

Students' Perceptions Toward Using Flash Cards in EFL Classrooms

Ahmad Fahmi Idris, Siska Yuliawati*, Najwa Riskiyani, Naf'an Tarihoran

English Education Department, UIN Sultan Maulana Hasanuddin Banten, 42171, Indonesia

*Correspondence: siskayuliawati077@gmail.com

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Abstract: Vocabulary acquisition remains one of the most persistent challenges faced by students learning English as a Foreign Language, particularly in the Indonesian educational context, where learners have limited exposure to authentic English use in daily life. Flash cards, as a form of visual learning media that integrates written words with images, have been recognized as a practical and effective tool for supporting vocabulary instruction and strengthening long-term word retention in EFL classrooms. This study investigates students' perceptions of the use of flashcards in EFL classrooms at the university level, with a specific focus on a higher education EFL context in Banten, Indonesia — a population and setting underrepresented in the existing literature. Unlike prior studies that examined remote or primary-school settings, this study targets university-level EFL learners and examines a broader range of perception dimensions including motivation, comprehension, retention, ease of use, and speaking ability. Employing a descriptive quantitative research design, data were collected through a validated structured questionnaire (Cronbach's $\alpha = .87$) distributed via Google Forms to 100 EFL students with verified experience in flashcard-based vocabulary learning activities. Purposive sampling was applied based on measurable criteria of prior flashcard exposure. The collected responses were analyzed descriptively through frequency, percentage, mean, and standard deviation distributions. The findings reveal that students hold predominantly positive perceptions of flash cards, perceiving the medium as instrumental in increasing their motivation to learn new vocabulary, facilitating comprehension of word meanings through visual support, and strengthening vocabulary retention over time. The illustrations embedded in flashcards were widely acknowledged as helpful in associating words with concrete meanings, thereby reducing the cognitive load of learning unfamiliar vocabulary. Although students showed a comparatively moderate response to the direct impact of flash cards on speaking proficiency, the overall responses confirm that flash cards serve not only as an effective vocabulary-learning tool but also as a motivating medium that fosters active student engagement and creates a more interactive classroom atmosphere. These findings offer practical implications for EFL teachers in selecting and applying student-centered instructional media to enrich vocabulary teaching and improve learning outcomes.

Keywords: Flash Cards, ELF Classroom, Students' Perception, Vocabulary Learning, Visual Learning Media

Abstrak: Akuisisi kosakata tetap menjadi salah satu tantangan paling besar yang dihadapi oleh siswa yang belajar bahasa Inggris sebagai bahasa asing, khususnya dalam konteks pendidikan di Indonesia, di mana pelajar memiliki paparan terbatas terhadap penggunaan bahasa Inggris otentik dalam kehidupan sehari-hari. Kartu flash, sebagai media pembelajaran visual yang mengintegrasikan kata-kata tertulis dengan gambar, telah diakui sebagai alat yang praktis dan efektif untuk mendukung pengajaran kosakata serta memperkuat retensi kata jangka panjang di kelas EFL. Studi ini menyelidiki persepsi siswa terhadap penggunaan kartu flash di kelas EFL tingkat universitas di Banten, Indonesia, dengan fokus pada populasi yang belum banyak diteliti. Dengan menggunakan desain penelitian kuantitatif deskriptif, data dikumpulkan melalui kuesioner terstruktur yang telah divalidasi (Cronbach's $\alpha = .87$) dan didistribusikan melalui Google Forms kepada 100 mahasiswa EFL yang memiliki pengalaman terverifikasi dalam aktivitas pembelajaran kosakata berbasis kartu flash digital. Pengambilan sampel purposif diterapkan berdasarkan kriteria keterpaparan kartu flash digital yang terukur. Tanggapan yang dikumpulkan dianalisis secara deskriptif melalui distribusi frekuensi, persentase, mean, dan

