

Retrieval Practice for EFL in the Korean Context

Merrilee Brinegar

(Graduate School of TESOL, Hankuk University of Foreign Studies, South Korea)

ABSTRACT: Retrieval practice is a concept that purports that for learning to be lasting, learners need repeated practice. While this notion is not in question, how to maximize the effectiveness of retrieval practice is a point of interest in current research on education, including in the field of language learning. This paper summarizes the tenets of retrieval practice and overviews the fundamental research findings of retrieval practice. This is followed by a synopsis of studies on the effects of retrieval practice for second language learning and a review of studies specifically on retrieval practice in the context of EFL in Korea.

KEYWORDS: *English as a Foreign Language (EFL), retrieval practice, South Korea*

I. INTRODUCTION

Retrieval practice is a learning strategy that involves recalling information from memory to promote long-term retention and retrieval of that information. This strategy is based on the idea that actively retrieving information from memory strengthens and consolidates the memory trace, making it easier to recall in the future (Roediger & Butler, 2011). Research has shown that retrieval practice can improve retention of a wide range of information, including vocabulary words (Roediger & Karpicke, 2006), concepts (Agarwal et al., 2008), and procedures (Brame & Biel, 2015). Moreover, retrieval practice has been found to be more effective than other popular study strategies such as rereading or highlighting (Dunlosky et al., 2013).

One of the main concepts of retrieval practice is active recall, as retrieval practice moves students beyond simply reviewing information passively. Through retrieval practice, learners pull information from their memory and use it to answer questions, complete tasks, or solve problems (Roediger & Butler, 2011). Repetition is also important for learning, and this can include massed practice or spaced practice. Massed practice involves studying information or practicing a skill for an extended period of time without taking breaks. This means that the information is presented in a condensed period of time, with little to no time between repetitions. This can be effective in the short-term for simple and rote learning tasks, but it is generally less effective for long-term retention and transfer of knowledge.

In contrast, spaced practice is based on the principle of the spacing effect, which suggests that information is better retained and recalled when learning sessions are spaced out over time (Dunlosky & Rawson, 2015). Thus, retrieval practice involves spaced repetition, where there are increasingly longer intervals between retrievals over time. This helps to strengthen memory traces and promote long-term retention of the information.

Along with active recall and spaced repetitions, feedback is vital for retrieval practice, in that feedback helps learners to correct any errors and reinforce correct responses (Butler & Roediger, 2008). Feedback can be provided immediately after retrieval or after a delay, depending on the learning goals. Finally, transfer of learning is also a focus of retrieval practice. The goal through retrieval practice is not only to help learners remember information and concepts over the long term but also to help them transfer what they have learned to new contexts, by promoting generalization and application of knowledge and skills to new situations (Kornell et al., 2011).

Retrieval practice can be applied in a variety of ways, including flashcards, quizzes, or practice tests. For example, students can create flashcards with vocabulary words or concepts and quiz themselves periodically to strengthen their memory of the material (Roediger & Butler, 2011). Similarly, teachers can administer practice tests to students to help learners reinforce and consolidate their learning (Agarwal et al., 2008). Overall, retrieval practice is a powerful learning strategy that can improve long-term retention and recall of information. By actively recalling information from memory, learners strengthen their memory traces and promote more durable learning.

II. RETRIEVAL PRACTICE IN LANGUAGE LEARNING

Retrieval practice has been extensively studied in the field of cognitive psychology. One influential study conducted by Roediger and Karpicke (2006) found that repeated retrieval practice was more effective than repeated studying in promoting long-term retention of learned material. This finding has been replicated in numerous subsequent studies, including a meta-analysis of experiments by Dunlosky et al. (2013), which found that retrieval practice was one of the most effective learning strategies across a wide range of materials and contexts.

In the context of language learning, retrieval practice has been shown to be particularly effective for vocabulary acquisition. A study by Karpicke and Bauernschmidt (2011) found that repeated retrieval practice with long intervals between testing improved recall of foreign language vocabulary words by over 200% compared to retrieval on massed tests. Similarly, Kang et al. (2013) compared two conditions for vocabulary learning: having students listen and repeat target words versus having students try to retrieve and produce the words before hearing them. Their study demonstrated that the retrieval practice drill condition yielded better effects on an immediate and delayed post-test for both comprehension and production of the target words.

Research has consistently shown that spaced practice is more effective than massed practice for long-term retention and transfer of knowledge (Cepeda et al., 2006; Dunlosky et al., 2013). By spacing out learning sessions and allowing time for forgetting, learners are forced to actively retrieve information from memory, which strengthens memory traces and promotes more durable learning. Research on spaced versus massed practice for language learning has found that spaced practice is more effective than massed practice for promoting long-term retention and acquisition of language skills, particularly grammar (Miles, 2004). Additionally, studies have shown that spaced repetition of vocabulary words leads to better retention than cramming vocabulary words in one long study session (Bahrick & Phelps, 1987; Karpicke & Roediger, 2008).

