

Action Research

Improving Vocabulary Retention by Training Students to Use Vocabulary Learning Strategies In and Out of Class

Tetiana Foster, PhD

Russian Instructor, Russian School, Undergraduate Education

Tatiana Saenko

Russian Instructor, Russian School, Undergraduate Education

This article describes an action research study to enhance vocabulary retention in intro-level students by implementing an optimized blended approach of combining memory-enhancing vocabulary learning strategies. In a classroom setting, 18 Russian language learners participated in a well-structured, 3-week workshop series during which they used their concrete experience to build threshold vocabulary skills by integrating vocabulary learning strategies organized into logically structured learning blocks, aimed at helping them acquire all word aspects. Under the guidance of researchers, participants integrated digital technology with traditional vocabulary learning tools and developed their own algorithm of vocabulary learning pertinent to their needs. Utilizing both quantitative ratings from survey questions and qualitative analyses of surveys, interviews, and vocabulary journal comments as well as participant output during the project, this study seeks to ascertain the benefits of this approach in enhancing student vocabulary retention.

Keywords: *Vocabulary Learning Strategies, Vocabulary Retention, Reflective Learning*

INTRODUCTION

Background

From the beginning of the foreign language learning experience, language learners are facing a never-ending task of vocabulary learning. Significant effort has been taken into discovering a

DIALOG ON LANGUAGE INSTRUCTION (ISSN 1058-3858) is the journal of the Defense Language Institute Foreign Language Center, in the U.S. Department of Defense. The views expressed herein are those of the author(s), not the Department of Defense or its elements. Further reproduction is not advisable. Whenever copyrighted materials are reproduced in this publication, copyright release has ordinarily been obtained only for use in this specific issue. Requests for reprints should be directed to the individual authors.

wide range of vocabulary learning strategies (VLS) that students use to foster long-term retention and comprehension, which resulted in a few VLS taxonomies (Gu, 2018; Nation, 2013). Although second language (L2) acquisition depends on word learning and retention, remembering a large number of words is often challenging for students (Nation, 2013; Schmitt, 2019). Gu (2019) argues that at the start of the language learning program greater emphasis should be placed on developing students' threshold vocabulary skills—such as word recognition, word processing, and decoding—before focusing on complex cognitive skills such as understanding vocabulary in context with authentic listening or reading.

Research suggests different methods to build vocabulary skills in L2 students. Traditional teaching methods tend to focus on input-based approaches, primarily emphasizing the introduction of new vocabulary and promoting incremental learning. However, a series of studies on output-oriented techniques emphasize that vocabulary retrieval from students has demonstrated superior long-term retention and comprehension of language concepts. Strong (2023) suggests that a blended approach that integrates retrieval practice with other effective learning strategies, such as spacing and interleaving, can provide an optimized learning environment that encourages active recall and bolsters vocabulary knowledge among language learners.

Other studies found that 'multidomain' approaches that combine different memory enhancement vocabulary learning techniques can be used to design optimized study regimens by incorporating spacing, retrieval practice, and repetitions that eventually yield enhanced retention outcomes for L2 learners (Karatas et al., 2021; Ullman & Lovelett, 2018). This approach promotes a more engaged and active learning environment, which is particularly crucial for DLIFLC learners seeking to achieve linguistic proficiency in intense language learning programs with significant time constraints.

Our action research employed the latest series of studies on "multidomain" approaches to enhance the effectiveness of learners' vocabulary learning. In this study, students under the guidance of instructors participated in structured workshops designed to model effective vocabulary learning in an individual setting. These workshops consisted of logically structured learning blocks to help students acquire all word aspects. They integrated word recognition and manipulation with repetition, retrieval, and spacing techniques, all of which proved their effectiveness in earlier research.

This study intended to answer the following research questions:

1. When students enter the Basic Russian language program, what vocabulary learning strategies do they know about and use?
2. What are students' perceptions of the usefulness of the vocabulary learning strategies they learned and practiced in a 3-week workshop?

We sought to create an optimized learning environment for Russian intro-level learners by equipping them with effective vocabulary learning skills that they could use autonomously to ensure better vocabulary retention throughout the course. The action plan follows.

ACTION PLAN

Context

This action research was prompted by the challenge that students in the Russian Basic Program face in memorizing large volumes of vocabulary, often up to 100 words per week. Such demands place a heavy cognitive load on learners that often results in superficial learning or burnout, especially since students must both recognize and accurately produce the words. We observed that beginner-level students typically lack strategies to manage this load, taking over a month to discover effective methods through trial and error, causing unnecessary stress early in the course and undermining success. To better support them, we aimed to make vocabulary learning more meaningful by introducing strategies that encourage deeper learning and more efficient use of individual study time.