standar deviasi. Temuan menunjukkan bahwa siswa umumnya memiliki persepsi positif terhadap penggunaan kartu flash, menganggap media ini berperan penting dalam meningkatkan motivasi mereka untuk mempelajari kosakata baru, memfasilitasi pemahaman makna kata melalui dukungan visual, serta memperkuat retensi kosakata dari waktu ke waktu. Ilustrasi yang tertanam dalam kartu flash secara luas diakui bermanfaat untuk menghubungkan kata-kata dengan makna konkret, sehingga mengurangi kesulitan kognitif dalam mempelajari kosakata yang belum dikenal. Meskipun siswa menunjukkan respons yang relatif moderat mengenai dampak langsung kartu flash terhadap kemampuan berbicara, respons keseluruhan menegaskan bahwa kartu flash tidak hanya berfungsi sebagai alat pembelajaran kosakata yang efektif, tetapi juga sebagai media yang memotivasi dan mendorong keterlibatan aktif siswa dan menciptakan suasana kelas yang lebih interaktif. Temuan ini menawarkan implikasi praktis bagi guru EFL dalam memilih dan menerapkan media pembelajaran yang berpusat pada siswa untuk memperkaya pengajaran kosakata serta meningkatkan hasil belajar.

Kata Kunci: *Kartu Flash, Kelas EFL, Persepsi Siswa, Pembelajaran Kosakata, Media Pembelajaran Visual*

INTRODUCTION

English has established itself as the dominant language of global communication, serving as a primary medium of interaction across education, science, technology, business, and international diplomacy. In Indonesia, English functions as a foreign language and has been incorporated into formal education from the elementary level through higher education. Despite its long-standing inclusion in the national curriculum, many Indonesian learners continue to face significant challenges in achieving adequate English proficiency. Among the various dimensions of language learning, vocabulary acquisition is widely regarded as one of the most foundational yet difficult aspects, as it constitutes the primary building block for developing all four language skills: listening, speaking, reading, and writing. Research has consistently documented that insufficient vocabulary knowledge remains a major obstacle for Indonesian learners in comprehending and using English effectively (Krisnayanti & Winarta, 2021; Hartini & Ardini, 2024).

Vocabulary holds a central role in language development because it provides learners with the fundamental resources needed to construct meaning in both receptive and productive communication. Students with an extensive vocabulary are generally better able to understand written and spoken texts, express ideas accurately, and engage confidently in classroom interactions. Conversely, students with limited vocabulary knowledge frequently struggle across all major language skills and often demonstrate lower levels of confidence in speaking and writing activities. Fathurizki et al. (2025) emphasize that vocabulary limitations remain one of the most significant factors contributing to low English achievement among students in the EFL context. These difficulties highlight the urgent need for instructional strategies and learning media that can facilitate more effective and meaningful vocabulary learning experiences.

In many Indonesian classrooms, vocabulary instruction is still predominantly delivered through conventional methods, such as memorizing word lists, translation exercises, and repetitive drills. While these approaches may offer some benefit in terms of exposure to new words, they often result in passive learning and reduced student engagement, as learners have limited opportunities to interact meaningfully with vocabulary in context. To address these limitations, educators are increasingly seeking alternative instructional media that can make vocabulary learning more engaging, interactive, and memorable. One medium that has attracted considerable attention in EFL vocabulary teaching is the use of flashcards. Flash cards are visual learning tools that typically feature words, pictures, symbols, or short phrases designed to help students associate vocabulary items with visual representations, thereby facilitating recognition and meaning construction. Connected by the principles of active recall and spaced repetition, flash cards support vocabulary learning by encouraging learners to repeatedly engage with word forms and meanings, which strengthens neural pathways associated with long-term memory storage (Xodabande et al., 2022).

A growing body of research has demonstrated the positive impact of flashcards on vocabulary learning outcomes and classroom engagement in EFL settings. Putri et al. (2024)

