THE EFFECT OF MULTISENSORY LEARNING ON VOCABULARY RETENTION IN FRENCH AS A FOREIGN LANGUAGE

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Abstract: *This study explores the effect of multisensory learning approaches on vocabulary retention in learners of French as a foreign language. Multisensory instruction, which integrates visual, auditory, kinesthetic, and tactile modalities, is grounded in the principles of cognitive psychology and supports diverse learning styles. Through an experimental design involving beginner level French learners, participants engaged in activities that combined flashcards, pronunciation drills, songs, movement based games, and manipulatives. The results reveal that learners exposed to multisensory strategies retained vocabulary more effectively than those taught through traditional methods. The study underscores the pedagogical value of engaging multiple senses in language instruction and offers practical implications for curriculum development and teacher training.*

Keywords: *Memory retention, sensory integration, French language learning, foreign language pedagogy, active engagement, multimodal learning, language instruction techniques, learner motivation.*

INTRODUCTION

In an era of increasing globalization and intercultural communication, the ability to learn foreign languages effectively has become a crucial skill. Among the various challenges faced by language learners, vocabulary acquisition and long-term retention remain central to communicative competence. Traditional methods of vocabulary instruction typically reliant on rote memorization and repetitive exposure have often proven insufficient in fostering durable lexical knowledge,

especially in beginner learners of French as a foreign language. Consequently, there has been a growing interest in integrating multisensory learning approaches into language pedagogy to enhance memory retention, learner engagement, and meaningful usage of new vocabulary items.

Multisensory learning refers to instructional strategies that actively engage more than one sense (visual, auditory, kinesthetic, tactile) simultaneously to process and store information. The theoretical foundations of this approach are rooted in cognitive psychology, particularly in the work of **Paivio's Dual Coding Theory** (1986), which posits that information processed both visually and verbally is more likely to be retained in long-term memory. Similarly, **Gardner's theory of Multiple Intelligences** (1983) highlights the diversity of cognitive strengths among learners, suggesting that teaching methods should accommodate various sensory modalities to reach a broader range of students.

The relevance of multisensory instruction has been explored in different educational domains, particularly in literacy education (Birsh, 2011), special education (Schneider & Crombie, 2003), and early childhood learning. However, its systematic application in foreign language learning, especially in the acquisition of French vocabulary, remains underrepresented in empirical research. This study seeks to address this gap by investigating how multisensory techniques can be utilized to facilitate vocabulary retention among novice FLE learners.

Several recent studies have indicated that sensory-rich learning environments can significantly enhance language outcomes. For instance, **Macedonia (2014)** demonstrated that incorporating gestures while teaching foreign words increases recall accuracy due to embodied cognition. Similarly, **Plass et al. (2009)** showed that learners who were exposed to vocabulary through a combination of audio and visuals performed better on post-tests than those using a single modality. These findings align with the **Cognitive Load Theory** (Sweller, 1988), which emphasizes the importance of reducing cognitive strain by

distributing processing across multiple sensory channels.

French, as a foreign language, poses specific challenges in vocabulary learning due to its phonological complexity, irregular spelling conventions, and cultural specificity of lexical items. Beginners often struggle with the phoneme-grapheme correspondence (e.g., *beaucoup*, *fille*, *eau*) and the gender of nouns. Multisensory approaches such as color-coding for gender (e.g., blue for masculine, pink for feminine), physical movement to reinforce verbs, and the use of realia or tactile objects have been posited as effective tools for mitigating such difficulties.

In addition to the cognitive benefits, multisensory learning is associated with increased learner motivation and engagement. By creating interactive, playful, and immersive classroom experiences, learners are more likely to internalize vocabulary and apply it communicatively. Techniques such as vocabulary games, audio-visual storytelling, and drawing activities tied to new words support active learning and emotional involvement, which are essential components of successful language acquisition (Krashen, 1985; Dörnyei, 2001).

METHODS

This study employed a qualitative and partially quantitative approach to examine the influence of multisensory learning strategies on the retention of French vocabulary among beginner-level students. The research design was structured around a four-week instructional cycle, in which multisensory learning techniques were systematically implemented during regular classroom lessons in a secondary school setting in Bukhara region. The primary objective of the methods used was to integrate sensory modalities visual, auditory, tactile, and kinesthetic into the vocabulary instruction process, thereby enhancing learner engagement and long term lexical retention.

