

Using Flash Card Games to Enhance Vocabulary Retention among University Students in Northern Viet Nam

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Abstract

This study investigated the effectiveness of flash card games in enhancing vocabulary retention among university students at a university in northern Viet Nam and examined students' responses to this vocabulary learning technique. The study employed a classroom action research design involving planning, action, observation, and reflection. Data were collected through a vocabulary pre-test, a post-test, and a closed-ended questionnaire. The pre-test was administered before the intervention to identify students' initial vocabulary achievement, while the post-test measured vocabulary retention after students learned vocabulary through flash card games. Questionnaire data were used to explore students' perceptions of the technique. The findings showed that students' vocabulary achievement improved after the intervention. Students' responses were also largely positive, indicating that flash card games made vocabulary learning more interesting, enjoyable, understandable, motivating, and active. The study concludes that flash card games can be an effective and practical technique for improving vocabulary retention in university EFL classrooms, especially where traditional memorization remains a common classroom practice. The findings suggest that English teachers should integrate visual and game-based activities into vocabulary instruction to promote learner engagement and long-term word recall.

Keywords: flash card games; vocabulary retention; vocabulary learning; university students; EFL classroom

1. Introduction

Vocabulary is a fundamental component of English language learning because it enables learners to understand and produce language in listening, speaking, reading, and writing. Hatch and Brown (1995) emphasize that vocabulary forms the foundation of language and plays an essential role in communication. Similarly, Wilkins (1972) argues that without vocabulary, nothing can be conveyed, highlighting the central role of word knowledge in language use. Nation (2013) also states that vocabulary knowledge makes language use possible, while language use itself contributes to further vocabulary development. Therefore, vocabulary learning is not only a matter of memorizing words but also a necessary condition for effective communication and language proficiency.

In Vietnamese EFL contexts, vocabulary learning remains a common challenge for university students. Although many students have studied English for several years before entering university, they may still have difficulty remembering new words, recalling them when needed, and using them appropriately in communication. Traditional vocabulary teaching often depends on word lists, translation, repetition, and written exercises. These techniques may help learners recognize word meanings, but they may not always

support long-term vocabulary retention or active vocabulary use. Since university students need English for academic study, classroom interaction, presentations, reading comprehension, and future professional communication, vocabulary instruction should provide them with more engaging and memorable learning experiences.

Vocabulary retention is closely related to memory and repeated exposure to language. Al-Zahrani (2011) explains that learners' ability to remember and recall words is connected with how they acquire and retain vocabulary. Souleyman (2009) also describes retention as a memory-related process involving learning, storage, recall, and recognition. Zhang (2002) distinguishes between short-term and long-term memory, suggesting that vocabulary learning should help learners move beyond temporary recognition toward longer-term storage and retrieval. Therefore, effective vocabulary instruction should not only introduce new words but also help students remember and use them after instruction.

Flash card games may provide a useful technique for enhancing vocabulary retention because they combine visual support, repetition, interaction, and enjoyment. Flashcards can be used to present, practice, review, and recycle vocabulary. Hadfield (1998) notes that flashcards can support vocabulary consolidation and can be used in a variety of language games. Harmer (2007) also recognizes the value of pictures and visual materials, including flashcards, in language teaching. When flashcards are used through games, vocabulary learning may become more active and less monotonous. Students can match words with pictures, guess meanings, recall vocabulary, pronounce target words, and use them in simple communicative activities.

Previous studies have reported positive effects of games and flashcards on vocabulary learning. Aghlara and Hadidi (2011) found that digital games supported vocabulary retention in foreign language learning. Nugroho, Nurkamto, and Sulistyowati (2012) reported that flashcards improved students' vocabulary mastery and increased their classroom participation. Jafarian and Shoari (2017) also found that games had a positive effect on vocabulary learning among EFL learners. In the Vietnamese context, Huyen and Nga (2003) showed that games could make vocabulary lessons more interesting and help learners improve vocabulary learning. However, much of the existing research has focused on young learners or school-level students, while fewer studies have examined the use of flash card games among university students in Vietnamese EFL classrooms.

