

## Students' perceptions about game-based learning in vocabulary learning

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**Abstract:** Vocabulary acquisition is a fundamental aspect of language learning. Using suitable learning strategies can help students learn and enrich their vocabulary. This study examines students' perceptions of using Game-Based Learning (GBL) in vocabulary learning. This study was conducted at SMA Istiqamah Bandung, involving 56 grade X students as participants. This study used a quantitative approach with an instrument in the form of a questionnaire distributed via Google Forms. The analysis involved calculating frequency distribution, percentage, mean, and perception levels. We carried out direct communication and periodic reminders to ensure complete data collection. The results indicated that students viewed GBL as a fun and helpful method in learning vocabulary. They showed interest, motivation, and enthusiasm when learning vocabulary through game-based strategies. The findings also reflect a preference for a collaborative, student-centered learning environment. The students viewed GBL as a helpful strategy for vocabulary learning. We recommend further research to explore broader contexts and combine various data collection methods to gain a deeper understanding.

**Keywords:** English education, enjoyable, perception, vocabulary learning

**Abstrak:** Penguasaan kosakata merupakan aspek mendasar dari pembelajaran bahasa. Penggunaan strategi pembelajaran yang tepat dapat membantu siswa belajar dan memperkaya kosakata mereka. Penelitian ini mengkaji persepsi siswa terhadap penggunaan *Game-Based Learning* (GBL) dalam pembelajaran kosakata. Penelitian ini dilakukan di SMA Istiqamah Bandung, melibatkan 56 siswa kelas X sebagai partisipan. Penelitian ini menggunakan pendekatan kuantitatif dengan instrumen berupa kuesioner yang disebarluaskan melalui *Google Forms*. Analisis yang dilakukan meliputi penghitungan distribusi frekuensi, persentase, rata-rata, dan tingkat persepsi. Kami melakukan komunikasi langsung dan pengingat berkala untuk memastikan pengumpulan data yang lengkap. Hasil penelitian menunjukkan bahwa siswa memandang GBL sebagai metode yang menyenangkan dan bermanfaat dalam mempelajari kosakata. Mereka menunjukkan minat, motivasi, dan antusiasme saat mempelajari kosakata melalui strategi berbasis permainan. Temuan tersebut juga mencerminkan preferensi untuk lingkungan belajar yang kolaboratif dan berpusat pada siswa. Para siswa memandang GBL sebagai strategi yang bermanfaat untuk pembelajaran kosakata. Kami merekomendasikan penelitian lebih lanjut untuk mengeksplorasi konteks yang lebih luas dan menggabungkan berbagai metode pengumpulan data untuk mendapatkan pemahaman yang lebih dalam.

**Kata kunci:** Pendidikan bahasa Inggris, menyenangkan, persepsi, pembelajaran kosa kata

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## INTRODUCTION

Vocabulary acquisition is a fundamental aspect of language learning, as it significantly influences students' reading comprehension, speaking fluency, and overall language proficiency (Bai, 2018; Liu & Saad, 2025; Saeed et al., 2025). Vocabulary learning is a crucial part of language pedagogy, but it can be challenging due to its incremental nature and potential boredom. Many learners feel frustrated and seek effective vocabulary learning approaches (Zou et al., 2021). Traditional vocabulary instruction methods, such as rote

memorization and textbook-based exercises, are often viewed as monotonous and less effective in maintaining students' interest (Yang & Dai, 2011). Teachers should effectively incorporate vocabulary instructional methods to teach students various vocabulary learning strategies in language classrooms (Halici Page & Mede, 2018). The use of suitable learning strategies can help students learn and enrich their vocabulary.

The educators have increasingly explored innovative instructional strategies, including Game-Based Learning (GBL), to enhance vocabulary retention and engagement (Hidayah et al., 2023; Plass et al., 2015; Yang et al., 2024). GBL incorporates gaming elements into the learning process, creating an interactive and immersive environment where students actively participate in language acquisition (Chowdhury et al., 2024; Derakhshan et al., 2024; Plass et al., 2015). Research has demonstrated that students benefit most when engaging in meaningful learning activities rather than passively receiving information, aligning with constructivist learning principles emphasizing active engagement and social interaction (Faudi et al., 2023; Ota et al., 2023; Pambudi et al., 2022; Vargas-Hernández & Vargas-González, 2022). Game-based learning is becoming more common in schools because of its effectiveness in concept learning, skill acquisition, and attitude formation, as well as its potential to enhance the teaching and learning process (Lu & Lien, 2020).