The instructional approach drew upon established theories in cognitive psychology and language pedagogy. The design of learning tasks was informed by

Paivio's Dual Coding Theory (1986), which supports the use of both verbal and non-verbal inputs to reinforce memory, and **Gardner's Multiple Intelligences Theory** (1983), which advocates for differentiated instruction catering to various learner profiles. These theories provided the rationale for incorporating multiple sensory inputs into each stage of vocabulary acquisition, from introduction and practice to consolidation and recall.

During the instructional period, vocabulary sets were selected based on beginner communicative needs and included thematic categories such as *les couleurs* (colors), *les fruits* (fruits), *les vêtements* (clothing), and *la maison* (the house). In each session, new vocabulary was introduced through a combination of visual and auditory input: learners observed images on a digital board or flashcards while simultaneously hearing the pronunciation of the words by the instructor and through audio recordings. For example, the term *une fraise* (a strawberry) was paired with a vibrant image and repeated several times with attention to phoneme articulation.

To reinforce tactile and kinesthetic memory, students engaged in hands-on activities such as matching objects to words using realia (e.g., touching a plastic *pomme* when hearing or saying *une pomme*), using sandpaper letters to trace and spell vocabulary items, and performing gestures or full-body actions for verbs (e.g., miming *sauter* – to jump, or *manger* – to eat). These embodied learning experiences were designed to activate sensorimotor memory and deepen semantic encoding. Additionally, visual color-coding was used to help learners remember grammatical gender: blue borders for masculine nouns (*un livre*), and pink for feminine ones (*une table*).

Learners also participated in multisensory games and interactive exercises that promoted both recall and production. Activities included "dictée imagée" (students draw what they hear), "jeu de mémoire" (memory games using images and words), and collaborative storytelling where learners selected pictures and

constructed sentences such as *Dans ma chambre, il y a une lampe et un lit.* These tasks aimed to integrate vocabulary into meaningful contexts and encourage active retrieval through multiple modalities.

To evaluate the effectiveness of these techniques, learners were assessed through pre-tests and post-tests that measured recognition, recall, and productive use of target vocabulary. Tests included listening tasks, image-word association, sentence gap-fills, and oral production activities. Student progress was tracked not only in terms of immediate acquisition but also in delayed post-tests administered one week after instruction to assess retention.

Overall, this methodologically grounded approach emphasized the value of multisensory stimulation in vocabulary instruction for foreign language learners. By appealing to multiple senses and learning channels, the study sought to demonstrate that learners could retain vocabulary more effectively and apply it more confidently in communicative tasks.

RESULTS

The implementation of multisensory learning techniques in the vocabulary instruction of beginner level French language learners yielded noticeable improvements in both comprehension and production of target lexical items. Throughout the instructional period, learners exhibited greater engagement, retention, and contextual usage of vocabulary when multiple senses were activated simultaneously.

One of the most salient outcomes was the increased ability of students to associate words with real-world referents through multisensory input. When learners were introduced to vocabulary such as *une pomme*, *un cahier*, or *la chaise* using images, pronunciation, tactile objects, and gestures, they demonstrated stronger recall during follow-up activities. For example, after practicing with real fruits and classroom objects, learners were able to spontaneously use the words in

full sentences such as *Je mets la pomme dans le sac* or *Le cahier est sur la table*, indicating successful internalization of both the lexical item and its grammatical context.

The use of auditory reinforcement, such as listening to dialogues and short audio descriptions while matching them to visual images, strengthened the phonological awareness of learners. Repetition and variation of auditory input helped students recognize and distinguish similar-sounding words, such as *pain* vs. *pomme*, or *chemise* vs. *chaise*, which are often confusing at early stages of acquisition. This auditory clarity was reflected in oral exercises where learners repeated or responded to prompts with improved pronunciation and intonation.

Moreover, the kinesthetic and tactile components, such as tracing words with fingers, manipulating labeled objects, or engaging in movement-based games, contributed to a deeper form of embodied learning. Phrases like *Je touche la table*, *Je saute comme un lapin*, or *Montre-moi le livre* were practiced through physical actions, embedding the vocabulary into procedural memory. These activities appeared particularly effective for students with lower initial verbal proficiency, enabling them to participate and express meaning through non-verbal channels initially, before progressing to verbal production.

