Enhancing Vocabulary Mastery Through Escape Room Game

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Abstract

Vocabulary acquisition remains a challenge in EFL contexts, especially among junior high students in Indonesia, due to limited exposure and traditional rote-based instruction. This study investigated the effectiveness of the Escape Room Vocabulary Game in enhancing English vocabulary mastery among students at Junior High School 1 Pekalongan, Centra Java, Indonesia. The research employed a quasi-experimental design involving pre-tests and post-tests, motivation questionnaires, and classroom observations. Findings revealed a significant improvement in the experimental group compared to the control group, with enhanced student engagement and motivation. The results imply that gamified, collaborative methods like Escape Rooms can serve as powerful tools in EFL vocabulary instruction.
Keywords*: Escape Room, Vocabulary Mastery, Game-Based Learning, Motivation, Experimental Research*

Abstrak

Penguasaan kosakata masih menjadi tantangan dalam konteks Bahasa Inggris sebagai Bahasa Asing, terutama di kalangan siswa SMP di Indonesia, karena keterbatasan paparan dan instruksi berbasis metode pembelajaran tradisional. Penelitian ini menyelidiki efektivitas *Escape Room Vocabulary Game* dalam meningkatkan penguasaan kosakata bahasa Inggris di kalangan siswa SMP 1 Pekalongan, Jawa Tengah, Indonesia. Penelitian ini menggunakan desain kuasi-eksperimental yang melibatkan tes awal dan tes akhir, kuesioner motivasi, dan observasi kelas. Temuan penelitian mengungkapkan peningkatan yang signifikan pada kelompok eksperimen dibandingkan dengan kelompok kontrol, dengan peningkatan keterlibatan dan motivasi siswa. Hasil penelitian menyiratkan bahwa metode kolaboratif yang digamifikasi seperti Escape Rooms dapat berfungsi sebagai alat yang ampuh dalam instruksi kosakata *EFL*.
Kata Kunci: *Escape Room*, Penguasaan Kosakata, Pembelajaran Berbasis Permainan, Motivasi, Penelitian Eksperimental

INTRODUCTION

Vocabulary plays a crucial role in second language acquisition, as it forms the foundation for learners to communicate effectively across all language skills. However, in the Indonesian context— especially in junior high schools—vocabulary mastery remains a major challenge for students. This difficulty is largely due to the limited exposure to English outside the classroom and the continued use of traditional instructional methods, such as

memorization and translation (Mirta et al., 2021). These approaches often fail to foster active engagement or long-term vocabulary retention. Amir et al. (2023) noted that students often felt bored and unmotivated when learning vocabulary through conventional methods such as memorizing and translating.

Students are expected to actively use English in meaningful contexts, not merely memorize isolated words. Ideally, vocabulary instruction should be interactive, learner-centered, and aligned with the needs of 21st-century learners. However, existing classroom practices often fall short of this ideal, relying heavily on teacher-centered activities that do not encourage student autonomy, collaboration, or enthusiasm (Astuti et al., 2023). Al-Jawwadah and Saputri (2021) stated that vocabulary teaching should not have focused solely on memorization but also needed to help learners internalize and apply words in real-life contexts. This gap between curriculum expectations and classroom reality calls for the integration of more engaging, student-driven approaches.

One promising alternative is game-based learning, which uses game elements to enhance educational experiences. Game-Based Learning (GBL) provides structured yet enjoyable environments where learners engage in tasks that promote problem-solving, cooperation, and motivation (Plass et al., 2015). Research has consistently shown that games increase students' interest, confidence, and achievement in vocabulary learning (Hasram et al., 2021; I. M. Jannah et al., 2020). Supporting this, Mirta et al. (2021) stated that educational games had the potential to increase students' motivation and helped them focus on learning vocabulary in a more enjoyable way. Nasrun and Mujahidah (2021) also emphasized that the Bingo game helped students understand vocabulary more easily, making them view it as less difficult and increasing their motivation to learn. Among various game-based strategies, escape room games offer a particularly immersive and collaborative experience. They place learners in real-time challenges where solving clues and using learned vocabulary become key to "escaping" the game scenario.