In recent years, the implementation of Game-Based Learning (GBL) in English language education has received increasing attention due to its potential to create more engaging and interactive learning environments. GBL integrates game elements into the instructional process to enhance students' motivation and participation in learning activities (Ahmed et al., 2022; Eshmakhmatovna, 2025), including vocabulary acquisition (Derakhshan & Khatir, 2015). As digital technologies become more accessible, educational games have been adopted as a strategy to facilitate vocabulary learning among high school students (Khodabandeh & Mombini, 2024; Qian & Clark, 2016). While previous studies have explored the theoretical benefits of GBL, further investigation is required to understand how students perceive and respond to this method in actual classroom settings.

Numerous studies have highlighted the positive effects of GBL on vocabulary acquisition. For instance, Al-Aosail et al. (2024) found that GBL markedly reduces foreign language anxiety, augments academic performance, elevates engagement, and promotes vocabulary acquisition relative to the conventional approach. Additionally, competitive elements in GBL, such as using Kahoot!, have significantly improved vocabulary retention and classroom participation (Ciaramella, 2017). Furthermore, repeated exposure to vocabulary within interactive game-based contexts has enhanced long-term retention, allowing learners to practice new words meaningfully through collaboration and problem-solving (Franciosi et al., 2016; Peterson, 2013; Plass et al., 2015). Despite these promising findings, research on GBL effectiveness in vocabulary learning among Indonesian high school students remains limited, with challenges such as curriculum constraints, teacher readiness, and access to digital tools influencing its practical implementation (Fauziyah, 2024; Hidayah et al., 2023).

This study seeks to address that gap by investigating the perceptions of Grade X students at Istiqamah Bandung High School toward using GBL in vocabulary learning. Using a quantitative approach, data were collected through a questionnaire to explore students' views on GBL's clarity, enjoyment, and perceived usefulness in enhancing vocabulary

acquisition. The results of this study aim to provide empirical evidence that may inform teachers, curriculum designers, and policymakers about the viability of GBL from the learner's perspective. By focusing on students' perceptions rather than measuring vocabulary gains, this study offers a complementary perspective to existing effectiveness-focused research. It contributes to a more comprehensive understanding of how students engage with GBL in real classroom settings and highlights the importance of aligning pedagogical innovations with learners' needs and experiences. Through this approach, the study aspires to support the refinement of vocabulary instruction strategies that are both pedagogically sound and learner-centered. This study examines students' perceptions of the use of GBL in vocabulary learning.

### METHOD

This study employs a quantitative approach to measure the effectiveness of the Game-Based Learning (GBL) method in enhancing students' vocabulary skills. Furthermore, this study utilizes a survey design, a data collection method that asks respondents questions to gather their perspectives on a particular topic. The survey was conducted using a questionnaire based on a five-point Likert scale to assess students' comprehension, motivation, and learning outcomes. This study involved 56 tenth-grade students from SMA Istiqamah Bandung who had experience using the Game-Based Learning (GBL) method in vocabulary learning. The purposive sampling method was used to select participants (Sugiyono, 2019), ensuring that only students with relevant experience were included. The chosen participants were students actively engaged in English learning through interactive game-based approaches. They had varying levels of exposure to English, both academically and non-academically, including participation in classroom discussions, group activities, and digital learning games. The sample size of 56 was considered adequate to provide valid results and generalizable insights within the school context. The characteristics of the respondents in this study are tabulated in the following table.