The participants consisted of 18 students, aged 19 to 25, enrolled in a three-section class that began the Russian Basic Program in February 2024 and graduated in February 2025. Throughout the project, each section was led by one of three full-time Russian instructors, who remained assigned to their respective groups for the duration of the project. The project moved from goal setting to delivering the workshops.

Goal Setting

Before the project, we set clear learning objectives for the participants, stating that by the end of the project, students would:

- incorporate memory-enhancing vocabulary learning strategies to optimize their study time independently, and
- develop a plan of action with effective vocabulary learning strategies pertinent to their needs.

The objectives were well accepted by the students, as they could see their value.

Needs Analysis

On the first day of the project, students took an *Intro Diagnostic Questionnaire* (Appendix A). The survey results provided insight into word memorization strategies that students had already established (Table 1) and served as a needs assessment tool. It was based on a five-point Likert measurement that included *never*, *occasionally*, *sometimes*, *usually*, and *always* as its options. The questions of the questionnaire were originally drawn from Strategy Inventory Language Learning (SILL) version 7.0 for speakers of other languages learning English (Oxford, 1990). Then, investigators made some modifications to the questions to adjust them to the needs of the participants and added an open-ended question to probe deeper into participants' responses.

This information was used to help students apply their existing strategies more effectively and to identify strategies they were interested in exploring.

Table 1

Students' Self-Reported Usage of Various Memorization VLSs: Intro Diagnostic Questionnaire Results (N=18)

Vocabulary Learning Strategy	Never	Occasionally	Sometimes	Usually	Always
Number of Responses for Each					
1. Taking notes of the new words for later look up	0	2	7	7	2
2. Keeping a neat and spacious vocabulary notebook for new, important, or difficult to remember words	2	4	5	5	2
3. Using flashcards	0	2	1	6	9
5. Repeating the words aloud	0	0	0	10	8
6. Writing the new word repeatedly and memorizing its spelling letter by letter	0	5	5	5	3
8. Writing lists of words over and over	3	6	5	2	2
9. Using associations with English words	1	3	5	4	5
10. Acting out a word	7	3	5	3	0
15. Organizing words in groups					
16. Remembering words through common expressions/idioms	3	4	9	1	1
19. Making up sentences using the words	1	2	8	6	1

Note: Only VLSs that students reported using at all are included in the table

The participants' responses revealed that most students recognized the importance of regular vocabulary review in foreign language learning. However, as illustrated in Table 1, their preferred strategies were limited and primarily involved repeating words aloud or using flashcards. In response, we incorporated structured repetition techniques into the workshop design, enabling students to adopt more effective review strategies during independent study. These included guided use of digital tools, particularly Quizlet's Learn and Test features, which offer multiple-choice questions, spelling tasks, and low-stakes quizzes to support retrieval practice. Also, given that traditional flashcards often lack contextual depth and are therefore less effective for retrieval, students were instructed to create semi-contextualized flashcards for more challenging vocabulary, as described later.

Vocabulary Learning Workshops

Our goal was to leverage a combination of memorization strategies to design practical workshops that could foster vocabulary retention outcomes. By incorporating spacing, repetition, retrieval practice, and digital tools, we attempted to design an optimized study system that students could use independently. We used the information gained from the needs analysis to inform our workshop content. The schedule of the workshops is presented below.

Figure 1
Schedule of Workshops for Vocabulary Learning Strategies

Week 1 Focus: <i>VLSs for Initial Exposure to New Words:</i> VLSs for word form, meaning and use	Workshop 1 Content: Russian Basic Course, Lesson 3 Diagnostic Survey Word Recognition (L1-L2, visual, auditory) Phonological form recognition Salient word parts Defining words from mini context Vocabulary Journal Intro	Workshop 2 Content: Russian Basic Course, Lesson 3 Word Recognition Labeling pictures Associations (items-their locations) Anki Cards (words in context) Quizlet features: flashcards, multiple choice, test	Workshop 3 Content: Russian Basic Course, Lessons 3-4 Spaced Repetition Quizlet writing feature Word Manipulation Word Recognition (L1-L2, visual, auditory) Listen & Do Vocabulary journal review Group Interview 1
Week 2 Focus: <i>VLSs for Retrieval Practice:</i> VLSs for word processing and retention	Workshop 4 Content: Russian Basic Course, Lessons 4-5 Spaced Repetition Quizlet writing feature Word/Concept Associations Oral/Visual/Imagery Anki Cards (words in context) Quizlet features: flashcards, multiple choice, test	Workshop 5 Content: Russian Basic Course, Lesson 5 Keyword method Word Bag Listen & Do Semi-contextualized flashcards for difficult words Anki Cards (words in context) Quizlet features: flashcards, multiple choice, test	Workshop 6 Content: Russian Basic Course, Lessons 5-6 Spaced Repetition Word Recognition and Word Grouping: Common features/positive/negative Word pairs/collocations Vocabulary activation: crammed stories Vocabulary journal review Group Interview 2
Week 3 Focus: <i>Putting it All Together:</i>	Workshop 7 Content: Russian Basic Course, Lesson 6 Spaced Repetition Word Grouping	Workshop 8 Content: Russian Basic Course, Lessons 6-7 Word chains Creating Quizlets	Workshop 9 Content: Russian Basic Course, Lessons 6-7 Spaced Repetition

