LEVERAGING FLASHCARD FOR ELT: A SYSTEMATIC REVIEW

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ABSTRACT

Flashcards in English Language Teaching (ELT) have gained significant attention due to their effectiveness in vocabulary acquisition, engagement, and retention. This systematic review aims to analyze existing studies on the role of flashcards in ELT, comparing traditional and digital formats and identifying their impact on language learning outcomes. The study follows a systematic literature review methodology, selecting 3.946 articles published (Connected Paper: 221, PubMed: 179, Science Direct: 507, Taylor: 1.670, Mendeley. Co: 1.369) between 2020 and 2024. Findings suggest flashcards enhance vocabulary retention, learner motivation, and classroom interaction. Digital flashcards, particularly those utilizing spaced repetition technology, offer advantages in accessibility and long-term retention, although challenges such as digital literacy gaps and over-reliance on rote memorization persist. While flashcards effectively support vocabulary learning, their integration with contextual and communicative learning strategies is crucial for maximizing their pedagogical benefits. The review highlights the importance of a balanced approach in incorporating flashcards within ELT and suggests future research on their role in higher-order language skills development.

Keywords: English Language Teaching (ELT), Flashcards, Teaching Media, Vocabulary Acquisition

I.   INTRODUCTION

Flashcards have long been recognized as an effective tool in English Language Teaching (ELT), aiding students in memorizing vocabulary, understanding grammar, and improving speaking and listening skills. By presenting words, phrases, or images interactively, flashcards enhance learning engagement through matching games, memory challenges, and question-and-answer sessions (Dineshika & R.R. Jayasinghe, 2024). Their visual and auditory reinforcement benefits learners with diverse learning styles, increasing motivation and making language acquisition more dynamic and enjoyable (Rachmadi et al., 2023).

Nowadays, flashcards' adaptability across different instructional methods contributes to their widespread use in ELT. Teachers can modify flashcard content

based on students' proficiency levels, covering fundamental vocabulary to complex sentence structures. The rise of digital flashcards has further transformed language learning by providing accessibility through educational applications and online platforms. The combination of physical and digital flashcards offers a versatile approach, allowing students to engage with language learning more effectively and personally. (Prasanti, 2024).

Despite their popularity, the effectiveness of flashcards in ELT remains a subject of debate. While several studies affirm their role in enhancing vocabulary retention and engagement, others argue that their success depends on instructional design, learner involvement, and integration with other teaching strategies. Additionally, the shift from traditional to digital flashcards raises questions about their comparative impact on cognitive processing and long-term language retention. Given these inconsistencies, a comprehensive review is needed to assess their pedagogical value. (Lubis et al., 2023).

Although flashcards are widely used in English Language Teaching (ELT) and have been recognized for their effectiveness in vocabulary retention and interactive learning, their pedagogical impact is still debatable. Some studies show that flashcards significantly improve vocabulary acquisition, while others argue that their effectiveness depends on instructional design, learner engagement, and integration with other teaching methods. This inconsistency in research findings highlights the need to explore the optimal use of flashcards in ELT. (Rizqiyah et al., 2024).

Moreover, this study aims to synthesize existing research on flashcards in ELT, examining their benefits, limitations, and key factors that determine their effectiveness. By analyzing prior studies, this research seeks to provide insights into optimizing flashcard usage for better student engagement and learning outcomes. The review will specifically explore how different learning contexts influence the efficacy of flashcards and whether specific instructional approaches enhance their impact.

Furthermore, in the context of English Language Teaching (ELT), technological advancements continue to reshape modern education, with artificial intelligence (AI) and gamification introducing new dimensions to flashcard-based learning. AI-powered flashcards can personalize learning by adapting to student progress and providing targeted reinforcement. Meanwhile, gamification elements, such as rewards, leaderboards, and interactive challenges, enhance motivation and engagement. Exploring how these innovations can be effectively integrated into ELT will ensure that flashcards remain relevant in evolving educational contexts. (Zarrati et al., 2024).

Based on these considerations, this study is guided by the following research questions: (1) How do learning outcomes differ between students who use flashcards and those who do not? (2) What are the key predictors that influence the effectiveness of flashcards in ELT? (3) Which language skills benefit the most from using flashcards in the learning process? By addressing these questions, this research aims to bridge the

gap in existing studies and offer a clearer understanding of how flashcards can enhance English language learning in various educational contexts.

A. Literature Review

1.1 Technology in English Language Teaching

Technology integration in English Language Teaching (ELT) has significantly changed teaching methodologies and learning experiences. According to Syarifuddin and Ariawan (2021), technology provides innovative tools for teachers to enhance engagement, interaction, and accessibility in language learning. Using digital platforms, such as online learning applications, virtual classrooms, and interactive media, allows students to experience a more dynamic and flexible learning process. These advancements have transformed the traditional teacher-centered approach to more student-centered learning, where students can access materials independently and practice language skills at their own pace.

In addition, technology facilitates personalized learning by enabling adaptive learning systems that meet students' individual needs. Incorporating multimedia elements, such as audio, video, and interactive exercises, enhances understanding and retention of language concepts. However, despite its advantages, technology integration in ELT has several challenges, such as the digital literacy gap among students and educators, internet accessibility issues, and the need for effective instructional design. Addressing these challenges is crucial to maximizing the potential of technology in ELT and ensuring that technology serves as a supportive tool rather than a barrier to learning. (Anshari et al., 2022).

