*.

Research on the effects of online games on *English* vocabulary has also been conducted. In her journal, Anastasiya Yuditseva, entitled *Synthesis of Research on Video Games for the Four Second Language Skills and Vocabulary Practice*, states that a person's proficiency in a second language is significantly affected by vocabulary use. There is a positive effect on vocabulary learning outcomes. However, the effectiveness of one type of game or genre depends on the user's gender, second language proficiency, gaming experience, and educational goals (Ratnalestari, 2023).

The *Oxford Basic English Dictionary* defines vocabulary as all the words that someone knows or that are used in a specific book or subject, or all the words in a language. Everyone's vocabulary is different and increases with age. Vocabulary plays an important role in forming a language. As Harmer (1991) states, if language structures are the skeleton of a language, vocabulary is the flesh and vital organs.

The use of online games nowadays has rapidly increased among students. It has become part of their daily routine since it is considered a fun and challenging activity, which can be done simply by sitting in front of a computer (Ardyanto & Pamungkas, 2018; Oktaviani & Desiarti, 2019; Yunara & Kardiansyah, 2017). The characteristics of *PUBG Mobile*, which is rich in content and features, make players learn indirectly, both in terms of communication and knowledge of content and features.

A game is a system where artificial conflict occurs between players along with rules to achieve desired goals (Salen & Zimmerman in Aji, I. S., 2014). One of the goals is to beat other players in the game. The game has several parts to complete, including tools, rules, objectives, and players. Games are classified into sports (football, basketball, tennis, etc.), board games (snakes and ladders, blackjack, halma, etc.), and video games.

Video games are a part of gaming. The definition of a video game is a form of electronic game in the form of text or images that involves communication between game software and the person playing it, linked to game processing hardware. Game software provides output in the form of images or text displayed on media (TV, computer, mobile phone, etc.), then receives input from the player in the form of commands sent through the displayed game hardware (Djaouti et al. in Aji, I. S., 2014).

Online games in this era are increasingly being played because they are now easier to play using only a smartphone. *PUBG Mobile* is one of the smartphone online games currently popular among teenagers because it can be played by friends simultaneously and is also an interactive game (Praswanda, Y. B., 2021).

PUBG Mobile itself is a game launched by Lightspeed & Quantum Studios from Tencent Gaming Buddy. *PUBG Mobile* was launched in 2018 and is based on the FPS (First Person Shooter) genre. *PUBG Mobile* can be played alone or by a maximum of 4 people simultaneously where 100 players fight to survive, with the winner being the last person standing. The 100 players parachute onto an island with an area of 8x8 km and fight. Upon landing, players pick up equipment to fight. After acquiring equipment, players kill each other and survive until a winner is declared (Praswanda, Y. B., 2021).

According to Sarwat (2023), vocabulary is a collection of words known by a person. In short, learning new words and their meanings is an important component of language. Vocabulary is a set of lexemes, including single words, compound words, and idioms. Vocabulary involves everything related to words, such as their origins, usage, and relationships to other words. In learning a foreign language, the main thing learners should know is the vocabulary of the language itself (Azizah, B. S. H., 2023).

Vocabulary refers to the set of words used in a language or known to an individual. It is an essential component of language and communication, helping convey thoughts, ideas, emotions, and information. Datu (2020) states that vocabulary is the total number of words needed to communicate ideas and express speakers' meanings. Vocabulary can be oral, written, or signed. As Hanson and Padua (2011) stated, vocabulary is the phrases utilized by human beings, both in oral and written forms, for communication. In the educational context, vocabulary refers to the body of words, including their meanings and uses, that a student learns and uses.

H1: Students who receive the *PUBG* method will show better achievement in vocabulary compared to students who receive the conventional method.

H2: Students who receive the *PUBG* method will achieve better performance in vocabulary at a higher level compared to those who receive the conventional method.