To address this gap, the present study investigates the effectiveness of flash card games in enhancing vocabulary retention among university students at a university in northern Viet Nam. It also examines students' responses to the use of flash card games in vocabulary learning. The study is guided by two research questions: (1) Are there any significant differences in students' vocabulary achievement before and after learning vocabulary through flash card games? and (2) How do university students respond to the use of flash card games in learning vocabulary?

2. Literature Review

2.1. Vocabulary and vocabulary learning

Vocabulary is a central component of English language learning because it provides the lexical resources learners need to understand and produce language. Hatch and Brown (1995) consider vocabulary an essential foundation of language and communication, while Wilkins (1972) emphasizes that without vocabulary, communication cannot be effectively conveyed. Nation (2013) also argues that vocabulary knowledge makes language use possible and that language use contributes to further vocabulary development. These views indicate that vocabulary is not only a supporting element of language learning but also a core component of communicative competence.

Vocabulary knowledge involves more than knowing the meaning of individual words. Learners need to recognize, understand, pronounce, spell, remember, and use words appropriately in different contexts.

Aebbersold and Field (1997) distinguish between active and passive vocabulary. Active vocabulary refers to words learners can use in speaking and writing, whereas passive vocabulary refers to words learners can recognize and understand in reading and listening. For university students, vocabulary knowledge is particularly important because it supports academic reading, writing, classroom discussion, presentation, and professional communication.

2.2. Vocabulary retention

Vocabulary retention refers to learners' ability to remember and recall words after they have been learned. Al-Zahrani (2011) explains that vocabulary retention is closely related to learners' ability to remember and retrieve words, phrases, and utterances for later use. Souleyman (2009) also describes retention as a memory-related process involving learning, storage, recall, and recognition. In English language learning, vocabulary retention is important because students need to remember words beyond immediate classroom practice and use them later in academic and communicative contexts.

Memory plays an important role in vocabulary retention. Zhang (2002) distinguishes between short-term and long-term memory in vocabulary learning. Short-term memory supports immediate recognition and use of new words, while long-term memory allows learners to store and retrieve vocabulary over a longer period. Therefore, vocabulary instruction should provide repeated exposure, meaningful practice, and opportunities for recall. Techniques that combine visual input, interaction, and repetition may help learners move vocabulary from temporary recognition to more stable retention.

2.3. Games in vocabulary learning

Games have been widely used in language teaching because they can create a more engaging and motivating learning environment. Hadfield (1998) defines a game as an activity with rules, a goal, and an element of fun. Games are not merely entertainment; they can support language practice, repetition, memory, and meaningful language use. When used appropriately, games can encourage learners to participate actively and reduce the boredom often associated with mechanical vocabulary memorization.

In vocabulary learning, games can help learners encounter and review words in enjoyable and meaningful ways. Instead of learning vocabulary only through lists, translation, or repetition, students can use target words in activities that involve matching, guessing, identifying, recalling, and interacting with peers. Huyen and Nga (2003) found that games helped Vietnamese learners make vocabulary lessons more interesting and supported vocabulary learning. This suggests that games can be useful in Vietnamese EFL classrooms, where students may need more motivating and interactive vocabulary learning techniques.

2.4. Flash card games in vocabulary teaching

Flashcards are visual teaching aids that usually contain pictures, words, or both. They can be used to introduce, practice, review, and recycle vocabulary. Hadfield (1998) notes that flashcards can support vocabulary consolidation and can be used in a variety of language games. Harmer (2007) also recognizes the usefulness of pictures and visual materials in language teaching, including their role in helping students understand and remember language items. In vocabulary instruction, flashcards can help learners connect word forms with meanings through visual association.

Flash card games combine the advantages of visual learning and game-based practice. Through flash card games, students may match words with pictures, guess meanings, pronounce target words, translate vocabulary items, recall previously learned words, and use vocabulary in simple communicative activities.

This type of learning can be especially useful for vocabulary retention because it provides repeated exposure and active recall. It may also make vocabulary lessons more interactive and learner-centered, which is important for university students who need to use English actively in academic and communicative contexts.