III. RETRIEVAL PRACTICE FOR EFL IN KOREAN CONTEXTS

While much research has been conducted on retrieval practice, including its effects on second language learning, the research on retrieval practice on English as a foreign language (EFL) in the Korean context is a more recent phenomenon. Makarchuk (2018) examined the importance of recall in second language acquisition, specifically looking at vocabulary retention among Korean university students studying English. He argued that while many language learners focus on the ability to produce language, the ability to recall previously learned information is just as important for achieving language proficiency. In his study, three treatment were compared: rereading, recall, and a recognition task. Although he found that students' preferred way to study was rereading, retrieval practice was more effective for long-term retention.

Makarchuk (2018) concluded that language learners can improve their recall efficacy by engaging in activities such as spaced repetition, self-testing, and elaborative rehearsal. He also noted the importance of the role of feedback in improving recall, purporting that learners benefit from both immediate feedback during learning tasks and delayed feedback during assessment. Makarchuk argues that by focusing on recall efficacy, language learners can improve their ability to retain and retrieve information, leading to greater proficiency in the target language.

Another study on the use of retrieval practice in the Korean EFL context was done by Cho (2010), who investigated the effects of input enhancement and written recall of the present perfect form. The Korean high school students in the study had been exposed to but had not yet mastered usage of present perfect. Students were divided into two groups who were exposed to enhanced input and written recall exercises, respectively, and a third control group that received traditional instruction without these techniques.

Cho (2010) found that on a receptive test, the control group with traditional instruction scored the lowest, whereas the group with input enhancement exercises scored the highest, even outperforming the students who had been in the input enhancement and written recall group. On a productive test, however, the group who had been exposed to input enhancement and done written recall exercises outperformed the other two groups. The findings of Cho's (2010) study suggest that both input enhancement and written recall exercises can improve language learners' noticing and acquisition of targeted grammatical forms. The study also suggests that the effects of these techniques are influenced by individual differences in cognitive abilities, such as working memory capacity.

In another study on Korean EFL learners, Miles (2014) investigated the effectiveness of spaced and massed distribution instruction for second language (L2) grammar learning. The study involved English language learners at a Korean university who were assigned to either spaced distribution, massed distribution instruction, or a control group using intact reading. The grammar items of focus were word order for frequency adverb-verbs and *almost* in determinative phrases and in verbal phrases, chosen specifically because those forms are commonly produced with errors by Korean university students. After instruction, an immediate post-test and delayed post-test were administered.

The findings of Miles' (2014) study suggest that spaced distribution instruction is more effective than massed distribution instruction for promoting L2 grammar learning. The learners in the spaced distribution group performed better on both the immediate and delayed post-tests than the learners in the massed distribution group. The study also noted that learners' individual differences, such as gender and language proficiency, influenced their performance on the task.

Another study in the Korean context by Choi and Yoon (2022) investigated the effectiveness of part and whole learning approaches on the acquisition of second language words and idioms by looking at spacing. The study involved two groups adult EFL learners who were exposed to either part or whole learning of target words and idioms, and their performance was measured on a pretest and posttest. The study had four spacing conditions. Whereas most studies view spacing in terms of time, their study considered spacing as created by the addition of items, rather than time, between repetitions. In the first condition, students were presented one word or idiom and then practiced and recalled that one word or idiom three times before moving on to the next item. The other three conditions involved blocking by 5, 10, and 20 items respectively, such that students learned more words or idioms at once before reviewing them.

On an immediate post-test, Choi and Yoon (2022) found that the 20-item group, who studied 20 words once through before the second repetition, outperformed the other three groups for individual word learning, indicating that delaying the first retrieval is beneficial for learning because it creates a desirable difficulty in learning. In contrast, when learning idioms, the results were less pronounced. While the three spaced groups performed better than the 1-item group, there was not a significant difference between the three spacing groups. Choi and Yoon asserted that this may have been because the idioms created additional space between items since idioms are naturally more than one word.

On delayed post-tests, the results varied again. For individual word learning, the group with 10-item part learning performed better than the 1-item and 5-item blocking groups but not better than the 20-item group; however, for idiom learning, the 10-item part learning group performed better than the other three groups, including outperforming the 20-item group. Choi and Yoon (2022) surmised that the 20-item idiom block may have exceeded the desirable difficulty condition of learning, as the idioms contained more than one word each.

The findings of the study suggest that both part and whole learning approaches are effective in promoting the acquisition of L2 words and idioms. However, the whole learning approach was found to be more effective than the part learning approach in terms of the learners' ability to produce and comprehend the target words and idioms. The study also found that individual differences in language proficiency influenced the learners' performance on the tasks. Choi and Yoon (2022) concluded that the optimal spacing condition depends on the difficulty of what is being learned, such that spacing can be increased to enhance learning if the task difficulty is low. While the whole learning approach may be more beneficial for learners' production and comprehension of the target language, individual differences in language proficiency should be considered when designing instructional interventions.