1.2. Flashcard in English Language Teaching

Flashcards have long been recognized as an effective instructional tool in English language teaching, particularly in vocabulary acquisition. According to Vocabulary and the Four Skills: Pedagogy, Practice, and Implications for Vocabulary Teaching (2020), flashcards provide learners with a structured and engaging method to reinforce vocabulary retention through repeated exposure. Using visual and textual cues in flashcards facilitates dual coding, a cognitive process that improves memory by associating words with images or contextual meanings. This technique mainly benefits young learners and entry-level students who rely heavily on visual learning strategies.

However, while flashcards help build vocabulary, their effectiveness in developing higher-level language skills, such as writing and speaking fluency, requires further exploration. Combining flashcards with other instructional strategies, such as contextualized learning and task-based language teaching, can enhance their impact on overall language proficiency. Thus, understanding how flashcards function in ELT and their role in skill development is crucial to optimizing their pedagogical benefits. (James & Pollard, 2011).

Recent studies indicate that flashcards are crucial to language acquisition, particularly in vocabulary retention and reading comprehension. The structured exposure to new words through flashcards enables students to recall information more efficiently. Additionally, interactive flashcard activities help improve language retention by reinforcing cognitive and visual associations. Many educators incorporate flashcards into their teaching methods because they effectively engage students and make learning more interactive.

Furthermore, integrating digital and physical flashcards has been found to enhance student engagement by catering to diverse learning styles. Digital flashcards, which often include gamification elements, provide additional motivation for learners, while physical flashcards allow for hands-on interaction. Research suggests combining these two methods optimizes language learning by balancing memorization with interactive practice. Overall, studies confirm that flashcards remain a powerful tool in ELT, mainly in vocabulary acquisition and retention (Sari et al., 2024).

II. METHODS

A. Description of Sample

This systematic literature review sample consists of peer-reviewed journal articles, academic books, and conference proceedings examining flashcards' role in English Language Teaching (ELT). The selected studies focus on the effectiveness of flashcards in vocabulary acquisition, grammar instruction, and overall language retention, particularly compared to students who do not use them.

The studies in this review feature diverse participants, including young learners, secondary school students, and undergraduate EFL learners. Including various educational levels allows for a comprehensive analysis of how flashcards impact language learning across different learner demographics. Additionally, studies that explore traditional (physical) and digital flashcards are included to examine potential differences in learning outcomes based on the mode of flashcard usage.

B. Procedure

The research process adopted a systematic literature review methodology to ensure a structured and transparent data collection and analysis approach. The first stage involved a comprehensive *literature search*, where relevant studies were identified through academic databases such as Google Scholar, ResearchGate, ScienceDirect, and Taylor & Francis. To refine the search, specific keywords were used, including *flashcards in ELT, vocabulary acquisition with flashcards, traditional vs. digital flashcards*, and *effectiveness of flashcards in language learning*. After gathering initial sources, the *screening and eligibility check* phase was conducted by removing duplicate and irrelevant studies. Titles and abstracts were carefully reviewed to determine

relevance, and full-text articles were assessed based on predefined inclusion and exclusion criteria.

In the next stage, *data extraction and synthesis* were done using a structured data extraction sheet to collect essential details such as study design, participants, methodology, key findings, and conclusions. The extracted data were then categorized into recurring themes, including vocabulary retention, student motivation, engagement, and the comparative effectiveness of flashcards in language learning. Following this, *thematic analysis and interpretation were conducted* to identify trends and gaps in existing research. A comparative synthesis approach was also applied to evaluate differences in language learning outcomes between students who used flashcards and those who did not. The results of the analysis were interpreted to formulate best practices and recommendations for optimizing the integration of flashcards in English Language Teaching (ELT).

C. Study Selection Criteria

A set of inclusion and exclusion criteria was applied to ensure the quality and relevance of the studies included in this review. The inclusion criteria encompassed studies published between 2020 and 2024, focusing on empirical research using flashcards in English Language Teaching (ELT). Only studies that compared students using flashcards with those who did not were considered, ensuring a comprehensive analysis of their effectiveness. Additionally, research analyzing learning outcomes, student motivation, and engagement in ELT classrooms was included, as well as studies that examined the impact of traditional versus digital flashcards on language learning.

III. RESULT AND DISCUSSION

3.1 Result

Summarize the collected data and evaluate and interpret them. Provide clear arguments supported by appropriate theories and methods.