Table 1. Respondent characteristics (n=56)

<b>Respondent Characteristics</b>	<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
Gender	Female	27	48.2
	Male	29	51.8
Age	15	20	35.7
	16	31	55.4
	17	5	8.9

The instrument used in this study was a questionnaire (quantitative survey) designed based on the research variables. It covered three main topics: students' understanding of vocabulary skills using the Game-Based Learning method, the learning process involving Game-Based Learning, and students' learning outcomes after using it. The questionnaire consisted of thirteen statements using a 5-point Likert scale: (5 = Strongly Agree), (4 = Agree), (3 = Neutral), (2 = Disagree), and (1 = Strongly Disagree) (Dörnyei & Dewaele, 2022).

Before being distributed, the questionnaire underwent validity and reliability testing (Nasir et al., 2024) with 30 respondents. The results showed a Cronbach's Alpha value of 0.957, indicating a high level of reliability. These results confirm that the instrument is reliable and consistent for measuring students' perceptions of Game-Based Learning in vocabulary learning. Questionnaires are widely used in educational research as they provide standardized data that can be analyzed statistically, making them an effective tool for assessing learning outcomes (Fraenkel et al., 2012).

Table 2 Case processing summary

		<b>N</b>	<b>%</b>
Cases	Valid	56	100,0
	Excluded	0	0,0
	Total	56	100,0

Table 3. Reliability statistics

<b>Cronbach's Alpha</b>	<b>N of Items</b>
0.957	13

Tabel 4. Item-total statistics

	<b>Scale Mean if Item Deleted</b>	<b>Scale Variance if Item Deleted</b>	<b>Corrected Item-Total Correlation</b>	<b>Cronbach's Alpha if Item Deleted</b>
Item_1	49,00	104.582	0.830	0.952
Item_2	49.27	100.309	0.875	0.950
Item_3	49.13	104.002	0.816	0.952
Item_4	49.20	103.870	0.801	0.952
Item_5	49.77	106.836	0.567	0.959
Item_6	49.66	102.628	0.821	0.952
Item_7	49.55	110.397	0.460	0.961
Item_8	49.39	102.752	0.881	0.950
Item_9	49.77	104.327	0.741	0.954
Item_10	49.14	103.688	0.871	0.951
Item_11	49.36	102.416	0.823	0.952
Item_12	49.46	105.708	0.752	0.954
Item_13	49.30	101.124	0.887	0.950

The data collection process involves spreading the questionnaire to all participants, 56 people through the Google Form Platform over a week (7 days) who have previously communicated directly with the party concerned. Then, after the questionnaire was shared, researchers sustainably reminded the respondents to respond.

The data analysis technique processes data into meaningful information, making it easier to interpret and helpful in solving research-related problems. This study employed descriptive statistical analysis using SPSS software version 27.0.1.0. The analysis involved calculating frequency distribution, percentage, mean, and perception levels. Descriptive statistics summarize and present data without generalizing conclusions beyond the sample.

Furthermore, numerical representations from instrument data processing are provided to make the information more accessible and comprehensible (Creswell, 2014). The level of interpretation for student perception questionnaire scores is categorized in Table 5.

Table 5. Mean interpretation of student perception

Mean Range	Level of Perceived
0.1 - 1.0	Very Low
1.1 - 2.0	Low
2.1 - 3.0	Moderate
3.1 - 4.0	High
4.1 - 5.0	Very High

## RESULTS AND DISCUSSION

This research presents the quantitative results obtained through the distribution of questionnaires to Grade X students of Istiqamah High School Bandung. Data were collected from 56 students who had experienced GBL-based learning and were analyzed using descriptive statistics through calculations of frequency, percentage, and mean scores. Students generally perceive GBL as an effective and engaging approach for improving vocabulary skills in English language learning. Unlike traditional memorization-based methods, GBL offers an interactive, student-centered environment where learners can engage with vocabulary in meaningful and enjoyable contexts (Plass et al., 2015). According to the survey results, students found GBL to be highly effective in helping them remember and understand new vocabulary, as it fosters motivation and participation—key factors in successful vocabulary acquisition (Gregersen et al., 2021).