Flashcards can also support different classroom arrangements. Lewis and Bedson (1999) explain that cards and games can be used in individual, pair, group, and whole-class activities. This flexibility allows teachers to adapt flash card games to different class sizes, vocabulary topics, and learning objectives. In university classrooms, flash card games can be used not only for basic vocabulary review but also for academic word practice, pronunciation drills, quick recall activities, peer questioning, and collaborative vocabulary tasks.

2.5. Previous studies on games and flashcards in vocabulary learning

Previous studies have provided evidence that games and flashcards can support vocabulary learning. Aghlara and Hadidi Tamjid (2011) found that digital games had positive effects on vocabulary retention in foreign language learning. Nugroho, Nurkamto, and Sulistyowati (2012) reported that flashcards improved students' vocabulary mastery and made students more active and enthusiastic in classroom activities. These findings suggest that flashcards can be an effective teaching aid when they are used not only for presentation but also for active practice and review.

Other studies have also shown the value of games in vocabulary learning. Jafarian and Shoari (2017) found that games had a positive effect on vocabulary learning among EFL learners. In the Vietnamese context, Huyen and Nga (2003) reported that games helped reduce boredom in vocabulary lessons and made vocabulary learning more effective and enjoyable. These studies support the use of game-based techniques as a way to improve vocabulary learning and classroom engagement.

However, most previous studies have focused on young learners, primary students, or lower secondary students. Less attention has been given to university students in Vietnamese EFL contexts, although this group needs vocabulary for academic reading, writing, discussion, presentations, and future employment. University students may also require learning techniques that promote both retention and active use of vocabulary. Therefore, further research is needed to examine whether flash card games can enhance vocabulary retention among university students in northern Viet Nam.

2.6. Research Gap

The reviewed literature shows that vocabulary is essential for English language learning and that vocabulary retention is necessary for learners to use words beyond immediate classroom practice. It also shows that games and flashcards can support vocabulary learning by providing visual input, repetition, interaction, and motivation. However, existing research has focused mainly on younger learners or school-level contexts. There remains a need for more evidence on the use of flash card games with university students in Vietnamese EFL classrooms. This study addresses that gap by investigating the effectiveness of flash card games in enhancing vocabulary retention among university students at a university in northern Viet Nam and by examining their responses to this learning technique.

3. Methodology

This study employed a classroom action research design to examine the effectiveness of flash card games in enhancing vocabulary retention among university students at a university in northern Viet Nam and to explore their responses to this vocabulary learning technique. Classroom action research was selected because it is suitable for investigating a specific classroom problem and improving teaching practice through

systematic intervention, observation, and reflection. Mills (2000) describes action research as a systematic inquiry conducted by teacher researchers or other educational stakeholders to understand and improve teaching and learning practices, while Nunan (1997) emphasizes that action research involves planned changes, critical action, and evaluation of results. Following the action research model of Kemmis and McTaggart, as cited in Burns (2010), the study was conducted through four main stages: planning, acting, observing, and reflecting. In the planning stage, the researcher identified students' vocabulary learning difficulties, prepared vocabulary lessons, designed flash card game activities, and developed the research instruments. In the acting stage, students learned selected English vocabulary through flash card games that involved visual recognition, word-picture matching, pronunciation practice, meaning recall, translation, and vocabulary review. In the observing stage, the researcher monitored students' participation, attention, and responses during the learning process. In the reflecting stage, the researcher examined the results of the intervention to determine whether flash card games contributed to students' vocabulary retention and engagement. The participants were university students selected purposively because they experienced difficulties in remembering English vocabulary and needed more interactive vocabulary learning activities. Data were collected through a vocabulary pre-test, a vocabulary post-test, and a closed-ended questionnaire. The pre-test was administered before the intervention to identify students' initial vocabulary achievement, while the post-test was administered after the intervention to measure changes in vocabulary retention. The questionnaire was used to examine students' responses to the use of flash card games in vocabulary learning. The test data were analyzed quantitatively through scores, percentages, mean scores, and achievement categories, while questionnaire data were analyzed using percentage distributions based on a five-point Likert scale ranging from strongly agree to strongly disagree. Ethical considerations were observed by informing students of the research purpose, using the collected data only for academic research, and keeping students' identities and responses confidential.