Chyzhykova (2021) highlights that collaboration in learning environments promotes communicative competence and meaningful interaction, especially beneficial for vocabulary development. Moreover, experiential learning theory emphasizes that students learn best when actively involved in experiences that require application of knowledge in context (Mollaei, 2012). The Escape Room Vocabulary Game embodies both principles by challenging students to solve vocabulary-based puzzles through teamwork and critical thinking. Though card games and online platforms like Wordwall have shown success (Armelia et al., 2024; M. Jannah and Syafryadin, 2022), studies exploring offline, classroom-based escape room applications in EFL contexts remain limited. Amir et al. (2023) emphasized that games involving physical movement and group problem-solving, such as escape room activities, were still rarely implemented in Indonesian schools despite their potential benefits.

This study aims to address this gap by implementing the Escape Room Vocabulary Game as an alternative instructional strategy for seventh-grade students at SMP Negeri 1 Pekalongan. It investigates the game's effectiveness not only in improving vocabulary mastery but also in enhancing student motivation and engagement. Building upon theories of Game-Based Learning, Experiential Learning, Collaborative Learning, and Multimedia Learning (Farani, 2016), this research provides empirical evidence on the pedagogical value of escape room games in EFL classrooms.

RESEARCH METHOD

This study employed a quasi-experimental quantitative design with a pre-test and post-test control group to investigate the effectiveness of the Escape Room Vocabulary Game in improving students' English vocabulary mastery. The research was conducted at SMP Negeri 1

Pekalongan during the second semester of the 2024/2025 academic year. A total of 41 seventh-grade students participated in the study, divided into two intact classes. Class 7C was assigned as the experimental group (21 students) and received vocabulary instruction through the Escape Room Vocabulary Game, while Class 7A served as the control group (20 students) and was taught using conventional methods.

The data were collected using three instruments: (1) vocabulary pre-tests and post-tests, (2) a motivation questionnaire based on a 5-point Likert scale, and (3) an observation sheet to record students' engagement during the learning process. The vocabulary tests, administered before and after the treatment, consisted of multiple-choice items, fill-in-the-blank tasks, and matching exercises aligned with the school's English curriculum. The motivation questionnaire consisted of 15 statements designed to measure students' affective responses to vocabulary learning. Classroom observations were conducted throughout the treatment period to compare student behavior and engagement levels between the two groups.

Prior to data collection, the vocabulary test was validated through expert judgment and piloted with a different class to ensure reliability. The test's internal consistency was measured using Cronbach's Alpha, and item analysis was performed to ensure balanced difficulty and discrimination indices.

For data analysis, both descriptive and inferential statistical methods were used. Descriptive analysis included mean scores, standard deviations, and score ranges. Inferential analysis began with tests of normality using the Shapiro-Wilk method and homogeneity using Levene's test to verify assumptions for parametric testing. Hypothesis testing was then conducted using paired sample t-tests to analyze pre- and post-test differences within each group, and independent sample t-tests to compare the final performance between the experimental and control groups. A significance level of 0.05 was applied throughout the analysis.

By integrating test scores, attitudinal responses, and observational data, this study provided a comprehensive evaluation of the Escape Room Vocabulary Game's impact on vocabulary learning outcomes, motivation, and classroom engagement.

RESULTS AND DISCUSSION

The findings are based on data from pre- and post-tests (descriptive statistical analysis), a motivation questionnaire, and classroom observations comparing student engagement in both the control and experimental groups.

The descriptive statistical analysis showed that both the control and experimental groups experienced an increase in vocabulary mastery. However, the experimental group demonstrated significantly greater improvement. In the control group, the mean score increased from 42.14 (pre-test) to 58.1 (post-test), with a median of 65. In comparison, the experimental group's mean score rose from 35 to 74.52, with a higher post-test median of 85. This indicates that students who were taught using the Escape Room Vocabulary Game outperformed those who received conventional instruction. These findings suggest that the game-based learning method had a more substantial impact on vocabulary acquisition.