Semi-contextualizing and contextualizing VLSs	Mind Maps Quizlet features: flashcards, multiple choice, test	Semi-contextualized flashcards for difficult words Vocabulary activation: crammed stories	Sharing algorithms for vocabulary study Quizlet features: multiple choice, test End of project survey Vocabulary journal review Group Interview 3
---	--	--	--

As can be seen in Figure 1, workshop series were structured around several training regimens, addressing both the initial exposure to new vocabulary and subsequent retrieval practice.

VLSs for Initial Exposure to New Words (Week 1)

During the initial exposure phase, students engaged mostly in memorization strategies such as studying word lists, using flashcards, and consulting monolingual or bilingual dictionaries to build a foundational vocabulary base.

The key instructional goal was to raise participants' awareness of the diverse range of vocabulary learning strategies available to them, enabling them to select approaches that best aligned with their individual learning preferences and needs. The seventh-hour workshop, which preceded each new textbook lesson, was designed to guide students through a structured set of the following strategies:

- **Word recognition** focusing on form, meaning, and use
- **Identifying salient features** of the words (e.g., parts that stand out)
- **Engaging with Quizlet's Learn feature** for multiple-choice and spelling activities
- **Word manipulation exercises** using mini-contexts to explore how words function in different sentence structures and meanings
- **Specially designed Anki card sets** where learners listen to new words in mini-contexts and check their comprehension

The primary teaching implication was to have participants practice these techniques in short increments (approximately 10 minutes) during workshop sessions, with immediate feedback from instructors. This approach enabled focused practice and timely correction. Learners subsequently integrated the strategies they found most effective into their individual study routines. To support metacognitive awareness, participants also reflected on the usefulness and impact of each strategy in their daily vocabulary journals.

A key focus during this stage of the project was the strategic integration of digital tools to support vocabulary learning. Students were introduced to the full suite of Quizlet features following an initial familiarization phase, which involved listening to recorded word lists with English translations and reviewing the words in simple contextual sentences. After this introduction,

participants used the Quizlet *Learn* feature, beginning with multiple-choice quizzes that allowed them to choose their preferred question formats. They then progressed to writing and spelling exercises to reinforce retention. In addition, learners used Anki card sets specially designed by the instructional team, which presented new vocabulary in contexts that allowed students to hear the words used in short, meaningful sentences. This approach supported contextual understanding and offered opportunities for self-assessment through comprehension checks. Both Quizlet and Anki utilize spaced repetition algorithms that prioritize the review of more challenging vocabulary items at optimal intervals.

During regular classes, instructors reinforced the techniques introduced during the seventh-hour workshops. They incorporated various engaging activities, including team-based Quizlet review games, rapid-fire drills using Anki card sets, and word recognition exercises developed by the instructional team.

VLSs for Retrieval Practice (Week 2)

Following the initial introduction to new vocabulary, the focus shifted to the integration of semi-contextualized and contextualized VLS to reinforce retrieval practice. This phase aimed to deepen learners' understanding of vocabulary by embedding words in meaningful contexts and encouraging active recall.

A typical study regimen during this stage included the following strategies:

- **Word and concept associations** to enhance memory retention
- **Creating semi-contextualized flashcards** for difficult words
- **Using the keyword method** to form associations between new vocabulary and familiar concepts
- **Spaced repetition** through digital tools and personalized review schedules
- **Listen & Do tasks** designed to prepare learners for shadow listening
- **Word activation tasks** encouraging learners to use new vocabulary in speaking and
- **Low-stakes testing on Quizlet** promoting retrieval in a stress-free environment

Beginning in Week 2, the instructional design incorporated spaced repetition as a core strategy to enhance vocabulary retention. Research suggests that longer inter-repetition intervals—also known as temporal spacing—can lead to greater long-term retention compared to shorter intervals (Cepeda et al., 2008). Within the framework of this project, spaced repetition was implemented every other workshop with Anki sets containing previously learned vocabulary. In addition, participants were encouraged to develop personalized review schedules, selecting time intervals that best suited their individual learning rhythms.