Table 1. The PRISMA Diagram Visually Summarizes the Article Selection Stages
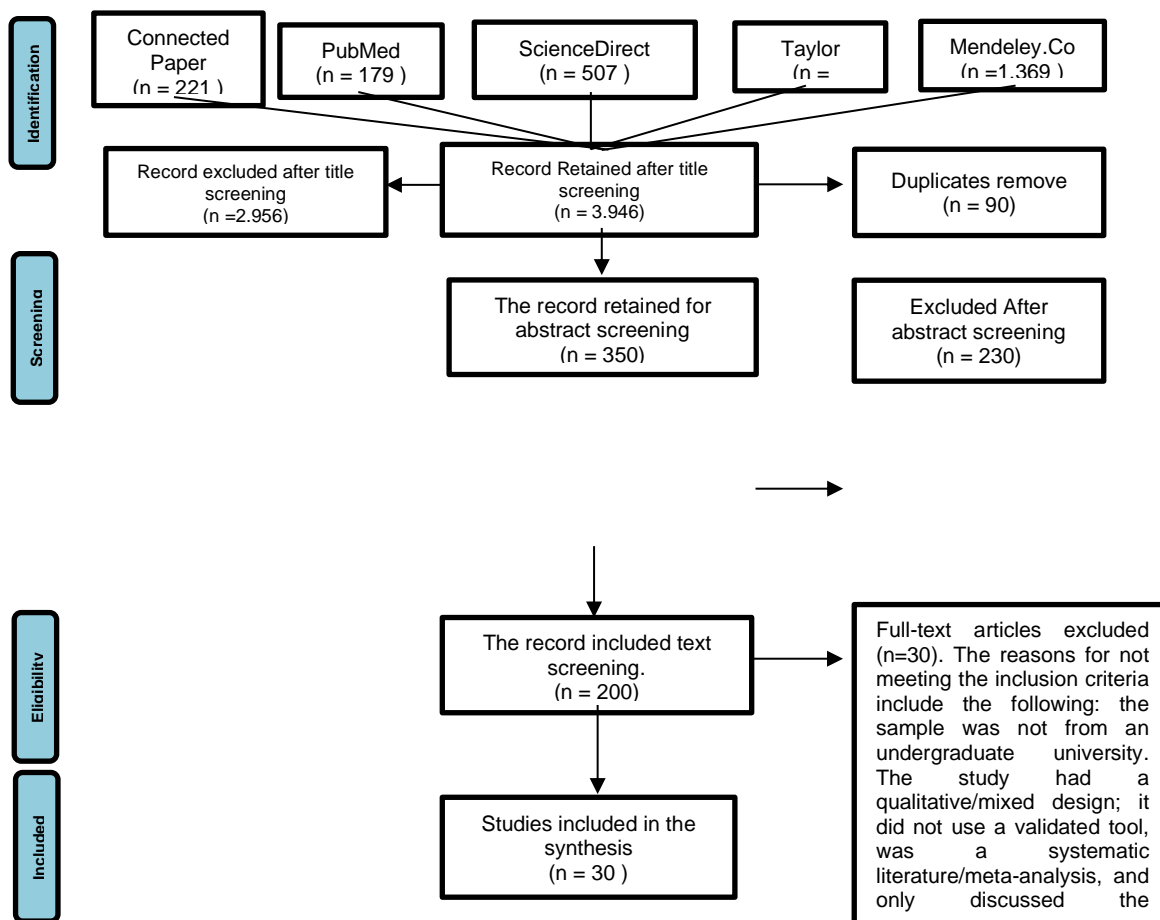
The PRISMA table in this article illustrates the systematic steps in selecting the articles used in this study. Starting from identifying 3,946 articles from various databases such as ScienceDirect, PubMed, and Taylor & Francis, the process filtered the articles by removing duplicates and evaluating relevance based on title and abstract. After the screening process, only 30 articles met the inclusion criteria and were included in the final synthesis. This table shows how this study used a systematic and rigorous approach in selecting credible sources that were appropriate to the study's focus.

Table 2. Summary and characteristics of the final studies selected

No	Authors	Mean Characteristic	Variable & Study Design	Measure	Findings

1.	(Elisa & Tuti, 2020) Indonesia	This study is descriptive qualitative research that evaluates the use of flashcard media in teaching vocabulary to pre-schoolers.	Student vocabulary skills Qualitative descriptive approach	-The data was analyzed using a Likert scale. -The questionnaire results are presented as percentage diagrams using SPSS.	-Most teachers respond positively to flashcards because they are easy to make, engaging, and can be tailored to the classroom's needs. --Flashcards help students focus more on learning and improve their recall of the vocabulary being taught.
2.	(Khan, 2022) Saudi Arabia	64 participants from the Deanship of Common First Year (DCFY) in Saudi Arabia.	Increased Vocabulary Quasi-experimental research design	- Vocabulary test designed by the examination committee (20 questions in pretest and post-test). The data were analyzed using a Paired Sample T-test with SPSS to see if there was a significant difference between the pretest and post-test.	- Flashcards significantly improve students' vocabulary comprehension compared to regular online learning methods. Flashcards also aid in vocabulary retention, increase motivation, and reinforce comprehension through visual elements.
3.	(Alghamdi & Elyas, 2020) Saudi Arabia	18–20 years old female students enrolled in the preparatory year at King	Vocabulary acquisition and improvement Quasi-	-Vocabulary knowledge tests: Pretest and post-test to evaluate vocabulary acquisition.	This article proves the effectiveness of electronic flashcards. Mann-Whitney U Test results showed a significant difference (p-value = 0.000), indicating that the experimental