The results of the motivation questionnaire support the effectiveness of the Escape Room approach. Students in the experimental group responded positively to the learning method. The following table shows the percentage of students who selected "Agree" or "Strongly Agree" for each statement in the questionnaire:

Student Motivation Questionnaire Results

Table 1 Student Motivation Questionnaire Results in Percentage (%)

Statement	SD	D	N	A	SA
I feel happy when learning English vocabulary.	0	0	9.52	71.43	19.05
I enjoy the way the teacher teaches vocabulary in class	0	9.52	0	42.86	52.38
The activities in learning make me more interested in learning vocabulary	0	0	19.05	28.57	52.38
I feel that the time to learn vocabulary goes quickly because it is fun	0	0	0	66.67	33.33
I prefer learning vocabulary this way than other ways	0	0	9.52	47.62	42.86
I feel confident in understanding and using new vocabulary	4.76	0	14.28	33.33	47.62
I am more motivated to improve my vocabulary skills	0	0	9.52	52.38	38.10
I want to learn more vocabulary with this method	0	0	0	61.90	38.10
I feel less afraid of making mistakes when trying to use new vocabulary	0	4.76	19.05	42.86	33.33
I want to speak and write more in English	4.76	0	9.52	57.14	28.57
I am active in vocabulary learning activities in class	0	0	4.76	42.86	52.38
I think more and look for solutions in learning vocabulary	0	0	9.52	52.38	38.10
I feel challenged to complete vocabulary assignments well	0	0	4.76	57.14	38.10
I am more enthusiastic about learning vocabulary than before this method was used	0	0	9.52	57.14	33.33
I want to try this method again in other lessons	0	0	19.05	47.62	33.33

Notes:
SD=Strongly Disagree
D=Disagree
N=Neutral
A=Agree
SA=Strongly Agree

The results indicated that the majority of students responded positively to the Escape Room Vocabulary Game. Across the 15 statements in the questionnaire, most

students selected either "Agree" or "Strongly Agree" on the 5-point Likert scale. For example, 71.43% of students agreed and 19.05% strongly agreed that they felt happy when learning English vocabulary using this method. Additionally, 52.38% strongly agreed that they enjoyed the way the teacher taught vocabulary in class, with another 42.86% agreeing—making over 95% positive responses.

Other notable findings included 66.67% agreeing that learning vocabulary felt faster and more fun, and 80.95% either agreeing or strongly agreeing that they preferred this method over others. Meanwhile, 90.47% of students expressed a desire to try this method again, reflecting strong support for its continued use. While neutral responses ranged between 4.76% and 52.38% depending on the item, the percentage of disagreement or strong disagreement was consistently very low, rarely exceeding 9.52%.

These results demonstrated that the Escape Room Vocabulary Game positively influenced students' enjoyment, confidence, and motivation in learning vocabulary, and that very few students expressed dissatisfaction with the approach.

The results from classroom observations further reinforced this finding. Students in the experimental group exhibited high levels of engagement, enthusiasm, and participation. They worked actively with peers, eagerly solved vocabulary-based puzzles, and remained focused throughout each session. In contrast, the control group showed relatively passive behavior, lower verbal expression, and limited interaction with peers. This contrast confirmed that the Escape Room Vocabulary Game encouraged student-centered learning and significantly enhanced classroom engagement.

The results of this study indicated that the Escape Room Vocabulary Game effectively enhanced students' vocabulary mastery, motivation, and classroom engagement. Students who participated in the Escape Room-based activities showed a noticeable improvement in their vocabulary performance compared to those who received traditional instruction. This suggested that using gamified and immersive learning strategies could provide a more engaging and impactful educational experience, leading to better learning outcomes than conventional teaching methods.

The success of the Escape Room Vocabulary Game aligns with various established learning theories. It is rooted in Game-Based Learning Theory (Plass et al., 2015), which emphasizes that games provide goal-oriented and immersive experiences that stimulate cognitive engagement. The game's structure—featuring time-bound missions, problem-solving tasks, and interactive vocabulary challenges—helps maintain students' focus and enthusiasm, contributing to deeper learning and improved retention. This is further reinforced by findings from Safura and Helmanda (2022), who revealed that integrating games into English language classrooms significantly boosts student motivation and engagement, creating an effective environment for vocabulary acquisition .

Additionally, the approach reflects the principles of Experiential Learning Theory (Mollaei, 2012), which underscores the importance of learning through experience and active involvement. The escape room format places students in dynamic situations where they must use vocabulary meaningfully to progress, shifting the focus from rote memorization to contextualized language use. Supporting this, I. M. Jannah et al. (2020) found that game-based learning provides meaningful experiences that improve retention and comprehension .