Table 6. Students' perception about GBL in vocabulary learning

Item	SA		A		N		D		SD		Mean	Level
	F	%	F	%	F	%	F	%	F	%		
Game-based learning methods are considered more engaging in the process of learning English.	38	67.9	14	25.0	0	0.00	2	3.6	2	3.6	4.50	Very high
English materials are easier to understand when delivered through games.	29	51.8	21	37.5	1	1.8	0	0.00	5	8.9	4.23	Very high

Classroom participation increases with the implementation of game-based learning.	34	60.7	15	26.8	3	5.4	2	3.6	2	3.6	4.38	Very high
Collaboration with classmates improves through game-based learning.	30	53.6	20	35.7	2	3.6	1	1.8	3	5.4	4.30	Very high
Confidence in using English increases after the implementation of game-based learning.	15	26.8	22	39.3	13	23.2	1	1.8	5	8.9	3.73	High
Speaking skills in English improve after using game-based learning methods.	16	28.6	23	41.1	13	23.2	0	0.00	4	7.1	3.84	High
Listening skills in English become better with the implementation of game-based learning methods.	19	33.9	22	39.3	11	19.6	1	1.8	3	5.4	3.95	High
English vocabulary is easier to remember through game-based learning.	21	37.5	27	48.2	4	7.1	1	1.8	3	5.4	4.11	Very high
The ability to communicate in English becomes more fluent after	14	25.0	22	39.3	14	25.0	3	5.4	3	5.4	3.73	High

using games in learning.												
The learning process becomes more enjoyable with games in English learning.	31	55.4	20	35.7	1	1.8	2	3.6	2	3.6	4.36	Very high
Game-based learning methods are recommended to peers as a practical approach.	26	46.4	20	35.7	5	8.9	2	3.6	3	5.4	4.14	Very high
Concentration during English lessons increases through game-based learning.	21	37.5	21	37.5	10	17.9	3	5.4	1	1.8	4.04	High
The challenge to improve English proficiency is felt more through the implementation of game-based learning.	27	48.2	21	37.5	4	7.1	0	0.00	4	7.1	4.20	Very high

The data obtained from the questionnaire show that students' perceptions of GBL in vocabulary learning are overwhelmingly positive. Out of thirteen items, eight were classified under the "Very High" category, while the remaining five received "High" scores based on the interpretation scale. The highest mean score was recorded for the item stating that GBL methods are more engaging in English learning ( $M = 4.50$ ), with 67.9% of students strongly agreeing and 25% agreeing. This confirms that students feel more enthusiastic and involved when games are integrated into English lessons, likely because they shift the focus from traditional methods to interactive, enjoyable activities. Students become enthusiastic about learning English when they are involved in GBL (Irwansyah & Izzati, 2021).

In addition to emotional engagement, cognitive and behavioural aspects also improved. Students reported increased concentration during English lessons when using GBL (mean = 4.04), which suggests that interactive and game-based approaches can help sustain attention and reduce boredom. GBL provides enjoyable conditions, motivates and

strengthens students' concentration (Li et al., 2021). Finally, the feeling of being challenged (mean = 4.20) implies that students recognized the value of GBL not only for fun but also for pushing themselves to perform better and grow academically. These findings show that GBL meets both affective and cognitive needs, reinforcing its effectiveness in language learning.

Another item that received a very high score ( $M = 4.38$ ) was related to classroom participation, with 60.7% strongly agreeing and 26.8% agreeing that GBL increased their involvement. Similarly, collaboration with classmates through GBL ( $M = 4.30$ ) also received strong positive feedback, with a majority (89.3%) agreeing or strongly agreeing. These results demonstrate that GBL promotes active participation and peer collaboration, creating a supportive environment for vocabulary learning. This aligns with Vygotsky's social constructivist theory, which emphasizes that learning is most effective when students engage with others in meaningful contexts. GBL involves students in collaboration with their classmates (Bahari, 2022)

In terms of vocabulary mastery, the statement "English vocabulary is easier to remember through game-based learning" received a mean of 4.11, with 85.7% of students agreeing or strongly agreeing. This suggests that GBL is effective in enhancing memory retention, as games often involve repetition, context, and association strategies. GBL helps students understand vocabulary and ultimately improves their retention (Franciosi et al., 2016). Meanwhile, the learning process being more enjoyable through GBL had a high mean score of 4.36, further confirming that enjoyment plays a key role in student motivation and willingness to engage. These aspects are crucial because a positive learning atmosphere significantly impacts students' desire to participate and absorb information.

