A Phenomenological Study on Students' Interest in Vocabulary Acquisition Through Digital Game-Based Learning

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Abstract

Amid the increasing demand for emotionally resonant and learner-driven instruction in EFL contexts, this study offers a novel exploration of how Digital Game-Based Learning (DGBL) can transform vocabulary acquisition into an affective, immersive, and socially collaborative experience. Adopting a phenomenological approach, the research investigates the lived experiences of 13 second-semester EFL students at Universitas Aisyah Pringsewu as they engaged with gamified platforms such as Wordwall. Through Interpretative Phenomenological Analysis, five key themes emerged: heightened learner interest, enhanced peer interaction, improved retention through contextual and repeated exposure, minor but manageable technological barriers, and deep emotional engagement throughout the learning process. The results indicate that DGBL not only supports cognitive aspects of vocabulary learning but also stimulates learners' motivation, confidence, and autonomous behavior. These findings highlight the pedagogical potential of integrating digital games into EFL classrooms to enrich both the cognitive and emotional dimensions of language learning.

Keywords: digital game-based learning; vocabulary acquisition; phenomenological study

1. Introduction

In today's digital age, the teaching of English vocabulary presents enduring challenges, particularly in sustaining students' motivation and interest. Conventional pedagogical methods are often seen as monotonous and ineffective in engaging learners actively (Afzal, 2019; Sihombing, P., & Riana, 2023; Ying, Z., & Ismail, 2022). As a response to these limitations, Digital Game-Based Learning (DGBL) has gained prominence as an innovative instructional strategy that combines interactive and enjoyable elements to support vocabulary acquisition among learners.

DGBL does not merely increase interest and classroom participation, but also contributes to meaningful vocabulary learning through contextual repetition and an essential component for long-term retention and language mastery. Despite its growing use in classrooms, understanding how students personally experience this form of learning remains limited. This gap highlights the

need for research that explores the subjective dimension of DGBL implementation, particularly from the learners' perspective.

This study, therefore, adopts a phenomenological approach to examine the lived experiences of students in learning vocabulary through digital games. By capturing students' thoughts, emotions, and reflections, this research seeks to understand how DGBL influences their engagement and motivation. The outcomes are expected to offer theoretical contributions and practical guidance for educators designing more effective and learner-centered vocabulary instruction.

A growing body of literature has recognized the pedagogical potential of Digital Game-Based Learning (DGBL) in second language instruction. Studies such as Kazu & Kuvvetli (2023), Rasti-Behbahani (2021), and Vnucko & Klimova (2023) emphasize that DGBL fosters engagement by offering interactive and enjoyable experiences. Moreover, it facilitates vocabulary retention through contextual learning environments enriched with visual, auditory, and narrative cues (Shadiev et al., 2024; Yilmaz et al., 2022; Zhao et al., 2023).

Research grounded in phenomenology has further shed light on how digital games shape learners' internal responses. Lazarurizqi & Suryaman (2023) and Wianto et al. (2022) found that students engaging with digital games report increased motivation, deeper focus, and improved vocabulary acquisition. For example, learners who played La Noire, a narrative-driven action-adventure game demonstrated significant vocabulary growth through exposure to immersive dialogue and in-game situations.

Simonnet et al. (2024) confirmed that digital games contribute to immersive learning environments that elevate learner motivation and attention span. Likewise, Firliantama & Rokhayani (2023) positive correlations between digital gameplay and classroom performance, while Pratiwi et al. (2022) highlighted the enjoyment and linguistic benefits students gained from digital vocabulary games.

Evidence from practical implementations across different countries also supports DGBL's effectiveness. At Phatnawitya School in Thailand, the use of Word Game and Wordwall raised students' vocabulary scores from an average of 47.3 to 84.6 (Setiawan, 2023). Similarly, in Selangor, Malaysia, DGBL reduced boredom and increased motivation among secondary school learners (Ibrahim et al., 2022) .

These studies collectively demonstrate that DGBL can enrich vocabulary instruction. However, many remain focused on outcome-based metrics. There is still a need to explore how students perceive and internalize their experiences during DGBL, making phenomenological inquiry a valuable and underused lens in current research.

2. Research Method

This study employed a qualitative approach using phenomenological methods to explore in depth the subjective experiences of university students in learning English vocabulary through Digital Game-Based Learning (DGBL). The phenomenological approach was selected for its capacity to uncover students' personal perceptions, meanings, and interpretations regarding their engagement with game-based digital media in the learning process. As emphasized by Moustakas

(2011), phenomenology seeks to understand the essence of lived experiences from the perspectives of the participants themselves.

