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RESEARCH ARTICLE

The effectiveness of the spaced repetition (flashcard) method in teaching vocabulary to a2-level EFL learners

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Abstract. The spaced repetition (flashcard) method is an effective way to teach vocabulary to A2-level learners of English as a foreign language (EFL), especially when learners review words at increasing intervals and actively recall their meaning and form. This article reviews four sources to answer three practical questions: what vocabulary to teach, who the A2 learner is, and how to teach vocabulary with spaced flashcards. The evidence shows that A2 learners should study high-frequency words in both directions, from word to meaning and from meaning to word. Spacing is more effective than cramming, and digital flashcards give lower-level learners the extra support they need. However, the way learners study matters more than whether the cards are digital or paper.

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1. Introduction

A2-level learners need to learn many new words quickly, but words learned once are soon forgotten. Repetition is one of the strongest principles of vocabulary learning, and spaced repetition helps to re-strengthen knowledge that has partly decayed [4]. The spaced repetition method puts this principle into practice: learners study words on flashcards and review them several times, with gaps of time between the reviews. Today, flashcards can be made of paper or used in digital applications such as Quizlet and Anki [1]. Research from psychology shows that spacing study sessions apart is more effective than cramming them into one session [3]. However, teachers still need to know which words to put on the cards, how A2 learners use them, and how to organise practice. Therefore, this article answers three questions: what to teach, who to teach and how to teach vocabulary to A2 learners through the spaced repetition (flashcard) method.

2. Methods

This study is a qualitative literature review based on four sources, and it uses the spaced repetition method as its framework for analysis. Three sources are experimental studies: a psychology study of spacing in flashcard learning [3], a 12-week comparison of digital and paper flashcards with 52 Japanese EFL students [2], and a comparison of digital and paper flashcards with 139 Japanese students at basic, intermediate and advanced levels [1]. The fourth source is a theoretical article on the principles of vocabulary learning [4]. Each source was read, and its relevant findings were grouped under the three guiding questions: what to teach, who to teach and how to teach. Numerical results are reported as given in the original studies.

3. Results

3.1 What to Teach?

Flashcards for A2 learners should carry high-frequency, everyday words that learners will meet often. For example, Dizon and Tang used words from the first level of the New General Service List, a list of the most common English words [2]. In contrast, Ashcroft, Cvitkovic and Praver used academic words [1], which are more suitable for higher levels than for A2 learners. Each card should link the English word form with a clear meaning. Nation recommends first-language meanings and pictures, because accurate and comprehensible meanings make learning more efficient [4]. Learners should also practise in both directions: looking at the word and recalling its meaning (receptive knowledge), and looking at the meaning and recalling the word (productive knowledge) [4]. Both types of knowledge can be developed with flashcards, as gains in receptive and productive vocabulary were found in the Japanese study [2]. Finally, cards can include the spoken form and common collocations, such as *make a mistake*, because learning words with their collocations and in both written and spoken forms strengthens memory [4].

3.2 Who to Teach?

The target group is A2-level EFL learners: elementary students, usually teenagers or young adults, who have a small vocabulary and limited study skills. Such learners benefit most from digital flashcards. In Ashcroft and colleagues' study, students with the lowest proficiency (TOEIC scores under 230) gained significantly more words with digital flashcards than with paper flashcards, while advanced students did not benefit more from the digital cards [1]. The authors explain that lower-level learners often lack metacognitive awareness and effective learning strategies, and digital flashcards partly compensate for this gap [1]. At the same time, learners do not always know what is good for them. In Kornell's experiments, spacing was more effective for 90% of participants, yet after the first session 72% of them believed that cramming had worked better [3]. Therefore, A2 learners need clear guidance from the teacher, as well as short and achievable tasks that support motivation and self-efficacy, the belief that they can succeed [4].

3.3 How to Teach?

The key to the method is spaced retrieval: learners should test themselves on the cards several times, with gaps between reviews, instead of studying all the words at once [3], [4]. Kornell showed that studying one large stack of flashcards was more effective than studying several small stacks separately, because a large stack creates more spacing between repetitions of the same word [3]. Spacing was also more effective than cramming the day before a test [3]. Digital flashcards make spacing easier. Quizlet, for instance, offers different study modes, audio, immediate feedback and random card order [1]. Table 1 shows the results for the lowest-level learners in Ashcroft and colleagues' study.

Table 1. Relative vocabulary gains of basic-level learners (0–1 scale) [1]

Test	Digital flashcards (Quizlet)	Paper flashcards
Immediate post-test	0.43	0.30
Delayed post-test (three weeks later)	0.22	0.13

Basic-level learners gained significantly more with digital flashcards, both immediately and three weeks later [1]. However, the tool is not the only factor. In Dizon and Tang's 12-week study, students who used paper flashcards together with taught strategies, such as oral rehearsal, association and dropping known cards, improved as much as students who used Quizlet or Cram [2]. Thus, how learners study matters more than the format of the cards. Table 2 links Nation's principles to classroom flashcard practice.

Table 2. Learning principles and matching flashcard practice [4]

Principle	Flashcard practice for A2 learners
Accuracy	First-language meaning and a picture on each card
Repetition	Several reviews of every card over days and weeks
Time-on-task	Self-testing with spaced retrieval and a larger stack as skill grows
Elaboration	Both directions, spoken form, example sentence and collocation

In practice, a teacher can apply the method in four steps. First, the teacher prepares a set of 15–20 high-frequency words from the course book in Quizlet, or shows learners how to make paper cards. Second, learners study the set in class with self-testing in both directions. Third, learners review the whole set at home on spaced days, for example after one day, three days and one week. Fourth, the teacher checks progress with short quizzes and gradually adds new words to the stack.

4. Discussion

The sources agree that spaced flashcard practice is an effective way to learn vocabulary, but its success depends on how it is organised. The strongest evidence concerns spacing: across Kornell's experiments, spacing beat massing for 90% of learners without requiring extra study time [3]. For A2 learners, digital flashcards add useful support, such as audio, feedback and a variety of study modes, which helps lower-level learners keep up with stronger peers [1]. Students also find digital flashcards easier to use: 73% of the digital group agreed that learning to study with them was easy, compared with 42% of the paper group [2]. However, the evidence has limits. Both classroom studies were carried out with Japanese university students, not with younger A2 learners [1], [2]. In Dizon and Tang's study, the groups were not equal at the start, and out-of-class study was not measured [2]. Moreover, the digital group did not study more outside class than the paper group, so teachers still need to encourage regular home review [2]. Finally, learners may prefer cramming because it feels effective in the short term, even though spaced study gives better long-term results [3]. Teachers should therefore explain why spacing works and build spaced reviews into the course.

5. Conclusion

The spaced repetition (flashcard) method is an effective way to teach vocabulary to A2-level EFL learners when it is based on spaced retrieval rather than cramming. Teachers should put high-frequency everyday words on the cards, with first-language meanings, pictures and spoken forms, and learners should practise in both directions [2], [4]. A2 learners have limited study strategies, so digital flashcards and clear teacher guidance are especially helpful for them [1], [3]. The best way to apply the method is to study a large stack of cards, review it at increasing intervals, test oneself instead of rereading, and check progress regularly [3], [4]. Digital tools such as Quizlet make this easier, but well-taught strategies can make paper flashcards equally effective [2]. Future research should test the method with younger A2 learners and over longer periods.

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