Although most items showed exceptionally high ratings, a few were slightly lower yet still positive. For example, the item on students' confidence in using English after GBL had a mean score of 3.73, and the item on speaking skills scored 3.84. These results suggest that while GBL supports effective and productive language development, students might still need more structured speaking opportunities or time to develop fluency. Nonetheless, these scores fall within the "High" category, indicating that students still perceive positive changes in their language abilities, just to a slightly lesser extent compared to more observable aspects like engagement and enjoyment. Learning activities in GBL encourage students to improve their speaking skills (Hwang et al., 2016).

Students generally perceive Game-Based Learning (GBL) as an effective and engaging approach for improving vocabulary skills in English language learning. Unlike traditional memorization-based methods, GBL offers an interactive, student-centered environment where learners can engage with vocabulary in meaningful and enjoyable contexts (Plass et al., 2015). According to the survey results, students found GBL to be highly effective in helping them remember and understand new vocabulary, as it fosters motivation and participation—key factors in successful vocabulary acquisition (Gregersen et al., 2021).

This classification shows that GBL has many functions in the learning process. GBL is not only effective for introducing and reinforcing vocabulary, but is also valuable for creating a fun, inclusive, and interactive classroom environment. This emotional connection to learning plays a vital role in maintaining motivation and consistency in students' efforts, which is essential for long-term language development (Figure 1).



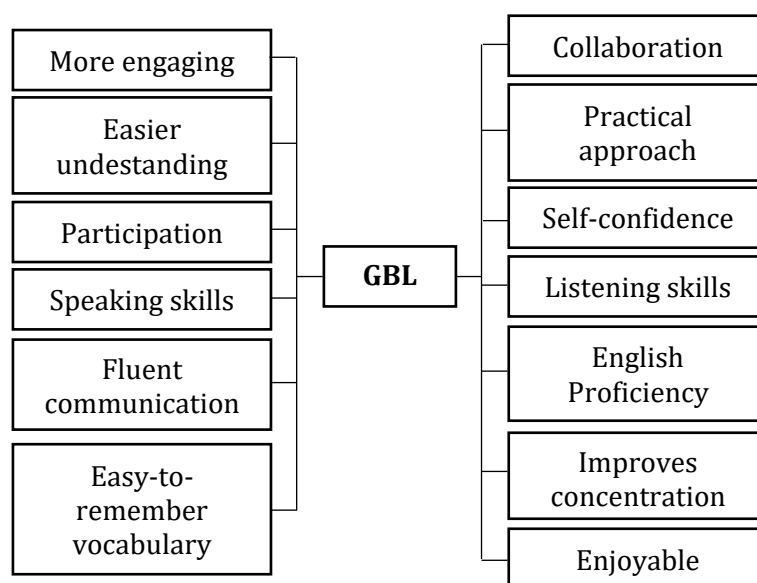


Fig. 1. Classification of students' perceptions of GBL in vocabulary learning

The classification results confirm that Game-Based Learning is not only well-received but also highly effective across domains. GBL supports vocabulary retention, increases classroom engagement, enhances emotional satisfaction, and encourages student-centered participation. Future studies could investigate further to measure long-term effects and test these variables statistically. However, based on the current data, GBL has shown great potential for broader application in EFL classrooms.

## CONCLUSION

This study concludes that Game-Based Learning (GBL) helps students master vocabulary in English language teaching, especially among Grade X students at SMA Istiqamah. The results show that through interactive and engaging activities, GBL makes it easy for students to understand materials and vocabulary, communicate, speak, collaborate, listen, concentrate, and enjoy. Future research should broaden the sample size for improved generalisability and adopt mixed-method approaches that combine quantitative and qualitative data. Additionally, further studies could explore the impact of GBL on other language skills, such as grammar, reading, or speaking, and examine key influencing factors like teacher roles, student motivation, and technology integration in classroom settings.

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