		Abdulaziz University, Saudi Arabia.	experimental research design	-Statistical analysis: -The Mann-Whitney U Test will compare post-test scores between groups. -Wilcoxon Signed Ranks Test to measure individual improvement in the experimental group.	group outperformed the control group. -Electronic flashcards enhanced vocabulary retention and learning motivation compared to traditional methods.
4.	(Lubis et al., 2023) Indonesia	Participants were vocational school students learning English and experiencing difficulties in vocabulary acquisition.	Improving students' English Vocabulary Descriptive qualitative research	-Vocabulary test to measure improvement before and after the use of flashcards. -Interview to evaluate the effectiveness of flashcards in a vocational school context.	-Flashcards are effective in improving students' vocabulary. -95% of students experienced significant improvement in vocabulary acquisition, especially the names of animals, school tools, and home furnishings.
5.	(Putri et al., 2024) Iran	86 students learning English as a Foreign Language (EFL).	Vocabulary acquisition Quasi experimental design	- Vocabulary knowledge tests - Statistical analysis.	Both groups improved vocabulary, but the mobile-assisted learning group showed significantly higher gains. Mobile-assisted learning outperformed traditional methods for

				vocabulary acquisition and long-term retention.
6.	(Gusti Ayu Winda Yuliantari et al., 2021) Indonesia	The participants were English teachers and 30 fifth-grade students who used Google Classroom to learn English vocabulary.	Google Classroom, English vocabulary skills Case study research	-Online observation of the implementation of flashcards in Google Classroom. - Interviews with English teachers regarding the planning, implementation, and advantages and disadvantages of using flashcards.	-Increases students' learning motivation. - Avoid boredom in online learning. -Helps students remember vocabulary with pictures.
7.	(Zakian et al., 2022) Iran	71 students learning English as a Foreign Language (EFL).	Flashcards improve vocabulary knowledge. Quasi experimental design	- Vocabulary knowledge tests - New Academic Word List Test (NAWLT) - Updated Vocabulary Levels Test (UVLT) - Statistical analysis	Both groups improved vocabulary, but the digital flashcard group showed significantly higher gains. Digital flashcards outperformed paper flashcards for vocabulary learning and long-term retention.
8.	(Erniwati et al., 2021) Indonesia	Participants are Elementary school students	Bilingual approach, vocabulary acquisition	- Classroom observations on flashcard usage in teaching.	Flashcards effectively enhance students' vocabulary comprehension. Due to visual aids and bilingual associations,

		learning English as a foreign language (EFL).	Descriptive qualitative research	- Document analysis of students' learning outcomes. - Feedback from teachers and students regarding the effectiveness of flashcards.	students remember words more easily. Teachers reported that using flashcards increases student engagement in learning. The bilingual approach helps students connect English vocabulary with their native language, facilitating comprehension.
9.	(Yüksel et al., 2022) Turkey	57 pharmacy program students at a public university in Turkey.	Technical vocabulary and improve technical language Quasi experimental design	- Two technical vocabulary tests (30 multiple choice questions) to compare the effectiveness of learning methods. -Pre-treatment survey to measure students' vocabulary learning strategies. Technology Acceptance Model (TAM)-based post-treatment survey to measure students' perception of	-Digital flashcards are more effective than wordlists in increasing students' technical vocabulary. -The use of Quizlet is not influenced by the duration of the study but rather by the quality of interaction with the app. -Students with repetition-based learning strategies were likelier to use digital flashcards than those with context-based strategies (e.g., constructing new sentences).

				Quizlet. - Statistical analysis using paired-sample t-test and linear regression to evaluate learning outcomes.	
10.	(Inez Zung Et al., 2022) United States (USA)	901 undergraduate students at the University of California, Los Angeles (UCLA).	Digital flashcards based on learning strategies. A large-scale survey on the use of digital flashcards in self-paced learning.	The survey included questions about: -How students obtain or create digital flashcards. -How do they use digital flashcards for learning? -Comparison between the use of digital flashcards vs. paper flashcards. - Statistical analysis used percentage calculations and correlations between variables to look at usage patterns.	77.8% of students use digital flashcards as part of their study strategy. Most students prefer digital flashcards to paper flashcards due to ease of access and storage. Digital flashcards have great potential to support learning, but students need to be trained to use them with more effective strategies.
11.	(Santika	The	English	Class	Flashcards and educational

et al., 2023) Indonesia	participants was a primary school in Indonesia.	language learning, English Vocabulary. Classroom Action Research	observations to see student responses to flashcards and posters. -Evaluation of vocabulary skills before and after the use of learning media. -Descriptive analysis to assess the effectiveness of the teaching methods.	posters effectively enhance English vocabulary comprehension among elementary school students. -They are more motivated to learn due to using images and colours in learning media. -The visual interaction from flashcards and posters helps students recall vocabulary more quickly. This interactive media-based teaching method should be implemented more broadly in elementary schools.
12.	(Rizqiyah et al., 2024) Indonesia	The participants were 34 seventh-grade students.	Learning medium, English Vocabulary Pre experimental design	Pretest and post-test to measure vocabulary improvement. - The "guess the picture" method in which students identify words from images. - Statistical analysis using t-tests to determine the effectiveness of flashcards.	Flashcards significantly improve students' vocabulary retention and recall. After the use of flashcards, average scores increased. Most students experienced improvement, but a few maintained identical scores. Flashcards help create a more engaging and interactive learning experience. -Conclusion: Flashcards are effective for enhancing vocabulary, but they must be combined with other methods for students who experience learning difficulties.