reported significant improvements in students' vocabulary scores following flashcard-based instruction, while Kurniati et al. (2023) found that flashcard activities enhanced both vocabulary retention and classroom participation. Saputri & Prasetyarini (2024) further noted that flash cards promoted a more interactive classroom atmosphere and provided students with expanded opportunities for meaningful vocabulary practice. In terms of affective dimensions, Nazira et al. (2025) found that students perceived flash cards as enjoyable and useful, with the medium making vocabulary more memorable and learning more engaging. Despite this growing evidence base, a specific gap remains: most existing studies have been conducted in primary or secondary school settings, remote school contexts, or non-Indonesian university populations, and few have simultaneously examined multiple perception dimensions — including motivation, comprehension, ease of use, vocabulary retention, and speaking ability — within a single university-level EFL cohort in Banten, Indonesia. Furthermore, the construct of “perception” as used in this study refers to students' subjective evaluations and beliefs about the effectiveness and utility of flashcards as a learning medium (Nazira et al., 2025); “vocabulary retention” refers to the ability to recall previously learned vocabulary items after a delay; and “vocabulary mastery” encompasses recognition, meaning understanding, and basic productive use of target words (Nation, 2001). Since students' perceptions of learning media are closely linked to their motivation, participation, and overall learning outcomes, understanding how university-level EFL students in a local Indonesian context view physical flashcards is essential for informing locally relevant instructional decisions. This study therefore aims to investigate students' perceptions of the use of digital flashcards in EFL classrooms at the university level, filling a population-specific and context-specific gap not adequately addressed by prior research.

METHOD

This study employed a descriptive research design with a quantitative approach to examine students' perceptions of the use of flashcards in EFL classrooms. The research was conducted at the university level, involving students with direct experience with flashcard-based vocabulary learning activities. Data were gathered through a structured questionnaire and analyzed descriptively to identify patterns and trends in student responses. The following subsections describe the respondents, the instrument, the procedures, and the data analysis techniques applied in this study.

1) Respondents

The participants in this study were students enrolled in the English Language Education Department at Universitas Islam Negeri Sultan Maulana Hasanuddin Banten, Indonesia. A total of 100 students were selected as respondents, all of whom have firsthand experience participating in English vocabulary learning activities that use digital flashcards as the primary learning tool. The flashcards consist of digital cards displayed on an electronic device, with the target vocabulary word on one side and a corresponding image or definition on the other side. Digital flashcard applications (e.g., Quizlet, Anki) were not used in the activities surveyed, situating this study explicitly in the physical flashcard tradition. Purposive sampling was employed, with two measurable selection criteria: (1) respondents must have participated in a minimum of five classroom sessions in which flashcards were used as the primary vocabulary learning activity, and (2) respondents must currently be enrolled in or have completed at least one English vocabulary course using flashcard-based instruction. The sample comprised students from Semester 2 (20%), Semester 4 (15%), and Semester 6 (65%). The dominance of sixth-semester students reflects the higher enrollment in upper-semester vocabulary and language skills courses at the research site and is acknowledged as a limitation in the Limitations section.

2) Instruments

The primary instrument used in this study was a structured questionnaire designed to measure students' perceptions of the use of physical flashcards in EFL classrooms. The questionnaire comprised 11 statements assessing three construct dimensions: (1) motivational and affective engagement (items 1–3), (2) cognitive effectiveness including comprehension, retention,

and vocabulary mastery (items 4–7, 9), and (3) practical utility including ease of use and impact on speaking ability (items 8, 10–11). Each statement was assessed using a five-point Likert scale, with response options ranging from Strongly Agree (5) to Strongly Disagree (1). The 11 questionnaire items were as follows: (1) Flash cards increase my interest in joining English lessons; (2) Flash cards motivate me to learn new vocabulary; (3) Flash cards make it easier for me to understand the meaning of new vocabulary; (4) Using flash cards helps me retain vocabulary for a longer time; (5) The pictures and illustrations on flash cards help me understand the meaning of words; (6) Flash cards are easy to use during learning activities; (7) Flash cards improve my ability to speak English; (8) Flash cards help me expand my overall vocabulary mastery; (9) Flash cards are an effective medium for learning English vocabulary; (10) I want my teacher to continue using flash cards in English learning activities; (11) Flash cards help me remember vocabulary better than other learning methods. Content validity was established through expert review by two EFL educators who confirmed item alignment with the study constructs. Face validity was confirmed through pilot administration with 15 students not included in the main sample. Reliability was assessed using Cronbach's alpha, yielding a coefficient of .87 across all 11 items, indicating high internal consistency (George & Mallery, 2003). This instrument enabled the researchers to systematically measure the extent to which students viewed physical flashcards as beneficial for their English vocabulary learning.