This study aims to examine the effectiveness of the *Player Unknown's Battlegrounds (PUBG)* game as a learning tool by comparing the vocabulary achievement of students exposed to *PUBG*-based learning with those

receiving conventional instruction. Additionally, the study seeks to identify which vocabulary levels show better improvement among students engaged in *PUBG*-based learning. The findings of this research are expected to provide valuable insights for educators and curriculum developers by highlighting the potential of integrating game-based methods in *English* language instruction. Specifically, this research contributes to the development of innovative, engaging, and contextually relevant teaching strategies, particularly in the field of game-based learning for vocabulary acquisition at the high school level.

RESEARCH METHOD

Research Design

Creswell (2018) states that quantitative research explains phenomena by collecting numerical data that are analyzed using statistical and mathematical-based methods. Rasinger (2013) asserts that in experimental designs, the dependent variable is the experiment's observed result, while the independent variable is frequently purposefully altered by the researcher. Additionally, the independent variable affects the dependent variable. In this way, the independent variable influences the values that the dependent variable takes on. The objective of this study is to examine to what extent *PUBG Mobile* provides better achievement in vocabulary mastery. The research design of this study is an ex post facto experimental design, specifically a post-test-only experimental design (Frankel et al., 2012). The independent variable of this study is *Player Unknown's Battlegrounds (PUBG)*, and the dependent variable is vocabulary mastery. According to Sugiyono (2019), this design involves conducting research on an event that has already occurred to find out several factors that determine the cause or possibility of occurrence in the event studied.

Study Sample

According to Kerlinger & Lee, the minimum sample size in quantitative research is 30 people. The sample for this study consists of 34 students from grade 12 of *SMK Rosma Karawang*. The research population, according to Sugiyono (2019), is a generalization area divided into objects or subjects that have certain characteristics and qualities, which are studied by researchers to be understood and then draw conclusions. The population selected by the researchers was high school students from grade 11.

Research Instruments

The research instrument for this study was a vocabulary mastery test in the form of a questionnaire. A questionnaire is a specific tool or instrument for collecting data from respondents about their attitudes, experiences, or opinions. The questionnaire was designed following the post-test-only experimental design (Frankel et al., 2012). The vocabulary test consisted of 40 multiple-choice questions comprised of synonyms and antonyms, nouns and

verbs, prepositional phrases, and the appropriate use of adjectives. Before applying the instrument, the researcher tried it out on senior high school students to assess its validity and reliability.

The vocabulary test was thoroughly examined for validity and reliability before being used in the study. Any invalid questions were revised to ensure they met the required standards. The validity assessment was conducted using the Pearson correlation test, with the results presented in Table 1.

Table 1. Validity Test

No. of item	r	Sign	Conclusion
Y-1	0,413	0,017	Valid
Y-4	0,424	0,014	Valid
Y-5	0,423	0,014	Valid
Y-10	0,489	0,004	Valid
Y-13	0,404	0,020	Valid
Y-14	0,363	0,038	Valid
Y-17	0,720	0,000	Valid
Y-22	0,360	0,040	Valid
Y-24	0,411	0,018	Valid
Y-29	0,469	0,006	Valid
Y-32	0,409	0,018	Valid
Y-34	0,452	0,008	Valid
Y-37	0,449	0,009	Valid

Meanwhile, the reliability of the instruments was evaluated using Cronbach's alpha, with the results summarized in Table 2.

Table 2. Reliability Test

Variable	Coefficient of Cronbach's Alpha	Standards used	Conclusion
Vocabulary Mastery (PUBG Player and Non-PUBG Player)	0,683	>0,6	Reliable

Data Collection

To examine the impact of the PUBG method on students' vocabulary mastery, the following data collection techniques were applied:

1. The researcher identifies and categorizes 34 senior high school students into two groups: those who play PUBG and those who do not.
2. A vocabulary test is administered to all students in both groups.
3. After the test is completed, the responses are evaluated and scored.
4. The scores are compiled and analyzed to compare the vocabulary mastery between the two groups.
5. The collected data is processed using an independent sample t-test in SPSS version 26 to determine the significance of the PUBG method's impact.