13.	(Mathura & Zulu, 2021) South Africa	31 first-grade students in Pietermaritzburg, South Africa.	Writing learning, improvement of creative writing skills Action research design	Direct observation during class sessions. -Document analysis of student writing before and after treatment. -Evaluation of writing skills based on aspects of spelling, tense usage, and sentence structure.	Significant improvement in students' writing skills after using flashcards. -Three main issues addressed with flashcards: 1. Spelling errors – students began to spell words better because they frequently saw them on the flashcards. 2. Incorrect use of tense – flashcards with example sentences helped students understand the correct tense. 3. Ungrammatical sentence structure – flashcards helped students comprehend correct sentence patterns. - Students are more active and confident in writing after using flashcards. - Flashcards support visual and interactive learning and suit various student learning styles.
14.	(Saputri & Prasetyarini, 2024) Indonesia	The research participants were 41 elementary school students in Waru, Indonesia (grades 4–6).	Learning English Vocabulary and mastery of the English language. Mixed-methods approach (combining quantitative and qualitative	Likert scale-based questionnaire to assess the level of interest and effectiveness of flashcards. • Descriptive statistical analysis using SPSS to process the results of the questionnaire	Flashcards increase student motivation to learn in both countries. Due to their visual elements and repetition, most students feel that flashcards help them remember vocabulary better. Student engagement levels have risen, especially in reading activities and spelling new vocabulary. In Malaysia, students face additional challenges due to limited access to education

			methods)	. • Qualitative thematic analysis* from interviews to identify patterns in students' experiences.	for immigrants, but flashcards assist them in self-directed learning. The questionnaire results show that 61% of students in Indonesia and 50% of students in Malaysia find flashcards very enjoyable for learning vocabulary. Flashcards are more effective than conventional methods in reinforcing vocabulary retention.
15.	(Paldy et al., 2023) Indonesia	The participants were 35 first-grade students.	ADDIE model, learning motivation Research and Development (R&D).	Expert validation of the alignment of flashcard materials with the curriculum and student development levels. • Classroom observation to assess student engagement while using flashcards. • Questionnaires for teachers and students to measure the effectiveness and acceptance of flashcards.	Flashcard-based ADDIE significantly improves students' vocabulary retention. Students are more active and motivated in learning English vocabulary after using flashcards. Teachers find flashcards easy to implement and very helpful in teaching new vocabulary. Effectiveness evaluation shows an expert validation score of 88% (very feasible) for use in the classroom. Vocabulary test results increased from 31% (pretest) to 89% (post-test) of students achieving the vocabulary mastery standard after three cycles of using flashcards. Students find it easier to remember words with the help of images and colours on the flashcards, which enhances their memory of new vocabulary.

				• Vocabulary tests before and after using flashcards measure student understanding improvements.	
16.	(Putri et al., 2024) Indonesia	The research participants comprised 49 fourth-grade students at a private elementary school in Yogyakarta.	English vocabulary learning Quantitative experiment	- Pretest and post-test with 20 English vocabulary questions. - Statistical analysis using SPSS to find the mean, median, standard deviation, and Wilcoxon test. - The Wilcoxon signed-rank test is used because the data is not normally distributed.	The average score for the pretest was 52.20 (intermediate category), while the post-test increased to 77.60 (advanced category). The Wilcoxon test results showed a p-value of 0.001, indicating a significant improvement after using flashcards. Flashcards have proven effective in enhancing students' mastery of English Vocabulary. Students are more active, engaged, and motivated when learning with flashcards. This research supports previous studies that indicate that using flashcards improves vocabulary retention and comprehension.
17.	(Prasanti, 2024) Indonesia	The study focuses on young EFL learners in a primary	Digital flashcards, vocabulary acquisition	The effectiveness of digital flashcards was	- Using digital flashcards enhances students' vocabulary learning by making the process interactive and engaging.

			measured through students' engagement, vocabulary retention, and ability to use the learned vocabulary in various contexts.	- The PPP method combined with digital flashcards improved vocabulary recall, pronunciation, and application in real-life contexts. - Students showed higher motivation and participation in learning English vocabulary through digital flashcards. - Some challenges included limited technological resources in the classroom and the need for well-structured digital learning materials.
	school setting.	Qualitative approach		
18.	(Rahmawati & Dahlina, 2024) Indonesia	The study investigates the effectiveness of digital flashcards in improving vocabulary mastery among seventh-grade students at Kramatwatu, Indonesia.	Vocabulary learning, Students' vocabulary mastery A quasi-experimental design with an experimental group and a control group.	- Pretest and post-test were conducted to assess students' vocabulary proficiency before and after the intervention. -The t-test statistical method was used to analyze the data and determine the significance of the results.	- The study found that digital flashcards significantly improved students' vocabulary mastery. The experimental group, which used digital flashcards, showed a higher increase in post-test scores than the control group. - Using digital flashcards increased - student engagement, motivation, and active participation in learning. - The traditional teaching methods were less effective in improving vocabulary skills.
19.	(Longchin	The study	Students'	- Pretest	- Significant improvement