3) Procedures

Data collection was conducted in several sequential stages. In the initial phase, the researchers developed the questionnaire based on the study's objectives and an extensive review of the literature on flashcard use in EFL vocabulary instruction. Once the instrument was finalized, it was distributed to the selected respondents via an online platform via a Google Form. Participants were instructed to provide honest responses to each statement based on their personal experiences with flash cards in the EFL learning context. After the collection period concluded, all submitted responses were organized and compiled for subsequent analysis.

4) Data Analysis

The questionnaire data were analyzed using descriptive statistics to identify overarching trends in students' perceptions of flashcard use in EFL classrooms, using Microsoft Excel and IBM SPSS Statistics 26. The analytical process involved calculating the frequency, percentage, mean (M), and standard deviation (SD) of responses for each questionnaire item. Prior to data collection, the following categorisation rule was established to interpret Likert mean scores: a mean of 4.20–5.00 was classified as "very positive"; 3.40–4.19 as "positive"; 2.60–3.39 as "neutral"; 1.80–2.59 as "negative"; and 1.00–1.79 as "very negative." This five-category scale, adapted from Riduwan (2015), provides a pre-specified decision rule for interpreting perception scores. The descriptive approach was selected as the most appropriate method for capturing and presenting the overall patterns evident in the data.

RESULT AND DISCUSSION

Results

This study collected data from 100 EFL students through a structured questionnaire administered via Google Forms. Respondents were asked to rate their agreement with 11 statements about physical flashcard use in vocabulary learning, using a five-point Likert scale from Strongly Agree (5) to Strongly Disagree (1). The data were analyzed descriptively using SPSS 26, with findings presented as frequency, percentage, mean (M), and standard deviation (SD) distributions across all items. Perceptions were categorised as very positive (M = 4.20–5.00), positive (M = 3.40–4.19), neutral (M = 2.60–3.39), negative (M = 1.80–2.59), or very negative (M = 1.00–1.79), following Riduwan (2015). A summary table comparing M and SD across all 11 items is provided at the end of this section.

Respondents' Demographic Data

Table 1. Respondents by Semester

Semester	Frequency	Percentage
Semester 2	20	20%
Semester 4	15	15%
Semester 6	65	65%
Total	100	100%

Participants were drawn from three academic semesters, as summarized in Table 1. The majority of respondents were sixth-semester students (65%), followed by second-semester students (20%) and fourth-semester students (15%). The dominance of sixth-semester participants suggests that most respondents had relatively extensive experience with EFL learning activities, which may have contributed to more reflective and informed perceptions of the use of flashcards as an instructional medium. A brief cross-cohort comparison reveals noteworthy differences. Sixth-semester students tended to report higher agreement with items related to vocabulary retention and effectiveness, likely reflecting accumulated experience with flashcard-based tasks across multiple courses. Second-semester students, by contrast, showed comparatively higher neutral responses on items about speaking ability and vocabulary mastery, which may reflect their more limited exposure to productive language use at an early stage of their studies. Fourth-semester students showed response patterns broadly consistent with the overall sample. While a full inferential statistical comparison across semesters was not within the scope of this study's descriptive design, these descriptive trends suggest that perceived flashcard effectiveness may strengthen with increasing academic experience, a direction worthy of further investigation.

Table 2. Students' Perception Toward Using Flash Cards in EFL Classrooms

Categories Responses	Percentage Responses (%)				
	SA	A	N	DA	SDA
Flashcards Increase Interest in English Lessons	24	34	35	6	1
Motivation to Learn New Vocabulary	18	54	23	4	1
Ease of Understanding Vocabulary Meaning	21	53	19	3	4
Vocabulary Retention Over Time	18	49	27	6	0
Role of Illustrations in Understanding	32	43	20	3	2
Ease of Use in Classroom Activities	21	46	28	5	0
Impact on Speaking Ability	9	41	44	5	1
Expansion of Vocabulary Mastery	19	43	31	6	1
Effectiveness as a Learning Medium	18	52	26	2	2
Desire for Continued Use	19	40	36	3	2

Flashcards Increase Interest in English Lessons

Table 2 shows that 58% of students agreed or strongly agreed that flash cards increase their interest in joining English lessons, while 35% responded neutrally. Only a small proportion of respondents (7%) disagreed or strongly disagreed. These results indicate that flash cards serve as an engaging visual medium that captures students' attention during classroom activities.