Semi-contextualizing strategies were introduced during this training regimen; these were designed to scaffold learners from isolated word recognition toward more meaningful vocabulary use within limited contexts. Given that students at this early stage lacked sufficient vocabulary to generate synonyms or antonyms, they were initially guided to use word and

concept associations—including visual, mental, and aural links—to support lexical retention and recall.

As learners gained confidence with these techniques, they advanced to practicing the keyword method, which involved forming acoustic and imagery-based associations between Russian and English words. For example, students linked the Russian word *диван* (*divan*, meaning “couch”) with the English-sounding cue “*divine*”, or *спасибо* (*spasibo*, meaning “thank you”) with the familiar English word “*spa*.” These mnemonic devices served as cognitive bridges, making unfamiliar words easier to retrieve.

To further support the acquisition of challenging vocabulary, participants were guided in creating enhanced, semi-contextualized flashcards. Each flashcard included four key elements: the target word, its translation, a meaningful association, and a collocation or brief example. To promote consistency and facilitate retrieval, learners were instructed to organize these elements in a fixed layout—for example, placing the translation in the top-right corner and the collocation in the bottom-right. This structured design enabled eight distinct retrieval opportunities through vertical and horizontal pairings, allowing learners to recall:

1. The target word from the association or translation
2. The association or translation from the target word
3. The translation or association from the collocation, and
4. The collocation from the translation or association

This approach aligns with Folse’s (2017) findings on the benefits of multi-directional retrieval cues in vocabulary learning. According to teacher observations, enhanced flashcards were significantly more effective than standard ones in promoting active recall and contextual understanding, particularly for challenging vocabulary items. In addition, students were encouraged to maintain a compact vocabulary notebook that could be kept readily accessible. This notebook served as a personal vocabulary bank for challenging or newly encountered words, allowing learners to record items for later lookup and review at their convenience. This fostered ongoing engagement with vocabulary beyond structured workshops and supported self-directed learning habits.

As learners progressed through the project, they gradually increased their exposure to context-rich input through reading, listening, and speaking activities, all of which facilitated repeated vocabulary retrieval. While reading tasks were integrated into regular class sessions, the seventh-hour workshops were designed to prepare students for shadow listening—a technique aimed at improving auditory processing and fluency. To support this, instructors implemented *Listen and Do* activities, which were aimed at building selective attention. For instance, participants were given transcripts of audio passages and instructed to listen attentively while highlighting target vocabulary. This approach enabled learners to notice lexical items in real time, reinforcing the connection between form and meaning.

To promote productive use of vocabulary, students also engaged in speaking tasks that required them to create short stories using either visual prompts or vocabulary groupings from the

textbook. These activities encouraged learners to link new lexical items with existing schemata, thereby enhancing both encoding and recall of new L2 vocabulary.

Toward the end of each retrieval-focused workshop, we implemented low-stakes tests using Quizlet's built-in features—including true/false, multiple choice, matching, and written response formats—to reinforce learning and celebrate student success. These assessments provided a supportive environment for learners to demonstrate progress, while also reinforcing vocabulary through varied retrieval formats.

Putting it All Together with VLSs (Week 3)

A combination of digital tools, spaced repetition, and retrieval practice in a gamified, interactive setting over the 3-week project enabled instructors to manage student cognitive workload. By gradually increasing the level of processing, this approach facilitated the transfer of vocabulary from working memory to long-term memory. This helped participants develop mental structures to hold information and build the new knowledge more effectively.

DATA COLLECTED

End-of-Project Survey

The *End-of-Project Survey* (Appendix B) collected quantitative data regarding participants' perceived effectiveness of the structured VLSs for better retention, as well as qualitative data regarding participants' experience with vocabulary journaling and their deeper insights into how they believed they could improve word memorization at the beginning of the language program while studying independently.

Interviews and Students' Journals

We collected qualitative data through face-to-face weekly group interviews and daily journaling through individual discussion threads in Canvas groups. During group interviews, we explored which retrieval practices participants found most effective, what challenges they encountered, as well as how the project could be improved. In their daily vocabulary journals, participants responded to a provided prompt and shared which vocabulary they practiced independently, what strategies they used, their emotional responses, and their goals for future learning (Appendix C). These data were intended to capture students' progression through the project, their reasoning, and personal application of recommended strategies.

Teacher Observations

To round out our data collection, we observed students' behavior during the workshops, reflecting on their progress and challenges and noting areas where they needed more practice. We reviewed these notes as a research team regularly and used the information to guide workshop content.