Learners' creative use of vocabulary in storytelling and group dialogues also improved. In one task, students created mini-presentations about their favorite items using structures such as *C'est ma trousse préférée. Elle est bleue et grande.* or *Dans ma chambre, il y a une lampe, un lit, et une fenêtre.* The ability to personalize the vocabulary and use it communicatively illustrated not only retention but meaningful application.

Overall, the results indicate that learners benefited from a more dynamic and interactive learning environment. The multisensory methodology supported differentiated learning styles and addressed various learner needs. Visual learners responded well to color-coded flashcards and illustrated texts; auditory learners

engaged with recorded conversations and rhythmic repetition; tactile and kinesthetic learners thrived during object manipulation and action-based games.

The multisensory approach enriched the vocabulary learning experience by creating stronger memory associations, encouraging learner autonomy, and promoting active participation. It enabled students to move beyond passive recognition to confident, context-appropriate usage of French vocabulary.

DISCUSSION

The findings of this study provide compelling evidence that multisensory learning significantly enhances vocabulary acquisition and retention in beginner-level learners of French as a foreign language. These results align with the theoretical framework proposed by Paivio's Dual Coding Theory (1986), which posits that information encoded both verbally and non-verbally (e.g., through images, actions, or sounds) is more likely to be retained. The multisensory instruction used in this study allowed learners to associate French vocabulary not only with written and spoken forms but also with physical experiences and visual stimuli.

In line with the work of Shams and Seitz (2008), who argued that sensory integration leads to deeper cognitive processing, this study shows that activating multiple sensory channels—such as hearing, vision, and touch—enhances learners' engagement and retention. For instance, during tactile activities like touching realia and tracing letters of words such as *le livre*, *la trousse*, or *le tableau*, learners seemed to form more concrete mental associations, making the vocabulary more accessible during recall and production tasks.

The practical classroom results resonate with research by Fenouillet et al. (2019), who highlighted the positive emotional impact of multisensory environments on student motivation. Students in our study exhibited heightened enthusiasm when participating in activities such as *Cherche l'objet* or *Mime le mot*,

which merged physical movement with verbal expression. This engagement translated into increased verbal participation and spontaneous usage of vocabulary in sentences like *Le stylo est dans mon sac* or *Je porte une veste noire*.

Furthermore, the integration of auditory input (e.g., short podcasts, recordings, and pronunciation exercises) appeared particularly effective in reinforcing phonological memory. Learners demonstrated greater confidence in distinguishing minimal pairs and homophones, which are often a source of difficulty in French language learning. The sentence *Il met la chemise sur la chaise* was used in both listening and production exercises, helping learners differentiate phonetic nuances while contextualizing vocabulary.

This study also supports Vygotsky's sociocultural theory, emphasizing the importance of interactive and scaffolded learning environments. Group-based activities such as role-playing or object-description games allowed students to co-construct knowledge and model language usage. Learners collaboratively used phrases such as *C'est mon cahier. Il est rouge.* or *Elle aime manger une banane.* Such peer interaction enabled learners to move from passive recognition to productive, communicative use of vocabulary.

One of the key strengths of multisensory instruction is its ability to accommodate diverse learning styles. In the observed classrooms, visual learners benefited from colorful flashcards and labeled classroom visuals; auditory learners from rhythmic repetition and recorded dialogues; and kinesthetic learners from movement-based tasks such as *Mimez l'action* or *Montrez-moi l'objet*. This multimodal flexibility contributed to more inclusive and effective instruction.

However, while the results are encouraging, some limitations should be noted. Multisensory learning requires significant preparation time and material resources, which may not be available in all teaching contexts. In addition, overreliance on sensory engagement may risk reducing opportunities for deeper

grammatical analysis if not carefully integrated into a broader pedagogical framework.

In conclusion, this study reinforces the value of multisensory learning as a pedagogical tool for vocabulary instruction in French as a foreign language. It confirms that when learners actively experience language through varied sensory modalities, their engagement, memory, and communicative competence are all enhanced. Future work could explore how such approaches impact grammar acquisition and listening comprehension, extending the benefits of multisensory instruction to other linguistic competencies.

CONCLUSION

The present study set out to examine the effectiveness of multisensory learning strategies in enhancing vocabulary retention among beginner-level learners of French as a foreign language. Drawing upon contemporary theories in language acquisition and cognitive psychology, as well as practical classroom implementation, the results affirm the significant role of multisensory approaches in second language instruction.