4. Results and Discussion

4.1. Results for Research Question 2

The first research question asked: Are there any significant differences in students' vocabulary achievement before and after learning vocabulary through flash card games? To answer this question, students' vocabulary scores in the pre-test and post-test were compared. The pre-test was administered before the use of flash card games, while the post-test was administered after the intervention. The results were analyzed using students' scores, percentages, achievement categories, and mean scores.

Table 1. Distribution of students' vocabulary achievement in the pre-test

Achievement level	Score range	Frequency	Percentage
Excellent	90–100	0	0%
Good	70–89	7	28%
Fair	60–69	8	32%
Average	50–59	7	28%
Poor	0–49	3	12%
Total		25	100%

Table 1 shows that students' vocabulary achievement before the intervention was relatively limited. No student reached the excellent level in the pre-test. The largest group was at the fair level, with 8 students, accounting for 32%. In addition, 7 students, or 28%, were at the good level; 7 students, or 28%, were at the average level; and 3 students, or 12%, were at the poor level. The mean score of the pre-test was 58.8, which

indicates that students' vocabulary achievement before the use of flash card games was generally at a low-to-average level.

Table 2. Distribution of students' vocabulary achievement in the post-test

Achievement level	Score range	Frequency	Percentage
Excellent	90–100	5	17%
Good	70–89	20	69%
Fair	60–69	4	14%
Average	50–59	0	0%
Poor	0–49	0	0%
Total		29	100%

Table 2 presents students' vocabulary achievement after the use of flash card games. The results show an improvement in students' post-test performance. Five students, or 17%, reached the excellent level, while 20 students, or 69%, reached the good level. Four students, or 14%, were at the fair level. No student was categorized at the average or poor level in the post-test. The mean score of the post-test was 78.3, which indicates that students' vocabulary achievement after the intervention was generally at the good level.

Table 3. Comparison of students' pre-test and post-test vocabulary scores

Test	Number of students	Total score	Mean score	Lowest score	Highest score
Pre-test	25	1470	58.8	40	80
Post-test	29	2270	78.3	60	100

As shown in Table 3, students' mean score increased from 58.8 in the pre-test to 78.3 in the post-test. The difference between the two mean scores was 19.5 points. The lowest score also increased from 40 in the pre-test to 60 in the post-test, while the highest score increased from 80 to 100. These results show that students performed better in vocabulary achievement after learning through flash card games.

Table 4. Mean score improvement from pre-test to post-test

Test	Mean score	Mean gain
Pre-test	58.8	
Post-test	78.3	19.5

Table 4 shows that the mean gain from the pre-test to the post-test was 19.5 points. This increase indicates a clear improvement in students' vocabulary achievement after the use of flash card games. Therefore, the results answer the first research question by showing that there was a noticeable difference between students' vocabulary achievement before and after the intervention. Students achieved higher scores and better achievement categories in the post-test than in the pre-test.

4.2. Results for Research Question 2

The second research question asked: How do university students respond to the use of flash card games in learning vocabulary? To answer this question, a closed-ended questionnaire was administered after the intervention. The questionnaire consisted of ten items designed to identify students' perceptions of flash card games in relation to interest, enjoyment, vocabulary improvement, classroom participation, understanding, vocabulary acquisition, and motivation. Students responded using a five-point Likert scale: 5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, and 1 = strongly disagree.

Table 5. Students' responses to the use of flash card games in vocabulary learning

No.	Questionnaire item	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1	Learning vocabulary is interesting and easy to understand after using flash card games.	19 (65.5%)	10 (34.5%)	0	0	0

2	The technique used in teaching is effective in increasing vocabulary.	16 (55.1%)	11 (37.9%)	1 (3.4%)	1 (3.4%)	0
3	Studying through flash card games is enjoyable and fun.	18 (62.0%)	9 (31.0%)	0	1 (3.4%)	1 (3.4%)
4	Flash card games can be used in everyday teaching.	17 (58.6%)	8 (27.5%)	1 (3.4%)	2 (6.8%)	1 (3.4%)
5	After learning through flash card games, my vocabulary increased.	13 (44.7%)	12 (41.3%)	2 (6.8%)	2 (6.8%)	0
6	Students are more interested in learning vocabulary through flash card games than other techniques.	26 (89.6%)	0	1 (3.4%)	2 (6.8%)	0
7	After learning through flash card games, students are more active in class.	16 (55.2%)	11 (37.9%)	2 (6.8%)	0	0
8	Vocabulary lessons using flash card games are easier to understand than other techniques.	15 (51.7%)	11 (37.9%)	3 (10.2%)	0	0
9	Using flash card games helps students get new vocabulary.	17 (58.6%)	11 (37.9%)	1 (3.4%)	0	0
10	My motivation in learning vocabulary increased after using flash card games.	17 (58.6%)	9 (31.0%)	3 (10.2%)	0	0