The collaborative nature of the Escape Room Vocabulary Game also demonstrates the application of Collaborative Learning Theory (Chyzhykova, 2021), which advocates that meaningful learning is often achieved through social interaction and teamwork. Students were observed working together to solve puzzles, exchange vocabulary knowledge, and support one another throughout the game, promoting a positive

and cooperative classroom environment. This is in line with Ngsurukh et al. (2021), who found that game-based tasks, such as riddles, foster teamwork, boost emotional intelligence, and increase learners' enthusiasm during vocabulary lessons .

Moreover, elements of Multimedia Learning Theory (Farani, 2016) are evident, particularly when the game incorporates visual and auditory cues to reinforce vocabulary understanding. The multimodal delivery of content within the game stimulates multiple sensory channels, which aids memory and comprehension. Yudha and Mandasari (2021) affirm that games combining visuals and interaction significantly enhance vocabulary learning and make the lesson more engaging, particularly for learners in digital environments.

The positive responses in the motivation questionnaire further support these findings. A large percentage of students agreed or strongly agreed that they were more engaged, confident, and motivated when learning vocabulary through the Escape Room Vocabulary Game. These results resonate with the findings of I. M. Jannah et al. (2020); M. Jannah and Syafryadin (2022), who noted that interactive and gamified approaches contribute to improved student attitudes and enthusiasm in learning English. Moreover, Hasram et al. (2021) reported similar outcomes in their study involving online vocabulary games, where students showed increased motivation and better vocabulary acquisition compared to traditional approaches.

In terms of supporting vocabulary development, previous studies by Ak Ak Lukas et al. (2020); Armelia et al. (2024) showed that even simple card-based games could significantly enhance vocabulary mastery in young learners. Similarly, Rizikiya et al. (2022) confirmed the effectiveness of the "Superlary Game" in boosting vocabulary scores, showing that gamified learning cycles help transform vocabulary lessons into more interactive and impactful experiences. Amar et al. (2024)

likewise found that classroom games and collaborative activities are significantly correlated with vocabulary mastery, highlighting that game-based approaches allow for deeper student interaction and increased interest in vocabulary learning. Additionally, Aisiyah et al. (2024) emphasized that the Wordwall game had stimulated students' comprehension and retention of relevant vocabulary, which fostered their enthusiasm for acquiring English. further validating the impact of game-based strategies on language development. The Escape Room Vocabulary Game takes this concept further by combining competitive and cooperative gameplay, time pressure, and real-life classroom interactions—offering a more immersive and motivating learning experience.

Phenomenologically, this study also addresses a common challenge in Indonesian classrooms: students often find vocabulary lessons repetitive and unengaging. The implementation of the Escape Room Vocabulary Game offers a fresh, student-centered strategy that replaces teacher-centered instruction with active learning. Observation data confirmed that students in the experimental group were visibly more active, expressive, and collaborative than those in the control group, who showed less participation and enthusiasm.

Overall, the Escape Room Vocabulary Game has proven to be an effective alternative to traditional vocabulary teaching. It aligns well with learning theories, is supported by previous research, and addresses existing issues in vocabulary instruction. The game successfully integrates fun, collaboration, and language practice in a way that enhances students' performance and attitudes, making it a promising pedagogical approach for English language classrooms.

CONCLUSION

Based on the findings, the Escape Room Vocabulary Game proved to be an effective and engaging method for improving

students' English vocabulary mastery. Students who participated in the game-based activities showed better vocabulary performance, higher motivation, and stronger engagement compared to those taught through conventional methods.

Questionnaire results showed that most students enjoyed the learning process, felt more confident, and were eager to use this method again. Classroom observations also supported these findings, with students in the experimental group displaying greater enthusiasm and collaboration.

Although the results are promising, this study was limited by its small sample size, single research location, and short implementation period. Future research involving more diverse participants and longer durations is recommended to validate and expand upon these results.

In summary, the Escape Room Vocabulary Game offers a fun, collaborative, and meaningful alternative to traditional vocabulary instruction, making it a valuable addition to English language teaching practices.

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