	et al., 2024) Thailand	examines the effectiveness of digital flashcards in improving English word reading skills among Thai primary school learners aged 11 to 12.	word reading skills improvement A mixed-method research design incorporating both quantitative and qualitative approaches.	and post-test assessments of word reading skills. - A Likert scale questionnaire will be used to evaluate students' perceptions. - Semi-structured interviews for qualitative insights.	in students' word reading skills after using digital flashcards. - Post-test scores were higher than pretest scores, confirming the effectiveness of digital flashcards. - Students had positive perceptions, finding digital flashcards helpful, engaging, and motivating for learning English words. - Digital flashcards created an interactive and enjoyable learning environment, enhancing students' interest in English.
20.	(Yusril et al., 2023) Indonesia	Thirty ninth-year students from Takalar were selected using a purposive selection approach.	Teaching tool, vocabulary improvement. Classroom action research (CAR)	-Data Collection Methods Pretest, Post-test (final assessment of vocabulary improvement). Descriptive quantitative analysis (percentage calculations of test scores).	The use of flashcard applications significantly improved students' vocabulary skills. Pretest results: The average score was 49.00, below the passing grade (KKM score = 70).
21.	(Selamat & Bakar, 2023) Malaysia	The participants were female and had teaching experience ranging from 7 to 15 years.	Teachers' attitudes, preschool learning. Qualitative with Exploratory	- Data was collected through semi-structured interviews, non-participant	Teachers have a positive attitude toward using flashcards as teaching aids. Flashcards are considered practical tools for enhancing learning, although their use tends to be one-directional.

				case study By Triangulation (interviews, observations, and document analysis)	observations, and document analysis from the preschools where the participants worked. - Thematic analysis was used for data interpretation.	- Challenges in using flashcards include the *transition to digital flashcards*, financial constraints, and storage management. - Teachers need effective strategies to optimize flashcard use for more engaging learning.
22.	(Ahmad et al., 2024) Indonesia	The study investigates the effectiveness of handmade flashcards as a teaching tool to improve English comprehension among young English EFL learners.	Teaching tools, English comprehension skills Qualitative research method involving classroom observations and interviews.	- Data collection through classroom observations and semi-structured interviews with young learners. - The study evaluates engagement, vocabulary retention, sentence structure comprehension, and communication skills.	- Handmade flashcards positively impacted students' learning by increasing engagement and vocabulary retention. - Students showed a better understanding of sentence structures and improved communication skills. - Peer interactions and group discussions enhanced collaborative learning. - The study suggests that handmade flashcards are a cost-effective and engaging tool for rural EFL education.
23.	(Pangesti, 2024) Indonesia	The study investigates the effectiveness of flashcard-	Flashcard-based learning strategies	- Observations and field notes to assess	- The use of flashcards significantly improved students' vocabulary mastery. - Post-test scores

		based learning strategies among eighth-grade students in Mempawah, Indonesia.	Classroom Action Research (CAR) uses two cycles: planning, acting, observing, and reflecting.	student engagement and participation. - Multiple-choice tests were used in pretests and post-tests to measure vocabulary improvement. - Mean scores from pretests and post-tests were compared to determine the effectiveness of flashcards.	increased from a mean of 60 to 80, indicating substantial progress. - Flashcards made learning more engaging and interactive, improving pronunciation, spelling, and confidence in English communication. - Students actively participated in learning activities, such as discussions and presentations.
24.	(Novita et al., 2024) Indonesia	The study investigates the effectiveness of multimodal digital flashcards in enhancing narrative writing skills among eighth-grade EFL students.	The use of multimodal digital flashcards in teaching Pre-experimental quantitative research using a one-group pretest and post-test design.	- Pretest and post-test scores were analyzed using SPSS to determine statistical significance. - Observations and questionnaires were conducted to assess student engagement and learning	- The mean pretest score was 34.78, while the post-test score increased to 50.45, indicating significant improvement. - The use of multimodal flashcards effectively enhanced students' narrative writing skills. - Students responded positively to barcode flashcards, finding them more engaging and helpful in understanding folktales. - The intervention improved students' grammar, sentence structure, and storytelling

				experiences.	abilities.
25.	(Hidayah et al., 2024) Indonesia	The study investigates the transformative impact of using flashcards in learning English at Potrobangsan, Magelang.	Teaching tool and Students' vocabulary mastery Descriptive qualitative	- Teacher interviews to gather insights on instructional effectiveness. - Classroom observations to analyze student engagement and participation. Questionnaires to assess students' responses and enthusiasm for learning with flashcards.	- Flashcards significantly improved students' vocabulary, making learning more interactive and engaging. - Students developed better listening comprehension, transitioning from passive listeners to active participants in language learning. - Confidence in oral communication increased, with students demonstrating greater willingness to speak English in class. - Flashcards transformed traditional learning into a more enjoyable and immersive experience, fostering enthusiasm and motivation among students.
26.	(Mansouri, 2024) Indonesia	The study explores the effectiveness of multimedia learning, specifically the integration of flashcards.	Multimedia learning approach Mixed-method research combines quantitative assessments (pretest and post-test) and	- Pretest and post-test assessments to measure vocabulary usage, grammatical accuracy, and overall essay structure. - Qualitative analysis through essay	- Significant improvement in students' vocabulary application, grammatical accuracy, and essay writing skills after using multimedia-based flashcards. - Students demonstrated increased confidence in writing, better organization of ideas, and enhanced creativity in expressing thoughts. - The combination of