The questionnaire results show that students responded positively to the use of flash card games in vocabulary learning. For Item 1, all students selected either strongly agree or agree, with 19 students (65.5%) strongly agreeing and 10 students (34.5%) agreeing that vocabulary learning became interesting and easier to understand after using flash card games. For Item 3, 18 students (62.0%) strongly agreed and 9 students (31.0%) agreed that studying through flash card games was enjoyable and fun.

The results also indicate that students perceived flash card games as useful for vocabulary development. In Item 5, 13 students (44.7%) strongly agreed and 12 students (41.3%) agreed that their vocabulary increased after learning through flash card games. Similarly, in Item 9, 17 students (58.6%) strongly agreed and 11 students (37.9%) agreed that flash card games helped them acquire new vocabulary.

Students also reported positive responses regarding interest, participation, and motivation. In Item 6, 26 students (89.6%) strongly agreed that they were more interested in learning vocabulary through flash card games than through other techniques. In Item 7, 16 students (55.2%) strongly agreed and 11 students (37.9%) agreed that students became more active in class after learning through flash card games. In Item 10, 17 students (58.6%) strongly agreed and 9 students (31.0%) agreed that their motivation in vocabulary learning increased after the use of flash card games.

Table 6. Summary of positive responses to flash card games

Aspect	Relevant items	Main result
Interest and understanding	Items 1 and 8	Most students agreed or strongly agreed that flash card games made vocabulary lessons interesting and easier to understand.
Enjoyment	Item 3	Most students agreed or strongly agreed that learning through flash card games was enjoyable and fun.
Vocabulary improvement	Items 5 and 9	Most students agreed or strongly agreed that flash card games helped increase their vocabulary and acquire new words.
Classroom participation	Item 7	Most students agreed or strongly agreed that flash card games made students more active in class.
Motivation	Item 10	Most students agreed or strongly agreed that flash card games increased their motivation to learn vocabulary.

Overall, the results answer the second research question by showing that university students had positive responses to the use of flash card games in vocabulary learning. Most students agreed or strongly agreed that flash card games made vocabulary learning more interesting, enjoyable, understandable, active, and motivating. The questionnaire results also show that students perceived flash card games as helpful for increasing their vocabulary knowledge.

4.3. Discussion

The findings of this study indicate that flash card games had a positive effect on university students' vocabulary achievement. The students' mean score increased from 58.8 in the pre-test to 78.3 in the post-test, showing a mean gain of 19.5 points after the intervention. This improvement suggests that the use of flash card games helped students remember and retrieve vocabulary more effectively after instruction. The result supports the view that vocabulary is central to English language learning because it provides the lexical basis for communication. Hatch and Brown (1995) emphasize that vocabulary is fundamental to language development, while Wilkins (1972) argues that without vocabulary, communication cannot be meaningfully conveyed. In this study, the improvement in students' scores suggests that when vocabulary was taught through visual, interactive, and repeated practice, students were better able to retain and recall target words.

The positive change in students' vocabulary achievement may be explained by the nature of flash card games as visual and repetitive learning tools. Flashcards provide concrete visual support that helps students associate word forms with meanings, while games create opportunities for repeated exposure and active recall. This is important because vocabulary retention depends not only on initial word recognition but also on learners' ability to store and retrieve words later. Al-Zahrani (2011) explains that vocabulary retention is related to learners' ability to remember and recall words for future use, while Souleyman (2009) views retention as a memory-related process involving learning, storage, recall, and recognition. The post-test improvement in this study suggests that flash card games may have helped students move beyond temporary recognition toward stronger vocabulary recall.