FINDINGS AND DISCUSSION

Our research questions for this project were to identify the most commonly used VLSs by students when they first entered the program and their perceptions of the usefulness of the vocabulary learning strategies they learned and practiced in this 3-week workshop. As shown in Table 1, the most common strategies were repeating the words aloud, using flashcards, taking notes of the new words for later look up, using associations with English words, and writing the new word repeatedly and memorizing its spelling letter by letter. These strategies were limited and primarily involved repeating words aloud or using flashcards, which informed the content for the workshops. The following section discusses students' feedback and perceptions.

Students' Perceptions of VLSs After the 3-Week Workshop Program

The following perceptions come from the *End-of-Project Survey*, the student journals, interviews with students, and teacher observations.

Overall Perception of Usefulness

Importantly, students overall felt that the workshops increased their awareness of the vocabulary learning process and helped them retain words more effectively (mean 4.0/5.0); they also perceived that the vocabulary journals helped them understand which vocabulary learning strategies work best for them (mean 3.7/5.0). Furthermore, a thematic analysis of participants' reflective comments revealed several recurring patterns related to the usefulness of vocabulary learning strategies introduced during the workshops. Many participants reported that Quizlet's *Spelling* feature was particularly helpful for vocabulary production, alongside the practice of using new words in context through sentence creation. While the structured nature of the workshops and instructor support were widely regarded as effective, several participants suggested incorporating more opportunities for peer learning in future training sessions. Table 2 illustrates the key findings from the data collected during the *End-of-Project Survey*.

Table 2

Student Self-Reported Most Useful VLSs for Word Memorization: End-of-Project Survey Results

Vocabulary Learning Strategy	% Reporting the Strategy as Useful
Low-stakes tests on Quizlet	86%
Semi-contextualized flashcards	71%
Spaced repetition (Quizlet & Anki Cards)	57%
Sentence building and word manipulations	50%
Flashcards effectiveness	43%
Word activation	36%

Analysis of the data collected from the *End-of-Project Survey* suggest that the integration of structured memorization strategies during the workshops expanded students' use of and appreciation for these strategies. Whereas at the beginning of the workshop, students reported

that they used traditional flashcards quite a bit, by the end of the workshop, the percentage reporting that strategy as useful was 43%. In contrast, there was an appreciation for semi-contextualized flashcards—custom-created by learners for difficult words, which offered multiple retrieval opportunities. Furthermore, participants demonstrated an increased awareness of a variety of vocabulary learning strategies and, according to teacher observations, regularly applied these strategies to support their learning. Among these, low-stakes tests on Quizlet emerged as the most frequently utilized tool, providing effective retrieval practice through varied question formats. In addition, students benefited from using Quizlet’s *Spelling* feature, which aligns with existing research that advocates for digital learning tools in promoting autonomous and active learning. Using words in mini contexts stood out as an active learning strategy, as creating meaningful sentences not only aids memory but also enhances understanding and application of vocabulary. Many participants also viewed structured workshops as valuable, and their feedback reveals that there is more room for integrating peer study groups into future iterations.

As the primary goal of the training workshops was to progressively increase students’ ability to use vocabulary in context, facilitators also observed varying levels of difficulty across different strategies. Activities such as “listen and do” and word recognition involved minimal difficulty for intro-level participants. In contrast, strategies that required active recall and use of vocabulary in speaking tasks were reported as the most challenging. In response to these observations, more tailored classroom training could be implemented to support improved vocabulary retention and address the specific challenges faced by learners.

Findings from the weekly face-to-face group interviews suggested that students perceived the project as beneficial and engaging. In their feedback, they reflected on their vocabulary learning throughout the week, highlighting the most effective strategies practiced during workshop sessions, the biggest challenges, and suggestions for project improvement. Participants valued clear instructions and instructor support, as well as a variety of vocabulary learning strategies that they could practice independently. Using this input, researchers made adjustments to the program as needed. For example, the keyword method was introduced into the workshops after students expressed a desire to associate new vocabulary with English words but found it challenging to do so independently. A recurring theme throughout the project was the request to extend its duration, a suggestion that has been considered for future iterations.

Value of Digital Tools

Our analysis of vocabulary journaling responses revealed several recurring themes among participants in response to the given prompt (Appendix C). One prominent theme was the use of digital tools—particularly the complete suite of Quizlet features—for enhancing vocabulary retention. This theme emerged in response to the question about how students approached vocabulary learning at home. Under this main theme, two sub-themes were identified: the effectiveness of a structured learning sequence (i.e., flashcards → Learn feature → Test feature), and the value of immediate feedback provided by digital platforms. Digital tools also add the value of helping students easily do spaced repetition for reviewing previously studied vocabulary

through listening, particularly when using Anki sets. One participant emphasized that neglecting spaced repetition could negatively impact long-term retention, so Anki was particularly helpful.

