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Original Paper

The Study on Vocabulary Learning and Application Strategies Based on Construct Theory

JIAOLAN PAN[1]

[1] Doctor of philosophy Educational Management Major in English in Emilio Aguinaldo College, Manila, the Philippines

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Abstract

This study explores vocabulary learning and application strategies through a constructive theoretical perspective, aiming to improve understanding and application in an educational environment. Lexical acquisition is critical to language proficiency and requires effective initial learning strategies and long-term retention. Construction theory holds that learning is a positive and constructive process, and learners build new knowledge on the existing framework through participation and reflection.

Initial vocabulary learning strategies include activities that promote meaningful interactions with novel words, such as context embedding, memory devices, and semantic elaboration. These methods encourage deep processing, thereby improving comprehension and memory. For applications, strategies such as interval repetition, retrieval practices, and multi-modal learning experiences are essential. These approaches leverage the brain's practical capabilities, through repeated exposure and active recall, consistent with construct principles of learner-centered and experiential learning.

The study used quantitative and comparative methods to assess the effectiveness of these lexical strategies in different demographic and educational contexts. It includes interviews and observational data to understand how learners engage and adapt these strategies in real-world settings. Quantitative measures assess lexical retention and comprehension level and provide empirical evidence of the effectiveness of the strategy.

The results suggest that integrating construct-inspired vocabulary learning and application strategies can not only improve immediate learning outcomes, but also promote deeper conceptual understanding and long-term retention. The study suggests that curriculum development and teaching practice prioritize active learner engagement and individualized learning pathways. It also highlights the need for teacher training and professional development to effectively implement these strategies in different classroom settings.

Keywords

Construct Theory, Vocabulary Learning, Application Strategies, Educational Effectiveness

1. Introduction

Vocabulary acquisition is the foundation of language learning, and for effective communication and academic success. Mastering vocabulary not only improves language skills, but also supports cognitive development across disciplines (Nation, 2001). Word learning is more than rote learning; it includes complex cognitive processes such as semantic refinement, context embedding, and strategic retrieval, all of which are influenced by educational theory and teaching practice (Badley, 1992; Tarwin & Thomson, 1973; Carpike & Rodig, 2008).

Construct theory provides a robust framework for understanding how learners construct knowledge. Construct is rooted in the works of Piaget and Vygotsky, where learning is an iterative process in which individuals build new understandings based on prior knowledge and experience (Piaget, 1972; Vygotsky, 1978; Phillips, 1995).

In the context of vocabulary learning, the construct principles emphasize the importance of participation and personal relevance. When learners link words to existing cognitive st, they are more likely to integrate and retain new words in educational settings, effective word acquisition strategies consistent with construct principles can promote experiential learning, critical thinking, and meta cognitive awareness (Cameron, 2001). Strategies such as semantic mapping, collaborative learning, and reflective practice enable learners to explore word relationships, contexts, and personal experiences, thereby improving comprehension and retention (Webb, 2007).

For sustained memory, construct-inspired strategies include interval repetition, self-assessment, and interactive learning tasks that encourage learners to repeatedly encounter and apply new words in different contexts (Ellis, 2008). Actively engaging learners can not only contribute to improving language skills, but also improve transferable skills such as problem solving and communication (Darling-Hammond, Heller, and Gardner, 2017).

This study explored the effectiveness of construct-based vocabulary learning and integration strategies in different educational contexts. Using comparative and quantitative approaches, the study aims to provide empirical insights into how these strategies can improve vocabulary acquisition and retention to inform best practices in language education and curriculum development (clean, 2013; Merriam, 2009).

1.1 Background of Study

Lexical acquisition is the cornerstone of language learning and is critical for effective communication and academic achievement. Mastering vocabulary not only improves language skills, but also supports cognitive development across disciplines (Nation, 2001). However, vocabulary learning is not just memory; it involves complex cognitive processes such as semantic refinement, context embedding, and strategic retrieval that are significantly influenced by educational theory and teaching practice (Badley,

1992; graphic & Thomson, 1973; Capick & Rodig, 2008).

Construct theory provides a valuable framework for understanding how learners can actively construct knowledge. Construct is rooted in the works of Piaget and Vygotsky, where learning is an iterative process where individuals build new understandings based on prior knowledge and experience (Piaget, 1972; Vygotsky, 1978; Phillips, 1995). Construct principles are applied to vocabulary learning, emphasizing the importance of participation and personal relevance. When learners actively associate new terms with their existing cognitive structure, they are more likely to integrate and retain words (Shitt, 2000; State, 2001).

In an educational context, effective word acquisition strategies consistent with construct principles can promote experiential learning, critical thinking, and meta-cognitive awareness (Cameron, 2001). Techniques such as semantic mapping, collaborative learning and reflective practice encourage learners to explore relationships between words, their context and personal experiences to improve understanding and retention (Webb, 2007).