Motivation to Learn New Vocabulary

A substantial majority of respondents (72%) reported feeling motivated to learn new vocabulary when using flashcards, as shown in Table 2. Only 5% expressed disagreement, while

23% remained neutral. This high level of agreement suggests that flash cards create an encouraging learning environment that actively prompts students to engage with and expand their vocabulary knowledge.

Ease of Understanding Vocabulary Meaning

As illustrated in [Table 2](#), 74% of respondents found that flashcards helped them understand new vocabulary more easily. The clear, direct presentation format of flashcards appears to simplify the comprehension of meaning, reducing the difficulty students typically experience when encountering unfamiliar words.

Vocabulary Retention Over Time

67% of students believe they can retain vocabulary for longer after studying with flashcards. No respondents selected Strongly Disagree, indicating a general absence of a strong negative perception regarding flash cards' role in retention. The repetitive, visual nature of flashcard practice appears to support longer-lasting vocabulary recall.

Role of Illustrations in Understanding

The data in [Table 2](#) show that 75% of students agreed that pictures and illustrations on flashcards are valuable for helping them understand word meanings. This finding reflects the broader role of visual cues in language learning, as visual representations allow learners to associate words with concrete concepts, facilitating more accurate and deeper cognitive processing of vocabulary.

Ease of Use in Classroom Activities

67% of respondents found flashcards easy to use during learning activities, and none selected Strongly Disagree. This perceived practicality reinforces the view that flash cards are a versatile instructional resource that can be smoothly integrated into a variety of classroom settings without placing excessive demands on students or teachers.

Impact on Speaking Ability

[Table 2](#) presents a more varied distribution of responses. While 50% of students felt that flashcards improve their speaking ability, a notably large proportion (44%) remained neutral on this item. This pattern suggests that although flash cards provide essential vocabulary input that underpins oral communication, students may perceive that additional communicative practice, such as role-plays, conversations, and oral tasks, is still necessary to achieve meaningful improvement in speaking fluency.

Expansion of Vocabulary Mastery

62% of respondents agreed that flash cards help expand their overall vocabulary mastery. While this majority reflects a positive perception, 31% of students were neutral, potentially indicating that while flash cards broaden vocabulary exposure, students recognize that vocabulary mastery also requires contextual practice and usage beyond what flash cards alone can provide.

Effectiveness as a Learning Medium

70% of students considered flashcards an effective medium for learning English vocabulary. This strong approval rating affirms students' overall confidence in flash cards as a legitimate and valuable instructional resource for EFL vocabulary development.

Desire for Continued Use

Finally, 59% of students expressed a desire for their teachers to continue using flash cards in English learning activities. The relatively high neutral response (36%) may reflect students who are open to using flashcards but do not prefer them exclusively over other instructional media.

Nevertheless, the majority's continued use preference confirms that flash cards are perceived as both helpful and enjoyable by most respondents.

Table 3. Summary of Mean and Standard Deviation Across All Items

Item	Statement	M	SD	Category
1	Flashcards increase interest in English lessons	3.74	0.92	Positive
2	Flashcards motivate learning new vocabulary	3.84	0.80	Positive
3	Flashcards ease understanding of vocabulary meaning	3.84	0.92	Positive
4	Flashcards improve vocabulary retention over time	3.79	0.80	Positive
5	Illustrations help understand word meanings	4.00	0.91	Positive
6	Flashcards are easy to use in classroom activities	3.83	0.81	Positive
7	Flashcards improve speaking ability	3.52	0.77	Positive
8	Flashcards help expand vocabulary mastery	3.73	0.87	Positive
9	Flashcards are effective as a learning medium	3.82	0.82	Positive
10	Desire for continued flashcard use	3.71	0.88	Positive

Discussion

The findings of this study reveal that students hold predominantly positive perceptions of the use of flashcards in EFL vocabulary learning, particularly regarding motivation, comprehension, and retention. These results are consistent with a substantial body of prior research affirming the effectiveness of flash cards as an instructional medium and can be meaningfully interpreted through relevant theoretical frameworks in language acquisition and educational psychology.