Data Analysis

The first and second hypotheses are evaluated by analyzing the collected research data using an independent sample T-test, a statistical method that determines whether there is a significant difference between the means of two independent groups. Before testing the hypotheses, assumption tests are conducted to verify that the data is normally distributed and homogeneous.

RESULTS AND DISCUSSION

Descriptive Analysis

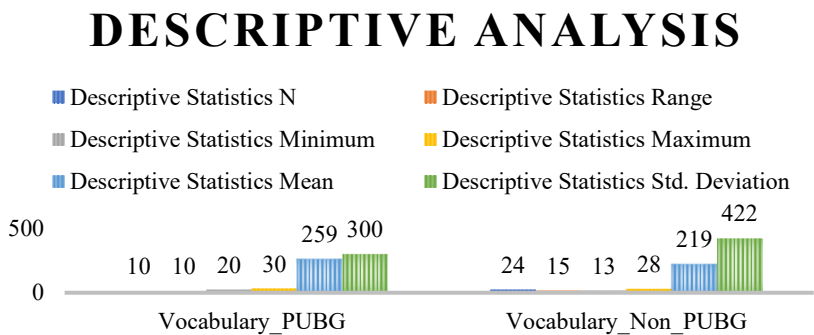


Figure 1. Descriptive Analysis

Figure 1 presents the descriptive statistics of this study. PUBG players have a higher minimum score of 20 and a maximum of 30, while non-PUBG players have a minimum of 13 and a maximum of 28. The vocabulary range is smaller for PUBG players at 10, compared to 15 for non-PUBG players. The average score is higher for PUBG players at 259, while non-PUBG players have 219. The standard deviation is lower for PUBG players at 300, indicating more consistent scores, whereas non-PUBG players show greater variation with a standard deviation of 422.

Assumption Tests

Normality Test

Based on the Shapiro-Wilk test results, the coefficients are entirely insignificant, indicating that all variables follow a normal distribution (see Figure 2).

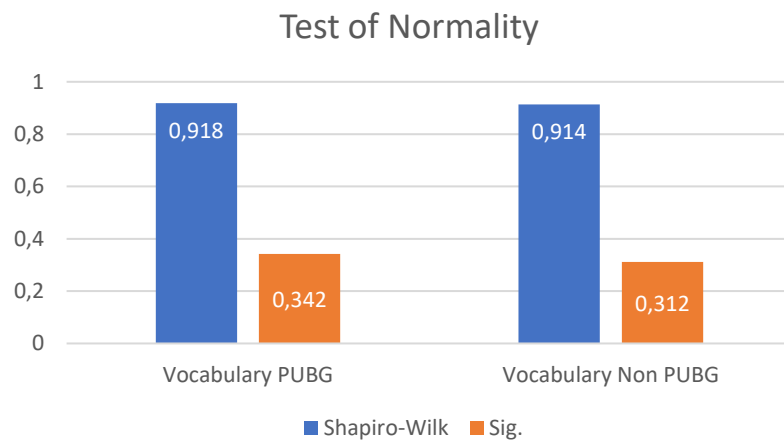


Figure 2. Normality Test

The results of the normality test show that both variables, students who play PUBG (X_1) and students who don't play PUBG (X_2), are normally distributed. The significance values for each group were found to be $X_1 = 0.312$ and $X_2 = 0.342$, both exceeding the 0.05 threshold, confirming that the data follow a normal distribution.

Homogeneity Test

The homogeneity test used is Levene's test. The results of the test indicate that there is no violation of homogeneity, as all values are consistent, as shown in Table 3.

Table 3. Homogeneity Test

Description	Levene Statistic	Sig.	Conclusion
Vocabulary Mastery (PUBG Player and Non-PUBG Player)	0,236	0,242	homogeneous

The results of the homogeneity test with the Levene test obtained that the entire coefficient is above, 0.5 so everything is homogeneous.