The participants in this study were second-semester students from the English Education Study Program at Universitas Aisyah Pringsewu who had previously participated in vocabulary learning activities using digital games such as Wordwall. Participants were selected using a purposive sampling strategy, based on the criteria that they had prior experience using DGBL and exhibited varying levels of interest in vocabulary learning. As Creswell & Poth (2021) assert, purposive sampling is essential in phenomenological research to ensure that selected individuals have genuinely encountered the phenomenon being investigated.

Data were collected through in-depth interviews, participant observation, and document analysis. Semi-structured interviews were conducted to provide flexibility in eliciting detailed insights into students' perceptions and experiences. Following Vagle (2018), phenomenological interviews must allow participants to articulate the meanings of their experiences reflectively. Observation was employed to capture non-verbal expressions, engagement, and behavioral patterns during DGBL sessions. In addition, document analysis included secondary data such as students' assignments, screenshots from digital applications, and personal learning notes.

The collected data were analyzed using Interpretative Phenomenological Analysis (IPA) as proposed by Smith et al. (2021). This technique involved iterative stages, including repeated readings of the data, exploratory note-taking, thematic identification, and connecting emergent themes to the deeper meanings derived from participants' lived experiences. IPA was deemed appropriate to capture the emotional nuances and reflective insights that revealed how DGBL influenced students' vocabulary learning interest.

3. Result and Discussion

Result

This study involved a total of 13 second-semester students from the English Education Study Program at Universitas Aisyah Pringsewu. All participants had previously engaged in vocabulary learning activities using DGBL, particularly through platforms such as Wordwall and similar game-based applications. The selection of participants was conducted through purposive sampling, ensuring that each student had actual experience with digital game-based instructional tools within their academic setting.

The participant group comprised 3 male and 10 female students, aged between 18 and 20 years. Their technological literacy varied: while most participants were already familiar with digital learning platforms, a minority encountered technical difficulties during the initial stages of DGBL usage. These students also exhibited diverse levels of exposure to digital tools in English learning, ranging from structured classroom activities to independent exploration.

Key Findings Based on IPA

Using Interpretative Phenomenological Analysis (IPA), the study identified five major themes that encapsulate the lived experiences of students in vocabulary learning through DGBL. Each theme is described in detail below:

Theme 1: Increased Interest in Learning

A significant majority (11 out of 13 students) reported a notable rise in learning interest when using digital games. The interactive and non-monotonous nature of game-based learning sparked their curiosity and encouraged self-directed vocabulary exploration. Moreover, students felt more focused and intellectually stimulated due to the competitive elements embedded in the game structure.

> "*Main game tuh bikin penasaran, ya Mr. Kita jadi semangat pengen menang, eh, tau-taunya udah dapet banyak kosakata baru tanpa sadar*." – Participant #5

Theme 2: Interactive and Collaborative Learning Environment

Most participants (10 out of 13) stated that DGBL fostered an interactive and collaborative atmosphere in the classroom. The game-based activities encouraged students to participate actively in group discussions, engage in teamwork, and provide feedback to their peers. These dynamics contributed to a socially enriched and enjoyable learning environment.

> "*Kita tuh sering mainnya bareng-bareng ya Mr, jadi belajarnya kerasa kayak kerja tim gitu. Seru banget, nggak ngebosenin sama sekali.*" – Participant #2

Theme 3: Enhanced Vocabulary Retention

Nine students indicated that their vocabulary retention had improved significantly due to the repetitive exposure provided by the games. The games' visual and auditory features helped reinforce long-term memory. Students found that words encountered in the game context were easier to recall compared to those learned through traditional memorization techniques.

Theme 4: Technological Challenges

Six participants acknowledged encountering technical difficulties when accessing DGBL platforms. These challenges included unstable internet connections and unfamiliar user interfaces, which initially hampered their learning interest. Nevertheless, most students managed to overcome these barriers after gaining more experience and seeking assistance from peers.

Theme 5: Positive Emotional Engagement

Twelve out of thirteen participants expressed that the use of DGBL created an enjoyable and motivational learning experience. The pleasure derived from gameplay contributed to a more positive attitude toward vocabulary learning. Several students viewed the activity as a form of stress relief that brought energy and enthusiasm into the classroom environment.