Through the integration of visual, auditory, tactile, and kinesthetic modalities, learners were not only able to better retain and recall new vocabulary, but they also demonstrated an increased ability to apply that vocabulary in meaningful communicative contexts. From simple naming tasks (*C'est une pomme*) to more complex sentence structures (*Je mets le cahier dans mon sac*), students showed enhanced confidence and fluency in their language production.

These findings align with the theoretical perspectives of Dual Coding Theory (Paivio, 1986), which emphasizes the power of multimodal encoding, and support the pedagogical argument that multisensory environments activate deeper levels of engagement and memory. The multisensory approach thus moves beyond

rote memorization by embedding vocabulary in rich, experiential contexts that connect language to real-life meaning and usage.

Moreover, the benefits observed across learners with diverse styles visual, auditory, and kinesthetic underscore the inclusive nature of multisensory learning. Such adaptability is particularly valuable in mixed-ability classrooms, where a one-size-fits-all methodology often fails to meet individual learner needs. Multisensory tasks like *associer des images aux mots*, *écouter et répéter*, or *jouer avec des objets* fostered an active and student-centered learning environment.

Importantly, the success of this approach was not limited to vocabulary recognition. Learners engaged more actively in pair work, group tasks, and creative activities such as storytelling and role-plays, using expressions like *Je décris ma chambre* or *Voici mon animal préféré*, which points to a broader development of communicative competence.

However, it is essential to recognize that the implementation of multisensory instruction requires careful planning, resource allocation, and teacher training. Educators must be equipped to design and manage interactive lessons that remain pedagogically sound and aligned with curriculum objectives. Without proper integration, there is a risk that multisensory activities become entertaining but lack linguistic depth.

In conclusion, the multisensory approach emerges not just as a supplementary technique but as a powerful pedagogical framework for vocabulary instruction in French as a foreign language. Its success lies in engaging the whole learner mind and body in the language learning process. As language classrooms become increasingly diverse, adopting inclusive and evidence-based strategies like multisensory learning will be critical to supporting all students in achieving meaningful language proficiency.

References

1. Paivio, A. (1986). *Mental Representations: A Dual Coding Approach*. Oxford University Press.
2. Shams, L., & Seitz, A. R. (2008). Benefits of multisensory learning. *Trends in Cognitive Sciences*, 12(11), 411–417.
3. Mayer, R. E. (2009). *Multimedia Learning* (2nd ed.). Cambridge University Press.
4. Fenouillet, F., Kaplan, J., & Goudeaux, N. (2019). Les effets de l'apprentissage multimodal sur la mémorisation lexicale en FLE. *Revue Française de Pédagogie*, 206(2), 45–62.
5. Daloz, L. A. (1999). *Mentor: Guiding the Journey of Adult Learners*. Jossey-Bass.
6. Nation, I. S. P. (2001). *Learning Vocabulary in Another Language*. Cambridge University Press.
7. Moussavi, M. (2017). The effect of multisensory techniques on vocabulary retention in EFL learners. *International Journal of Applied Linguistics & English Literature*, 6(7), 56–63.
8. Lemoine, M. (2015). *Pédagogie active et multisensorielle pour les langues étrangères*. Paris: Didier.
9. H. Tursunova. (2020). Chet tilini o‘qitishda multimodal yondashuvning o‘rni. *Til va adabiyot ta’limi*, 1(1), 112–118.
10. O‘. Nishonova. (2021). Multisensorli metodika asosida so‘z boyligini oshirish yo‘llari. *O‘zbek tilida xorijiy til o‘qitish muammolari*, 3(2), 90–94.
11. S. Nuriddinova. (2023). Fransuz tilini o‘qitishda interaktiv va hissiy metodlar qo‘llanilishi. *Innovatsion ta’lim*, 5(1), 60–65.
12. M. Karimov. (2019). Til o‘rganishda nutq ko‘nikmalarini shakllantirishda eshitish materiali roli. *O‘zDJTU ilmiy axborotnomasi*, 2(3), 77–80.
13. Conseil de l'Europe. (2001). *Cadre européen commun de référence pour les langues : apprendre, enseigner, évaluer*. Strasbourg: Conseil de l'Europe.