			qualitative analyses (essay evaluation and student reflections).	evaluation and thematic analysis of students' reflections.	visual and textual learning methods proved to be highly effective in reinforcing language skills.
27.	(Kumar & Akbar, 2024) Pakistan	The study investigates vocabulary acquisition strategies used by learners of English as a Foreign Language (EFL) at the Quaid-e-Awam.	Vocabulary acquisition strategies A qualitative case study involving semi-structured interviews with ten EFL learners from different academic levels.	- Semi-structured interviews consisting of four open-ended questions regarding vocabulary learning experiences. - Thematic analysis was used to identify trends, recurring themes, and effective learning strategies.	- EFL learners use a variety of vocabulary learning strategies, including flashcards, watching English-language media, reading books, using mobile applications, engaging in conversations, and participating in group study sessions. - Contextual learning (learning vocabulary through real-life interactions) was the most effective approach. -Social learning (language exchange platforms, online forums, group discussions) significantly helped learners retain and use new words. - Flashcards were helpful for memorization but less practical without contextual usage. - Technology-enhanced learning (mobile apps, podcasts, social media) was highly engaging and practical.
28.	(Zheng & Phawitpiriyakliti, 2022)	The study explores the combination of the card learning method and	Learning method, students' motivation	- Final exam scores to assess academic performance. - Post-	- Students using the card-group learning method showed an 8.7% improvement in final exam scores compared to the control group.

		group learning method to enhance high school students' innovative ability and cooperative skills in Shenzhen, China.	A quasi-experimental study comparing an experimental.	experiment questionnaire measuring students' engagement, motivation, and teamwork. - Teacher evaluations of group discussions and teamwork effectiveness.	- Higher enthusiasm, motivation, and engagement were observed in the experimental group. - Students in the experimental group developed better teamwork, critical thinking, and problem-solving skills. - The approach was effective in enhancing learning outcomes and fostering collaboration.
29.	(Wulandari & Apriyanti, 2021) Indonesia	The study examines the implementation of flashcards as a teaching tool for English vocabulary learning among fifth-grade students in Kayen, Indonesia.	Teaching Vocabulary, Students' Vocabulary Acquisition Descriptive qualitative research	- Observation of student engagement and interaction with flashcards. - Connect-the-word test to evaluate vocabulary recognition. - Pronunciation assessment to check students' ability to pronounce new words - Comparison of student performance	- Flashcards helped students recognize and memorize vocabulary more effectively. - Students showed enthusiasm and engagement, especially when combining flashcards with games. -Pronunciation difficulties were observed, requiring repetitive practice for improvement. - Some students struggled with spelling and writing words based on how they heard them rather than their correct form. - Teachers needed to provide extra guidance and motivation to ensure effective vocabulary retention.

			between flashcards-only teaching and flashcards combined with games.	
30.	(Majeed & Hussain, 2024) Pakistan	The study examines vocabulary development strategies in teaching English to 50 young learners in both public and private schools in Punjab, Pakistan.	Vocabulary development strategies, overall language proficiency Descriptive survey research Data collected from 50 randomly selected English teachers in Punjabi	- Survey questionnaire assessing vocabulary teaching strategies, frequency of use, effectiveness, and challenges - Classroom observations evaluating student engagement, teaching methodologies, and teacher-student interactions - Comparative analysis between public and private schools in vocabulary instruction effectiveness	- Teachers use strategies such as loud reading, word games, and flashcards, but their effectiveness varies between public and private schools. - Challenges faced: Limited English proficiency, lack of teaching resources, cultural and language barriers, and social isolation. - Public schools struggle with insufficient teaching materials, while private schools have better access to resources and training. - Teachers recommend professional development programs to improve English vocabulary teaching methods. - Technology-based learning (digital tools, mobile applications) remains underutilized despite its potential to enhance vocabulary retention.

Table 3. Distribution of Selected Studies by Year of Publication

Year of Publication	Total Articles
2020	2
2021	4
2022	5
2023	5
2024	14
Total	30

The distribution of selected studies by year of publication table presents the publication years of the articles used in this study, spanning 2020 to 2024. From this table, the number of publications related to the use of flashcards in English language learning has increased significantly in recent years, with the highest number of articles coming from 2024, with 14 articles. This shows that using flashcards in ELT is gaining more attention among academics, especially in digital technology and innovative learning methods.

3.2 DISCUSSIONS

The findings from this systematic review indicate that flashcards play a significant role in English Language Teaching (ELT), particularly in vocabulary acquisition and retention. The reviewed studies, conducted in various educational settings across different countries, consistently highlight the effectiveness of flashcards in enhancing students' engagement and motivation. Additionally, traditional and digital flashcards have been shown to provide notable benefits. However, their impact varies depending on factors such as instructional methods, learner characteristics, and the integration of complementary learning strategies.

4.1 Effectiveness of Flashcards in ELT

Several studies confirm that flashcards effectively improve vocabulary acquisition and retention. For instance, (Elisa & Tuti, 2020)Flashcards enhance young learners' focus and memory retention, making them a valuable tool in early childhood education. Similarly, in research conducted (Khan, 2022) In Saudi Arabia, students who used flashcards showed significant vocabulary improvement compared to those relying on traditional online platforms such as Blackboard. This suggests that the visual reinforcement and repeated exposure of flashcards contribute to better word recall and understanding.