> "*Kalau pake game, aku nggak kepikiran stres soal hafalan vocabnya Mr. Tiba-tiba aja udah hafal, soalnya vocabnya sering banget muncul di game.*" – Participant #9

This set of findings illustrates that DGBL not only supports cognitive engagement but also facilitates emotional and social involvement, providing a comprehensive learning experience for vocabulary development. Despite some initial technological hurdles, the majority of students reported strong personal and academic gains from using DGBL tools in their English learning process. The following is a summary of the thematic frequency data obtained from interview responses:

Table 1. Summary of Emergent Themes from Student Interviews

Major Theme	Number of Students	Percentage
Increased Interest	11	84.6%
Interactive Environment	10	76.9%
Vocabulary Retention	9	69.2%
Technological Challenges	6	46.1%
Emotional Engagement	12	92.3%

Table 1. presents a summary of the emergent themes derived from student interview responses. The most frequently mentioned theme was Emotional Engagement, reported by 12 out of 13 students (92.3%), indicating that emotional connection played a significant role in their learning experience. Increased Interest was highlighted by 11 students (84.6%), suggesting that the digital game-based learning approach effectively captured students' attention. Interactive Environment followed closely, with 10 students (76.9%) expressing that the engaging and participatory nature of the platform enhanced their learning. Vocabulary Retention was noted by 9 students (69.2%), demonstrating that the repeated exposure to vocabulary within the game context supported memory retention. Meanwhile, Technological Challenges were reported by 6 students (46.1%), pointing to some obstacles related to device compatibility, internet access, or user interface issues. These findings reflect the multifaceted impact of game-based learning on students' vocabulary acquisition and engagement.

Collective Student Narratives

Collectively, the participants reported that learning vocabulary through DGBL provided a more enjoyable and engaging educational experience compared to traditional methods. They expressed feeling more at ease to express themselves, less fearful of making mistakes, and more motivated to keep trying without hesitation. Several students even mentioned that they had independently sought out educational games outside of class hours, reflecting their belief in the effectiveness of this approach.

> *" Awalnya sih main karena disuruh tugas, ya Mr. Tapi sekarang malah aku sendiri yang nyari-nyari game vocabulary di Play Store."* – Participant #11

The findings of this study indicate that DGBL exerts a significant positive impact on students' interest, vocabulary retention, and emotional engagement in English language learning. Although some technical challenges were encountered, the majority of students were able to

overcome these difficulties and continued to benefit from the digital platforms. Overall, DGBL was perceived as an effective method for creating a learning environment that is more contextualized, collaborative, and centered on active, experiential learning.

Discussion

This section aims to critically interpret and analyze the findings presented in the previous chapter by connecting them with existing theories, prior empirical studies, and current pedagogical contexts in English language education particularly in vocabulary acquisition through DGBL. The study employed a phenomenological approach, enabling the exploration of subjective experiences of 13 second-semester students enrolled in the English Education Program at Universitas Aisyah Pringsewu regarding their engagement with DGBL platforms.

The discussion is structured around the five primary themes that emerged from the findings: (1) increased learning interest, (2) emotional engagement and the creation of a positive learning environment, (3) enhanced vocabulary retention, (4) technological challenges, and (5) the development of personal meaning in the learning process.

Increased Student Interest through DGBL

One of the key findings of this research is that students showed a significant increase in their interest in learning vocabulary when utilizing digital games such as Wordwall. Eleven out of thirteen participants reported that the integration of DGBL made the learning process more engaging, enjoyable, and far less monotonous than traditional methods.

> *"Biasanya aku males belajar vocab ya Mr, tapi pas pake game kayak Wordwall, malah jadi penasaran terus pengen main lagi, sambil belajar juga."* – Participant #7

This observation aligns with the motivation theory proposed by Gardner & Lambert (1972), which emphasizes the impact of both instrumental and integrative motivation on second language acquisition. In this case, DGBL fosters instrumental motivation through features such as reward systems, leaderboards, and game missions, which reframe vocabulary not simply as a memorization task, but as a goal to be achieved through game progress.

Furthermore, the results resonate with Flow Theory introduced by Csikszentmihalyi (1990), which describes a state of deep focus and enjoyment where individuals lose track of time due to high engagement. Several students in this study reported entering such a "flow state" while playing, indicating optimal conditions for learning were achieved.