The most prominent finding is that 72% of students reported feeling motivated to learn new vocabulary when using flash cards. This outcome aligns with the principles of interactive and meaningful learning, which emphasize that learners are more likely to engage deeply with content when it is presented in a format that stimulates interest and reduces monotony. Connected by the broader understanding that learning media directly influence learner affect and engagement, this finding reflects the position of motivation as a crucial mediating variable between instructional design and learning outcomes. The visual and interactive qualities of flash cards appear to transform vocabulary practice from a passive memorization task into a more active and stimulating learning experience. This is further supported by the work of [Nazira et al. \(2025\)](#), who found that students perceived flashcards as enjoyable and effective, which, in turn, encouraged greater voluntary participation in vocabulary learning activities.

The finding that 74% of students experienced greater ease in understanding vocabulary meanings through flash cards reinforces the critical role of input clarity in successful language acquisition. Flash cards reduce cognitive load by presenting words in a direct, simplified visual format that learners can access immediately. This aligns with the dual coding theory advanced by [Paivio \(1986\)](#), which posits that information encoded through both verbal and visual channels is retained more effectively in long-term memory than information processed through a single modality. When students encounter a word paired with a corresponding image, they create two complementary mental representations—one verbal and one visual—which strengthen their ability to retrieve that information later. This perspective is further reinforced by the finding that 75% of respondents agreed that illustrations on flash cards are valuable in facilitating understanding of word meanings, confirming that visual elements are a central mechanism through which flash cards support comprehension.

Consistent with established cognitive principles of repetition and reinforcement in memory formation, the finding that 67% of students reported improved vocabulary retention following

flashcard use is both theoretically sound and practically significant. Flash cards naturally promote spaced and repeated exposure to vocabulary items, a learning strategy extensively validated in research on memory and language acquisition. Each encounter with a word through flash card practice strengthens the retrieval pathways associated with that word in long-term memory, making future recall progressively more efficient. These results are consistent with those reported by [Anggreani et al. \(2025\)](#), who observed that repeated exposure to pictures and written words through flashcards significantly improved vocabulary retention among EFL students. The practical implication of this finding is that teachers can leverage flash cards not only for initial vocabulary introduction but also as a systematic tool for vocabulary consolidation and review.

One dimension in which flash cards appear to have a comparatively limited perceived impact is speaking ability. Although 50% of students reported that flash cards improve their oral skills, a notably large proportion (44%) remained neutral on this item. This pattern suggests that students draw a distinction between vocabulary knowledge, which flash cards demonstrably support, and oral communicative competence, which requires additional practice in authentic speaking contexts. This finding is particularly interesting when compared with [Tanjungpura \(2023\)](#), whose study reported similarly moderate perceptions of flashcard impact on speaking, and with [Yowaboot & Sukying \(2022\)](#), who found that digital flashcard use in primary school settings yielded stronger gains in vocabulary knowledge than in oral production. The alignment across studies with differing populations, settings, and flashcard formats strengthens the argument that this gap between receptive vocabulary and productive oral competence is a systematic pattern rather than a context-specific anomaly. A more analytically precise framework for explaining this gap is Anderson's ACT-R theory ([Anderson, 1983](#); [Anderson & Lebiere, 1998](#)), which distinguishes between declarative knowledge (factual information that can be recalled, such as knowing a word's meaning) and procedural knowledge (the ability to apply knowledge automatically in real-time performance, such as retrieving and deploying a word during spontaneous speech). Flashcards are highly effective at building declarative vocabulary knowledge through repeated retrieval practice, but they do not activate the procedural components of speaking, which require fluency training through communicative practice. This theoretical lens aligns with the findings of [Rahmawati et al. \(2022\)](#), who observed that while digital flashcards use significantly improved vocabulary test scores, oral production gains required additional task-based speaking activities. This finding therefore highlights the importance of combining flash card practice with interactive speaking tasks such as information-gap activities, structured role-plays, and vocabulary-in-context oral drills to support more comprehensive language development.

The finding that 62% of students perceived flash cards as helpful in expanding their overall vocabulary mastery, combined with the neutral responses of 31%, further illustrates an important nuance in the relationship between flash card use and comprehensive vocabulary development. Vocabulary mastery, as conceptualized by [Nation \(2001\)](#), encompasses not only word recognition but also an understanding of word meaning in context, collocations, grammatical patterns, and appropriate usage across registers. Flash cards are particularly well-suited to developing word recognition and basic semantic understanding, but they may offer less support for the deeper, contextual dimensions of vocabulary knowledge. This limitation does not diminish the value of flash cards as an instructional tool; rather, it underscores the importance of embedding flash card practice within a broader vocabulary teaching framework that also includes reading, contextual learning tasks, and communicative activities.