The findings also confirm the pedagogical value of using games in vocabulary instruction. Instead of learning vocabulary only through translation, memorization, or written exercises, students learned vocabulary through activities that required them to identify pictures, recall meanings, match words, pronounce items, and participate in classroom tasks. Hadfield (1998) states that games contain rules, goals, and an element of fun, and can support repetition, memory, and language practice. In this study, flash card games appeared to make vocabulary learning more active and engaging. This may explain why students' vocabulary performance improved after the intervention. When learners are actively involved in the learning process, they may pay more attention to the target words and have more chances to remember them.

The questionnaire results further show that students responded positively to the use of flash card games. Most students agreed or strongly agreed that flash card games made vocabulary learning more interesting, enjoyable, understandable, and motivating. This finding is consistent with Huyen and Nga (2003), who found that games could make vocabulary lessons more interesting and help learners improve vocabulary learning in the Vietnamese EFL context. The strong positive response in the present study suggests that flash card games can reduce the monotony often associated with vocabulary learning and can create a more enjoyable classroom atmosphere. For university students, this is particularly important because vocabulary learning may otherwise be perceived as repetitive or passive when taught mainly through word lists and translation.

The results also indicate that flash card games encouraged classroom participation. Many students reported that they became more active in class after learning vocabulary through flash card games. This finding aligns with Nugroho, Nurkamto, and Sulistyowati (2012), who reported that flashcards improved students' vocabulary mastery and made them more active and enthusiastic in learning activities. In the present study, the

use of flash card games may have encouraged students to participate because the activities were simple, visual, and game-like. Students did not only receive vocabulary input from the teacher; they also interacted with the learning materials and participated in vocabulary practice. This active involvement may have contributed to both vocabulary improvement and positive attitudes toward the learning technique.

The findings are also consistent with previous studies showing the usefulness of games and visual tools in vocabulary learning. Aghlara and Hadidi Tamjid (2011) found that digital games had positive effects on vocabulary retention in foreign language learning, while Jafarian and Shoari (2017) reported that games supported vocabulary learning among EFL learners. Although the present study focused on flash card games rather than digital games, the results similarly suggest that game-based vocabulary learning can support retention and engagement. The combination of visual cues, repetition, and enjoyable practice appears to be beneficial for vocabulary learning across different EFL contexts.

However, the findings should be interpreted within the scope of the study. The study examined one group of university students at a university in northern Viet Nam, and the intervention focused on selected vocabulary items taught through flash card games. Therefore, the results cannot be generalized to all university students or all vocabulary learning contexts. In addition, the study measured vocabulary achievement through pre-test and post-test scores and examined students' responses through a questionnaire. Future studies could include a larger sample, a control group, delayed post-tests, interviews, or classroom observations to provide stronger evidence of long-term vocabulary retention and learner engagement.

Overall, the discussion of the findings suggests that flash card games can be an effective and motivating technique for enhancing vocabulary retention among university students. The improvement from pre-test to post-test shows that students' vocabulary achievement increased after the intervention, while the questionnaire results show that students responded positively to the technique. These findings support the use of flash card games as a practical classroom strategy for vocabulary instruction in Vietnamese university EFL contexts.

5. Conclusion

This study investigated the effectiveness of flash card games in enhancing vocabulary retention among university students at a university in northern Viet Nam and explored students' responses to this vocabulary learning technique. The findings showed that students' vocabulary achievement improved after learning through flash card games, as reflected in the increase from the pre-test mean score to the post-test mean score. The questionnaire results also indicated that students responded positively to the use of flash card games, reporting that the technique made vocabulary learning more interesting, enjoyable, understandable, motivating, and active. These findings suggest that flash card games can be a useful instructional technique for vocabulary teaching in university EFL classrooms because they combine visual support, repetition, interaction, and learner engagement. The study contributes practical evidence for English language teachers who wish to make vocabulary instruction more effective and student-centered. It also implies that university teachers should consider integrating flash card games into vocabulary lessons to support students' vocabulary retention and classroom participation. However, further studies with larger samples, longer intervention periods, and delayed post-tests are recommended to examine the long-term effects of flash card games on vocabulary retention.

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