Emotional Engagement and the Formation of a Positive Learning Environment

Another major theme that emerged is the role of emotional involvement in supporting vocabulary acquisition. Twelve out of thirteen students expressed feeling enthusiastic and emotionally invested during DGBL sessions, which supports Krashen (1982)'s Affective Filter Hypothesis. According to Krashen, positive emotional states reduce the psychological barriers (affective filter) that typically hinder second language input processing.

> *"Kalau belajar di kelas sih biasanya aku cuma diem ini Mr. Tapi kalau pake game, aku malah jadi agak semangat dan lebih aktif sedikit.*" – Participant #2

The emotional connection in this context not only contributed to a more relaxed and supportive classroom atmosphere, but also triggered dopamine responses, which are known to enhance focus, curiosity, and intrinsic motivation. These findings are consistent with research by (Simonnet et al., 2024), who found that game-based learning environments promote immersion and engagement, ultimately leading to more sustainable and long-term learning outcomes.

Table 2. Comparison of Learning Enthusiasm Before and After Using DGBL

Level of Enthusiasm	Before DGBL (%)	After DGBL (%)
Low	38.5%	7.7%
Moderate	46.2%	30.8%
High	15.3%	61.5%

Table 2. illustrates the comparison of students' learning enthusiasm levels before and after the implementation of Digital Game-Based Learning (DGBL). Prior to using DGBL, 38.5% of students reported a low level of enthusiasm, which significantly decreased to 7.7% after its use. The percentage of students with moderate enthusiasm declined from 46.2% to 30.8%, indicating a shift toward higher engagement. Notably, the proportion of students demonstrating high enthusiasm increased substantially from 15.3% to 61.5% following the integration of DGBL. These results suggest that DGBL had a positive impact on enhancing students' motivation and enthusiasm for learning.

Vocabulary Retention: The Role of Contextual Repetition

Nine students reported that they were better able to retain newly learned vocabulary after engaging with game-based activities. This finding aligns with Paivio (1986)'s Dual Coding Theory, which posits that information presented through both verbal and visual channels is more likely to be processed effectively and stored in long-term memory.

In the DGBL environment, vocabulary is not presented solely in textual form; instead, it is often accompanied by images, audio cues, and narratives. These multimodal elements reinforce retention by stimulating different cognitive pathways. This result supports studies by Yilmaz et al. (2022) and Zhao et al. (2023), who demonstrated that game-based media enhance second language vocabulary retention through compelling, context-rich repetition.

> "*Kalau ada Vocab baru terus langsung keluar di soal, trus aku salah, biasanya malah jadi inget terus gara-gara penasaran.*" – Participant #10

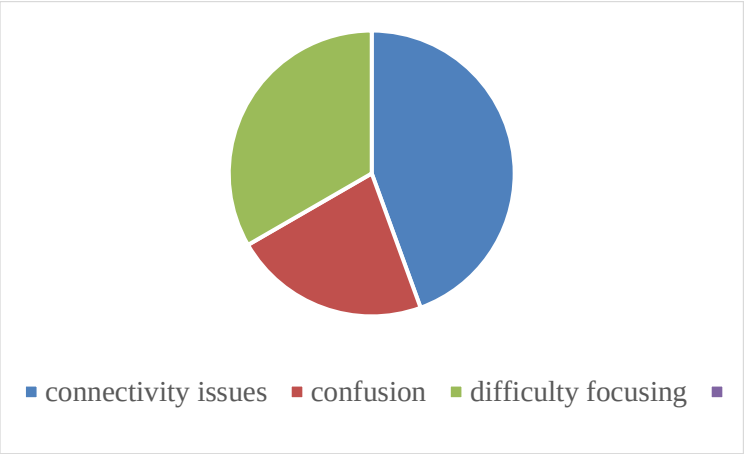
Moreover, repetition in this setting is not perceived as tedious or mechanical. Rather, it is integrated into the structure of missions and challenges, making retention a natural byproduct of engagement, not a passive memorization exercise.

Technical Challenges and Implementation Barriers in DGBL

Although most participants expressed positive attitudes toward DGBL, six students reported encountering technical difficulties, including unstable internet connections, problems navigating certain platforms, and confusion with user interfaces. These findings underscore the importance of viewing technology not merely as a supplementary tool but as a central component of the learning ecosystem.

According to the Technology Acceptance Model (TAM) proposed by Davis (1989), learners' perceptions of ease of use significantly affect their willingness to adopt educational technologies. When students perceive a platform as difficult to navigate, their learning curve becomes steeper, and motivation may decline.