While students highly value and appreciate digital tools, it became evident that many lack specific knowledge or experience in using them. We addressed this initial gap in vocabulary learning by equipping intro-level students with the skills to utilize all features of Quizlet, use recorded sets of Anki cards, and engage with supplementary recorded audio materials containing new vocabulary.

Value of Student Self-Reflection and Faculty Communication

The data showed that vocabulary journals proved to be useful both for instructors and students and promoted continuous self-evaluation and open communication between them. Participants' daily entries enabled instructors to measure the number and the efficiency of the tools used by students daily during their self-study time and guide them through the process of developing their algorithms for vocabulary learning that they shared in their journals at the end of the project (Appendix D). At the same time, daily journaling proved to be overwhelming for students, and over time, their answers became repetitive. In future workshops, we would opt for weekly reflective activities.

Limitations and Recommendations

While the proposed action plan has proven effective in equipping language learners with essential tools and strategies for vocabulary retention at the beginning of the language program, the study has several limitations and areas for further development. First, the action research involved a relatively limited number of participants and was conducted over a brief period during the initial phase of the first semester. By mid-Semester II, students often struggle with retaining more complex, structured, paragraphed, or idiomatic language. Therefore, it is recommended that a second series of vocabulary workshops be conducted later in the course. These workshops should focus on advanced conceptual skills, enabling learners to develop additional strategies such as uncued recall, synonym/antonym pairing, structural reproduction, collocation usage, and storytelling. Moreover, the action plan was tailored to a specific class based on a targeted needs analysis. As such, it may require further adaptation to suit other student groups with different learning experience. Finally, the study employed a limited range of vocabulary learning strategies through listening, constrained by the project's timeframe and the lack of tools suitable for introductory-level students. Given that listening remains one of the most challenging skills at DLIFLC, incorporating additional tools and strategies could enhance students' ability to recognize and retain vocabulary in audio formats.

In response to the findings, our teaching team, in collaboration with colleagues from another Russian Department, is finalizing the development of new content for the Language Technology Evaluation and Application product called the *Russian Basic Transcript Trainer*. This tool is specifically designed to provide sufficient audio language samples aligned with the curriculum

and to address the current gap for vocabulary retention tools for the Russian Basic Course. It will be integrated into future iterations of the vocabulary retention programs.

CONCLUSION

Supporting our students with effective vocabulary learning strategies and improving their learning experience were the goals that inspired and motivated our teaching team to develop this action research. Our study suggests that an optimized approach of combining word recognition and word manipulation with other memory enhancement vocabulary learning strategies, such as repetition, spacing, and word activation, could enhance vocabulary retention at the beginning of the language program. Additionally, mastering these vocabulary strategies through concrete experience during the structured framework of workshops enabled students to create individual plans of action to learn vocabulary, which they shared in their feedback. This approach encouraged student confidence and motivation as well as created the feeling of success at the beginning of the course. Furthermore, the integration of the digital spaced repetition systems with traditional vocabulary learning tools that were used in the study represented the demands of modern learning. The findings derived from this action research may become applicable for improving foreign language word learning and retention in the DLIFLC setting.

REFERENCES

- Cepeda, N.J., Vul, E., Rohrer, D., Wixted, J.T., & Pashler, H. (2008). Spacing effects in learning: A temporal ridge of optimal retention. *Psychological Science*, 19, 1095–1102. <https://doi.org/10.1111/j.1467-9280.2008.02209.x>
- Folse, K.S. (2017). *Vocabulary myths: Applying second language research to classroom teaching*. The University of Michigan Press.
- Gu, Y. (2018). Validation of an online questionnaire of vocabulary learning strategies for ESL learners. *Studies in Second Language Learning and Teaching*, 8(2), 325–50. <https://doi.org/10.14746/ssllt.2018.8.2.7>
- Gu, Y. (2019). Vocabulary learning strategies. In C.A. Chapelle (Ed.), *The encyclopedia of applied linguistics*, (pp. 1–7). John Wiley & Sons, Ltd. <https://doi.org/10.1002/9781405198431.wbeal1329.pub2>
- Karatas, N.B., Özemir, O., Lovelett, J. T., Bora, D., Erkol, K., Verrissimo, J., Erçetin, G., & Ullman, M.T. (2021). Improving second language vocabulary learning and retention by leveraging memory enhancement techniques: A multidomain pedagogical approach. *Language Teaching Research*, (29)1, 112–149. <https://doi.org/10.1177/13621688211053525>
- Nation, I. S. P. (2013). *Learning vocabulary in another language* (2nd ed.). Cambridge University Press.
- Oxford, R. L. (1990). *Language learning strategies: What every teacher should know*. Heinle and Heinle Publishers.
- Strong, B. (2023). Retrieval, repetition, and retention: Unveiling vocabulary acquisition strategies for ESL learners. *Arts & Humanities Open Access Journal*, 5(3), 185–190. <http://doi.org/10.15406/ahoaj.2023.05.00206>