The overall effectiveness rating of flashcards was strongly affirmed, with 70% of respondents rating them as an effective learning medium and 59% expressing a preference for their continued use in future classes. These figures are broadly consistent with the findings of [Saputri & Prasetyarini \(2024\)](#), [Putri et al. \(2024\)](#), and [Le & Luong \(2023\)](#), who reported positive outcomes from flash card-based vocabulary instruction. However, a substantive point of divergence is also noteworthy: [Maureen & Rahmansyah \(2024\)](#) reported that while students viewed flashcards positively for word recognition, they expressed a preference for digital over physical formats, citing the convenience of self-paced review and gamified repetition. In contrast, the present study's

participants — who used exclusively continued to rate the medium highly, indicating the effective and social dimensions of digital flashcard activities in the classroom (e.g., peer interaction, collaborative card-sorting tasks) may partially compensate for the technological affordances absent in the physical format. This finding supports the argument that physical flashcards retain significant pedagogical value even in an increasingly digital learning landscape, provided they are embedded in interactive classroom routines rather than used as solitary memorisation tools. The relatively low rates of strong disagreement across most questionnaire items further suggest that even students who did not strongly endorse flash cards tended to maintain a neutral rather than negative stance, indicating a generally favorable reception of the medium.

CONCLUSION

This study concludes that EFL students at the university level hold predominantly positive perceptions of the use of flashcards in vocabulary learning. Flashcards are perceived as an effective and engaging instructional medium that enhances motivation, comprehension, and vocabulary retention. The visual elements integrated into flash card design, including pictures and illustrations, play a particularly significant role in helping students associate word forms with their meanings, reducing the cognitive difficulty of vocabulary acquisition and supporting deeper encoding in long-term memory. The findings further confirm that flash cards foster a more interactive and enjoyable learning environment, encouraging active student participation and reducing learning anxiety.

Nonetheless, the study also identifies a notable limitation in the perceived impact of flash cards on speaking proficiency. Students' neutral responses regarding the relationship between flash card use and speaking ability suggest that vocabulary knowledge developed through flash cards does not automatically translate into oral communicative competence. This finding implies that flash cards should be implemented as one component within a broader, multi-strategy instructional framework that incorporates interactive speaking activities. Specifically, EFL teachers are encouraged to combine flashcard-based vocabulary introduction (two to three sessions per topic unit) with follow-up communicative activities such as information-gap tasks, peer vocabulary quizzes, and structured role-plays in which students must actively produce the target vocabulary in spoken contexts. For lower-proficiency learners (Semester 2), paired flashcard games that require oral labelling and sentence-building are recommended before students' progress to free-production tasks. For more advanced learners (Semester 6), flashcards can be integrated into debate preparation or oral presentation warm-ups to activate target vocabulary prior to extended speaking tasks. Teachers are also encouraged to revisit flashcard sets at spaced intervals — for example, reviewing the same set across three consecutive weeks — to support long-term retention rather than one-time exposure. Future research could further investigate the long-term effects of physical vs. digital flashcard use on vocabulary retention in the same population and explore whether the integration of Quizlet-style spaced repetition algorithms can extend the retention benefits observed in this study. A dedicated acknowledgement of study limitations is also warranted. First, this study employed single-institution purposive sampling, which limits the generalisability of findings to other university EFL contexts in Indonesia. Second, all data were self-reported via a Likert-scale questionnaire, which introduces self-report bias and does not capture actual vocabulary performance gains. Third, the unequal semester distribution (65% Semester 6) may have skewed perceptions toward more experienced, positively disposed students. Fourth, cross-sectional design provides only a snapshot of perceptions at one point in time and cannot capture changes in attitude over a full academic term. Fifth, the absence of an objective performance measure (e.g., a vocabulary test) means that perceptions of effectiveness cannot be corroborated with behavioural evidence. Future studies should address these limitations through multi-institution sampling, pre-post performance assessment, and longitudinal designs.

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