Figure 1. Common Technical Challenges Encountered by Students During DGBL Implementation



The figure above reveals three primary issues. Four students experienced unstable internet connectivity, making it difficult to access and engage with the digital platforms smoothly. Two students reported confusion with the user interface, indicating a need for more intuitive design or user training. Additionally, three students mentioned difficulty maintaining focus during game-based activities, which may reflect varying levels of digital literacy or personal learning preferences.

These findings suggest the need for: Institutional technical support, user training sessions prior to DGBL integration, and the selection of intuitive and learner-friendly platforms. Addressing these issues is essential to ensure that DGBL fulfills its potential as an accessible and effective instructional strategy.

Meaning-Making and Personal Reflection in the Learning Process

One of the defining features of the phenomenological approach is its ability to uncover the personal meanings and reflections students attach to their learning experiences. In this study, many participants described their use of digital games as more than a vocabulary aid that they viewed it as a space for self-expression, stress relief, and even social interaction.

> *"Aku jadi ngerasa lebih percaya diri soalnya bisa jawab soal ini Mr, terus juga ngerasa nggak sendirian pas belajar."* – Participant #9

This interpretation reflects the principles of constructivist learning articulated by Vygotsky (1978), which emphasize that knowledge is socially constructed through interaction and experience. Students were not merely absorbing vocabulary that they were constructing meaning from their active participation, digital media engagement, and reflection on successes and mistakes throughout the gaming process.

This theme also aligns with Kolb (2015)'s Experiential Learning Theory, which describes learning as a continuous cycle of: concrete experience, reflectives observation, abstract conceptualization, and active experimentation. In the DGBL context, this cycle is seamlessly embedded into each gameplay session, offering a rich, holistic learning experience that integrates emotional, cognitive, and behavioral dimensions.

Comparison with Prior Studies

The following table compares this study's key findings with those from previous research in the field of digital game-based vocabulary learning.

Table 3. Comparison of Findings with Previous Studies

Study	Key Findings	Alignment with Present Study
(Wianto et al., 2022)	Games with narrative contexts enhance vocabulary mastery	Strong alignment (contextualized vocabulary learning)
(Ibrahim et al., 2022)	DGBL significantly boosts student motivation	Consistent (majority of students felt more motivated)
(Firliantama & Rokhayani, 2023)	Game-based learning increases student engagement	Highly aligned (emotional and social engagement)
(Kazu & Kuvvetli, 2023)	Effectiveness confirmed through triangulation techniques	Methodologically consistent (multi-source validation)
(Pratiwi et al., 2022)	Students enjoy and retain vocabulary through digital games	Supported (positive emotional learning experiences)

Table 3. presents a comparison of the current study's findings with those of previous related research. The results show a strong alignment with (Wianto et al., 2022), who emphasized the effectiveness of narrative-based games in enhancing vocabulary mastery, a finding supported by the contextualized learning observed in this study. Similarly, (Ibrahim et al., 2022) reported increased student motivation through DGBL, which aligns with the present study's evidence of heightened learner enthusiasm. The study also echoes the conclusions of (Firliantama & Rokhayani, 2023), who found that game-based learning significantly enhances student engagement, particularly emotional and social aspects. From a methodological perspective, Kazu & Kuvvetli (2023) employed triangulation techniques to confirm DGBL effectiveness, which is consistent with the multi-source validation approach used in this research. Finally, Pratiwi et al. (2022) highlighted how digital games improve vocabulary retention and enjoyment, an outcome

also reflected in the students' positive emotional learning experiences reported in the current study. These comparisons further substantiate the validity and relevance of the present findings.

4. Conclusion

This study confirms that Digital Game-Based Learning (DGBL) significantly enhances students' interest, emotional engagement, and vocabulary retention in English language learning. Through a phenomenological lens, the experiences of second-semester university students revealed that DGBL fosters interactive, contextual, and enjoyable learning environments. While minor technological challenges were reported, the overall learning outcomes suggest that DGBL promotes deeper learner autonomy, sustained motivation, and positive affective states. These findings align with key educational theories, such as Krashen (2009)'s Affective Filter Hypothesis and Csikszentmihalyi (1990)'s Flow Theory, affirming the pedagogical value of integrating gamified tools into language instruction. The study contributes to the growing body of research supporting digital innovation in language education and offers practical insights for educators aiming to modernize vocabulary learning through immersive, learner-centered approaches.

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