IV. CONCLUSION

Retrieval practice has been shown to be an effective strategy for promoting EFL learning among Korean students. Its effectiveness has been demonstrated in various aspects of EFL learning, including vocabulary acquisition and grammar learning. Further research is needed to explore the potential of retrieval practice in other areas of EFL learning, such as writing and speaking.

Moreover, research on retrieval practice in EFL learning in Korea could also investigate the optimal frequency and timing of retrieval practice sessions, as well as the effects of individual differences such as motivation and learning styles on its effectiveness. Additionally, it would be useful to conduct studies on the use of technology-based retrieval practice tools such as online flashcards or gamification to enhance EFL learning among Korean students.

It is also important to consider the potential challenges and limitations of implementing retrieval practice in the Korean education system. For example, the emphasis on standardized testing and rote memorization may make it difficult for teachers to integrate retrieval practice into their curriculum. Furthermore, cultural factors such as a preference for group-oriented learning and a fear of making mistakes may affect students' willingness to engage in individual retrieval practice exercises.

Despite these challenges, the potential benefits of retrieval practice for EFL learning in Korea are significant. By promoting long-term retention and deep learning, retrieval practice has the potential to help Korean students overcome some of the persistent challenges they face in English education. As such, it is important for teachers and researchers to continue exploring the effectiveness of retrieval practice in the EFL context in Korea and to develop strategies for integrating it into the classroom.

REFERENCES

- [1] Roediger, H. L., & Butler, A. C. (2011). The critical role of retrieval practice in long-term retention. *Trends in Cognitive Sciences*, 15(1), 20-27.
- [2] Roediger III, H. L., & Karpicke, J. D. (2006). Test-enhanced learning: Taking memory tests improves long-term retention. *Psychological Science*, 17(3), 249-255.
- [3] Agarwal, P. K., Karpicke, J. D., Kang, S. H., Roediger III, H. L., & McDermott, K. B. (2008). Examining the testing effect with open-and closed-book tests. *Applied Cognitive Psychology: The Official Journal of the Society for Applied Research in Memory and Cognition*, 22(7), 861-876.
- [4] Brame, C. J., & Biel, R. (2015). Test-enhanced learning: the potential for testing to promote greater learning in undergraduate science courses. *CBE—Life Sciences Education*, 14(2), es4.
- [5] Dunlosky, J., Rawson, K. A., Marsh, E. J., Nathan, M. J., & Willingham, D. T. (2013). Improving students' learning with effective learning techniques: Promising directions from cognitive and educational psychology. *Psychological Science in the Public Interest*, 14(1), 4-58.
- [6] Roediger, H. L., & Butler, A. C. (2011). The critical role of retrieval practice in long-term retention. *Trends in Cognitive Sciences*, 15(1), 20-27.
- [7] Dunlosky, J., & Rawson, K. A. (2015). Practice tests, spaced practice, and successive relearning: Tips for classroom use and for guiding students' learning. *Scholarship of Teaching and Learning in Psychology*, 1(1), 72.
- [8] Butler, A. C., & Roediger, H. L. (2008). Feedback enhances the positive effects and reduces the negative effects of multiple-choice testing. *Memory & Cognition*, 36(3), 604-616.
- [9] Kornell, N., Bjork, R. A., & Garcia, M. A. (2011). Why tests appear to prevent forgetting: A distribution-based bifurcation model. *Journal of Memory and Language*, 65(2), 85-97.
- [10] Karpicke, J. D., & Bauernschmidt, A. (2011). Spaced retrieval: absolute spacing enhances learning regardless of relative spacing. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 37(5), 1250.
- [11] Kang, S. H., Gollan, T. H., & Pashler, H. (2013). Don't just repeat after me: Retrieval practice is better than imitation for foreign vocabulary learning. *Psychonomic Bulletin & Review*, 20, 1259-1265.
- [12] Cepeda, N. J., Pashler, H., Vul, E., Wixted, J. T., & Rohrer, D. (2006). Distributed practice in verbal recall tasks: A review and quantitative synthesis. *Psychological Bulletin*, 132(3), 354.
- [13] Miles, S. W. (2014). Spaced vs. massed distribution instruction for L2 grammar learning. *System*, 42, 412-428.
- [14] Bahrick, H. P., & Phelps, E. (1987). Retention of Spanish vocabulary over 8 years. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 13(2), 344.
- [15] Karpicke, J. D., & Roediger, H. L. (2008). The critical importance of retrieval for learning. *Science*, 319(5865), 966-968.
- [16] Makarchuk, D. (2018). Recall Efficacy in EFL Learning. *English Teaching*, 73(2), 115-138.
- [17] Cho, M. Y. (2010). The effects of input enhancement and written recall on noticing and acquisition. *Innovation in Language Learning and Teaching*, 4(1), 71-87.
- [18] Choi, J., & Yoon, H. (2022). Effects of Part and Whole Learning on the Learning of L2 Words and Idioms. *Korean Journal of English Language and Linguistics*, 22, 441-457.