Schmitt, N. (2019). Understanding vocabulary acquisition, instruction, and assessment: A research agenda. *Language Teaching*, 52, 261–274.

<https://doi.org/10.1017/S0261444819000053>

Ullman, M.T., & Lovelett, J.T. (2018). Implications of the declarative/procedural model for improving second language learning: The role of memory enhancement techniques.

Second Language Research, 34(1), 39–65. <https://doi.org/10.1177/0267658316675195>

APPENDIX A

Intro Diagnostic Questionnaire

Instructions: The purpose of this survey is to collect information about the strategies you use when you memorize new foreign language words. Please read each statement carefully and then circle the answer that applies to you. There are no right or wrong responses to any of the items on the survey; for this reason, it is very important that you express your true opinion in this survey.

1. I take notes of new important words for later look-up.

Never - occasionally - sometimes - usually - always

2. I keep a neat and spacious vocabulary notebook for new, important, or difficult to remember words.

Never - occasionally - sometimes - usually - always

3. I use flash cards of the new words you learn and review them regularly (you can use paper cards or/and such apps as *Quizlet*, *AnkiDroid*, *Cram*, *MemMe* etc.)

Never - occasionally - sometimes - usually - always

4. I review words repeatedly over time.

Never - occasionally - sometimes - usually - always

5. I repeat the word out loud to myself.

Never - occasionally - sometimes - usually - always

6. I write the new word repeatedly and memorize its spelling letter by letter and/or write both the new words and their English equivalents repeatedly.

Never - occasionally - sometimes - usually - always

7. I think of a person, place, time of the day, physical sensations that the new word associates within my brain.

Never - occasionally - sometimes - usually - always

8. I write lists of words over and over.

Never - occasionally - sometimes - usually - always

9. I associate the spoken foreign word to an English word (keyword) that sounds approximately like a foreign word and form a mental image of the keyword "interacting" with the English translation (**keyword** method).

Never - occasionally - sometimes - usually - always

10. I act out a word to remember it better.

Never - occasionally - sometimes - usually - always

11. I visualize the new word or associate a new word with a known English word that looks similar (even though the meaning may be different).

Never - occasionally - sometimes - usually - always

12. I remember together words that sound similar and /or associate a new word with a known English word that sounds similar.

Never - occasionally - sometimes - usually - always

13. I listen to recordings of words over and over.

Never - occasionally - sometimes - usually - always

14. I label items (furniture, utensils, etc.) to help me remember foreign words for them.

Never - occasionally - sometimes - usually - always

15. I organize words in groups (mind maps/word clouds/graphic organizers).

Never - occasionally - sometimes - usually - always

16. I remember words through common expressions/idioms.

Never - occasionally - sometimes - usually - always

17. I read for pleasure in a foreign language as much as possible so that I can make use of the words I learned.

Never - occasionally - sometimes - usually - always

18. I read the text to find new words.

Never - occasionally - sometimes - usually - always

19. I make up my own sentences using the words that I just learned.

Never - occasionally - sometimes - usually - always

20. Please describe any additional strategies that you use to memorize new words.

APPENDIX B

End of Project Survey

Instructions: The purpose of this survey is to collect information about the strategies that you found effective for vocabulary retention throughout the project. Please read each statement carefully and then circle the answer that applies to you. There are no right or wrong responses to any of the items on the survey; for this reason, it is very important that you express your true opinion in this survey.

Question 1

The sequence of vocabulary learning strategies taught and practiced during the project (word recognition, word manipulation, repetition through all Quizlet features and ANKI, including low-stakes Quizlet tests, spaced learning, vocabulary activation) increased my awareness of the vocabulary learning process and helped me retain words more effectively.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Question 2

Writing a *Student Vocabulary Journal* helped me better understand which vocabulary learning strategy works better for me and develop an effective action plan.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Question 3

What are your most effective vocabulary learning strategy/strategies for effective memorizing and word retention? Choose as many strategies as you wish.