Hypothesis Testing

Hypothesis I: Students who receive the PUBG method will show better achievement in vocabulary compared to students who receive the conventional method.

The results of the first hypothesis test can be seen in Table 4.

Table 4. Effect of PUBG Method on Vocabulary Mastery

Levene's Test for Equality of Variances					
	F	Sig.	t	df	Sig. (2-tailed)

Vocabulary	Equal variances assumed	1,423	0,24	2,717	32	0,011
	Equal variances not assumed			3,123	24	0,005

The analysis shows that the calculated F-value is 1.423 with a significance (2-tailed) level of 0.011, which is well below the threshold of 0.05. This result indicates a statistically significant difference in vocabulary mastery between students who used the PUBG method and those who did not. Specifically, students who used the PUBG method demonstrated a significantly higher level of vocabulary mastery compared to their peers who received the conventional method.

The independent sample t-test results further support this finding, suggesting that the PUBG method positively influences vocabulary acquisition. With a p-value of 0.011, it can be concluded that the PUBG method has a substantial impact on improving vocabulary mastery. This highlights the potential benefits of incorporating innovative, interactive methods like PUBG in educational settings, as it appears to enhance learning outcomes in vocabulary mastery more effectively than traditional methods. Hypothesis II: Students who receive the PUBG method will achieve better performance in vocabulary at a higher level compared to those who receive the conventional method.

Discussion

The results of the first hypothesis show that there is a difference between students who play PUBG (X₁) and students who do not play PUBG (X₂) in terms of Vocabulary Mastery (Y), which has a significant difference. Both groups have values of X₁ = 0.312 and X₂ = 0.342, which means that they have exceeded the normal threshold (0.05) and the data is proven to be normally distributed. This shows the beneficial effect of the PUBG game on students' Vocabulary Mastery. Students who often play PUBG tend to be more familiar with new vocabulary in English in the games they play, compared to students who do not play games and rely on conventional learning alone. In this case, students are more motivated to add new vocabulary, and their perspective instinctively looks for new words or meanings that they hear (Alemi, 2010).

PUBG players have a higher minimum score of 20 and a maximum of 30, while students who do not play games or non-PUBG have a minimum score of 13 and a maximum of 28. While the average score is higher for PUBG players, namely 259, non-PUBG players have a score of 219. This shows the beneficial effect of PUBG games on motivation and interest in learning Vocabulary Mastery. However, this finding cannot be the main source used to support excessive online gaming, as it can have a negative impact and hinder academic success.

Anastasiya Yudintseva (2015) conducted a study stating that a person's level of proficiency in a second language due to its influence on playing video games has significant results, showing a positive influence on vocabulary learning outcomes. However, the type of game was not specifically explained, while in this study, the author has narrowed down the X variable only to the *PUBG* game, making it more organized and focused on one influence and its comparison.

Therefore, the results of the study show that there is a difference in vocabulary mastery between students who play *PUBG* and students who do not play. In general, students who actively play *PUBG* tend to have higher vocabulary mastery compared to those who do not play. However, this study has limitations in its influence analysis method because it does not use regression, so it cannot specifically measure the percentage of *PUBG*'s influence on vocabulary mastery. Nevertheless, the results of the independent t-test showed a significant difference between the two groups.

CONCLUSION

Based on data analysis and discussion, it is concluded that the *PUBG* online game has a positive impact on students' vocabulary mastery. The results showed a significant difference in vocabulary test scores between students who actively play *PUBG* and those who do not. The use of *English* in the game helps increase students' motivation for learning, enriches their vocabulary, and positively affects the long-term retention of vocabulary. This can help elevate students' vocabulary to a higher level if the learning process is progressive. Therefore, the *PUBG* game can serve as a new, interesting, and effective language learning tool that can be utilized by teachers. However, it is necessary to pay attention to the frequency of playing when integrating online games into the learning process, so that it does not negatively impact other academic aspects.

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