Moreover, findings from studies such as those by (Lubis et al., 2023)Vocational schools in Indonesia indicate that 95% of students experienced substantial vocabulary gains after using flashcards. The study further highlights that flashcards aid memorization and enhance learner motivation and classroom engagement, making them suitable instructional tools for language learning in diverse settings.

4.2 Traditional vs. Digital Flashcards

The review also identifies a growing shift from traditional paper-based flashcards to digital flashcards, with platforms like Quizlet and Anki gaining popularity among learners. Research by (Boroughani et al., 2023) (2023) in Iran and Inez Zung et al. (2022) in the United States show that students using digital flashcards exhibit better vocabulary retention and self-regulation skills than traditional methods. This is attributed to the spaced repetition technology and interactive features of digital flashcards, which allow learners to review words systematically over time.

However, despite these advantages, some studies point out the potential limitations of digital flashcards. For example, research by (Gusti Ayu Winda Yuliantari et al., 2021) (2021) in Bali found that while Google Classroom-based flashcards effectively boost motivation, students become overly reliant on the teacher's guidance. Additionally, connectivity issues and digital literacy gaps were cited as common barriers to the effective use of digital flashcards, particularly in regions with limited access to technology.

4.3 Comparative Analysis: Students Using Flashcards vs. Those Who Do Not

A key focus of this review was to compare students who use flashcards with those who do not, and findings strongly support the notion that flashcard users consistently outperform their peers in vocabulary acquisition and retention. Studies such as those in Thailand and (Yüksel et al., 2022) In Turkey have shown that students who engage with flashcards, particularly digital ones, achieve higher test scores and show more enthusiasm for language learning.

For example, a quasi-experimental study by (Boroughani et al., 2023) (2023) in Iran compared students using spaced-repetition-based flashcards with those relying on traditional wordlists. The results indicated that the flashcard group had significantly higher long-term vocabulary retention, reinforcing the argument that structured flashcard use is more effective than conventional rote memorization techniques.

4.4 Challenges and Considerations

Despite their benefits, the use of flashcards is not without challenges. Some studies caution against over-reliance on flashcards for vocabulary learning without contextual understanding. For instance, (Saputri & Prasetyarini, 2024) Examined

flashcard use in Indonesia and Malaysia, highlighting that students often memorize words in isolation rather than understanding them in context. This suggests that flashcards should be supplemented with communicative and contextual learning strategies to ensure deeper language comprehension. Additionally, while flashcards are engaging, their effectiveness depends on how they are integrated into the curriculum. Research by (Mathura & Zulu, 2021) In South Africa, flashcards improve students' creative writing skills, but only when combined with writing activities encouraging sentence construction and critical thinking. This aligns with the broader argument that flashcards should not be used as a standalone tool but as part of a comprehensive language-learning strategy.

4.5 Implications for ELT

Based on these findings, this study highlights several key implications for English Language Teaching:

1. Incorporating flashcards as a supplementary tool: To enhance their effectiveness, flashcards should be integrated into diverse classroom activities, such as storytelling, sentence-building, and pronunciation drills.
2. Balancing traditional and digital flashcards: While digital flashcards offer greater accessibility and interactivity, traditional flashcards remain helpful for younger learners and classrooms with limited technological access.
3. Encouraging active engagement: Teachers should design flashcard-based activities that promote interaction, critical thinking, and contextual usage rather than memorization.
4. Addressing digital literacy gaps: Training for educators and students on effectively using digital flashcards can help maximize their benefits while minimizing technical barriers.

This systematic review confirms that flashcards are a highly effective tool in ELT, particularly for vocabulary acquisition. The evidence overwhelmingly supports their role in improving memory retention, engagement, and motivation. However, to maximize their potential, educators must ensure balanced implementation, combining flashcards with contextual learning and interactive classroom strategies. Future research should explore how flashcards can be optimized for developing higher-order language skills, such as writing and speaking proficiency.

IV.   CONCLUSION

This systematic review's findings highlight flashcards' significant role in English Language Teaching (ELT). The analysis of 30 previous studies suggests that students who use flashcards achieve better learning outcomes than those who do not. Moreover, the effectiveness of flashcards is influenced by several key factors,

including the mode of implementation, learner engagement, and technology integration. Flashcards are most beneficial for vocabulary acquisition and retention among the four language skills: listening, speaking, reading, and writing.

Despite their advantages, the review also identifies some limitations in current research, such as a lack of studies focusing on long-term retention and the need for more empirical research on digital flashcards in ELT. Future research should address these gaps by exploring the sustained impact of flashcard use over extended periods and investigating how technological advancements can further enhance their effectiveness in language learning.

To maximize the benefits of flashcards, educators should combine them with communicative learning strategies, contextualized activities, and interactive classroom methods. Additionally, balancing traditional and digital flashcards based on learners' needs and accessibility is essential. Future research should explore how flashcards can be optimized for developing critical thinking, writing, and speaking skills in ELT. By understanding these aspects, educators can optimize flashcards in ELT, ensuring they serve as an effective and engaging tool for language learners.

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