- Listening and repeating the words
- Word cards/ flashcards
- Spaced repetition through all Quizlet features and ANKI
- Low-stakes tests on Quizlet
- Flashcards for difficult words (with relevant associations, visualization, synonyms/antonyms, collocations, etc.)
- Sentence building/word manipulations
- Vocabulary activation
- Something else

Question 4

Please share any additional ideas about your experience in the project.

APPENDIX C

Example of Participants' Daily Vocabulary Journal Entries

Prompt:

Dear students, please reflect on your vocabulary learning process and create your Vocabulary Reflection Journal. You should submit your entries daily. Write your entries and answer the following questions:

1. What vocabulary did I study and for how long?
2. How did I study it?
3. How do I feel?
4. What do I do next?

Participant 1:

Feb 27, 2024 8:02pm | Last reply Mar 1, 2024 4:54pm

- Tonight, I created my own physical flashcards to study vocabulary 5 and 6. I spent 15 minutes studying.
- I used word association and grouped them based on their themes (colors, family, furniture, weather, etc.). This has helped me in the past when learning Spanish.
- I feel good about this method, and I will continue to use it.

Participant 2:

Feb 27, 2024 3:46pm | Last reply Mar 4, 2024 9:16am

- I studied vocab 4 and 5 for about 3 hours.
- I studied vocab 4 with the Quizlet function and vocab 5 I just listened to the audio on repeat and tried to guess the meanings before they said them.
- I feel good on vocab 4. It seems I missed quite a few soft signs on my vocab test so I need to work on that. As far as vocab 5 I think listening to it while doing things works well for me to give meanings to the words.
- I will try out more of spaced repetition of vocab 3 tonight to see how it works for me.

Participant 3:

Feb 28, 2024 7:46am | Last reply Mar 4, 2024 7:43am

- I studied vocal from lessons 3, 4 and 5 for about 90 minutes in total.
- I read from my textbook and practiced writing down words I struggle with in cursive in my notebook. I made some sentences with words that went together and practiced using the prepositional and genitive cases.

- I am still not retaining as much as I need to, but I feel more confident with the words I did not know before. Lesson 5 vocabulary is being retained so far better than the previous lessons, which I believe is progress.
- I need to continue studying with repetition and reading the words, to improve my vocabulary retention and speaking speed.

APPENDIX D

Examples of Vocabulary Journal Entries on the Effective Plan of Action for Vocabulary Learning

Prompt:

Please share your effective plan of action/algorithm for vocabulary learning that you developed at this early stage in the Russian program.

Participant 1:

Mar 7, 2024 3:13pm | Last reply Mar 10, 2024 1:57pm

My vocabulary survival guide:

1. Begin each lesson with listening to each word, audio can be found on Quizlet sets or in the SharePoint (Pt. 2 Textbook audio). Read each word aloud while listening to the correct pronunciation. I've found this works especially well after 2-3 repetitions.
2. Flashcards. Quizlet is the easiest method as handmade flashcards are time-consuming to make. This helps learn and cement the definitions of each word and receive immediate feedback. This is an important step after "learning" the vocab set. In later lessons, or after a period of time, the flashcards provide an excellent refresher.
3. Spelling practice. Quizlet spell has been extremely effective. Use the spell feature to practice the set in its entirety at least twice. For endings (conjugation/agreement), I have found its best to study in a group setting. Quizzing different words with sentences/scenarios helped learn to recall the endings.
4. Hard words/Phrases. I reserve handmade flashcards for words I struggle spelling or remembering.
5. Sentences/Anki. After I feel comfortable with the set my favorite way to study further is sentences or Anki. My favorite way to learn is in context or while actually practicing the concept. Anki or group sessions provide a perfect way to receive problems or scenarios to actively utilize the vocabulary set that was just learned.
6. Spaced repetition through ANKI. I have found that I best remember the concepts/words while forming sentences or practicing agreements/conjugation.

Participant 2:

Mar 7, 2024 3:09pm | Last reply Mar 10, 2024 1:51pm

Throughout my time figuring out how to study for Module 1, I've developed several strategies that work well for myself and for others as well. Studying with a group can definitely help, even studying one-on-one with someone can be of good use. With a group, one is able to compare and contrast ideas and understand the content from a different perspective. Always make use of all the resources provided, programs such as Quizlet, Reverso, and Russiandict definitely help in the long run. The spell/write feature on Quizlet helps to keep me accountable for my spelling mistakes, so that I wasn't only looking at the definitions on flashcards.

I turned on the Russian language feature in Safari so that one browser could be in Russian; this helped my brain connect words to certain features in the browser. Making word connections and making sentences or short stories is also a good strategy. Your brain will remember something better after making those connections.