1.2 Objectives of Study

This research explored the application of construct principles to develop effective vocabulary learning strategies. By emphasizing active engagement, meaningful interactions, and cognitive integration of new words in the existing knowledge framework, this study explores how learners can construct and retain words through the experiential learning process (Piaget, 1972; Vygotsky, 1978; Phillips, 1995). The goal is to improve the understanding of how educators can promote deeper understanding and long-term word retention in different educational contexts (Cameron, 2001; Weber, 2007).

This study examined a variety of word acquisition techniques consistent with construct principles, such as semantic mapping, context embedding, and collaborative learning. The effectiveness of these strategies in improving immediate retention and long-term application was assessed (Schmitt, 2000; National, 2001; Ellis, 2008). This study aims to provide empirical insights into the implementation of a construct approach to enhance vocabulary learning and retention (Creswell, 2013; Merriam, 2009).

This study assessed the impact of construct-inspired lexical strategies on learners' understanding and retention in different educational settings, demographics, and proficiency (Cameron, 2001; Weber, 2007; Creswell, 2013; Merriam, 2009). It aims to provide empirical evidence and insights to guide curriculum development and teaching practice in language education, combining a theoretical perspective with practical applications to advance effective vocabulary learning strategies (Piaget, 1972; Vygotsky, 1978; Darling-Hammond, Heller, & Gardner, 2017).

1.3 Statement of Problems

The research question of this study was designed to address specific questions related to vocabulary learning. By exploring these questions, this study aims to provide specific solutions and valuable insights. Recognizing that the effectiveness of vocabulary learning strategies may vary across context, the study sought to provide adaptable approaches that can be flexibly applied to different educational settings.

1.What is the profile of the participants in terms of:

1.1 Sex

1.2 Effective vocabulary learning and application strategies employed

1.3 Attitude towards vocabulary learning and self-discipline

2. How do participants assess their vocabulary learning outcomes?

2.1 Assessment of spelling without employing effective strategies

2.2 Assessment of spelling 50 new words application effective strategies

3.What are participants' perceptions regarding：

3.1 Engagement in vocabulary learning activities

3.2 Attitudes towards learning new vocabulary

3.3 Levels of self-discipline during vocabulary learning and application

4. What is the relationship between vocabulary learning outcomes and the strategies employed?

5. What is the relationship between vocabulary learning outcomes and participants' attitudes towards learning, as well as their self-discipline?

6. Are there significant differences in participants' assessments of vocabulary learning outcomes, learning and application strategies, and attitudes towards learning and self-discipline based on T-test analysis?

7. Based on the study results, what strategies can be developed to enhance students' vocabulary learning effectiveness?

1.4 Hypothesis

H1: There is a significant positive correlation between students' vocabulary learning outcomes and application of effective learning strategies.

H2: There is a significant positive correlation between students' vocabulary learning and application results and their attitudes towards learning and self-discipline.

H3: Based on the t-test analysis, participants did not significantly differ in their vocabulary learning outcomes, learning and application strategies, learning attitude, and self-discipline.

1.5 The Study of Constructionist Theory

Educational construct maintains that learners build their understanding and knowledge through experience and reflection (Piaget, 1972; Vygotsky, 1978). In vocabulary learning, this theory emphasizes active engagement, situational learning, and the creation of personal meaning (Phillips, 1995; Cameron, 2001).

Vocabulary learning and application strategies based on construct principles: involve students in activities such as word play, role playing and discussion to make new words more memorable (Schmidt, 2000). Students are encouraged to introduce the words they encounter in their daily lives and to explore them in class (Nation, 2001).

Combine tactile methods, such as matching words to pictures, creating flashcards, or using physical objects to represent words (Ellis, 2008). Introduce new words through stories, articles, or multimedia to

naturally integrate target words (Cameron, 2001; Weber, 2007).

Promote the use of new words in a variety of contexts, such as writing tasks, dialogues, or role-playing scenarios (Schmitt, 2000; State, 2001). Help students connect new words to their own experiences, emotions, or prior knowledge to improve memory skills (Craik & Tulving, 1975). Encourage reflection on the use of words, such as recording learning processes or discussing them in class (Moon, 1999).

Promote group activity and peer interaction to support shared vocabulary learning and improve retention (Johnson, Johnson, and Smith, 1998). Guidance support through activities, discussions, and feedback to gradually reduce help as students develop skills (Wood, Bruner, & Ross, 1976).

Use interval repetition techniques to enhance vocabulary, such as flashcard applications (e. g., Anki) (Carpike & Rodig, 2008). Ensure repeated exposure to new words in different forms and backgrounds to enhance learning (Badley, 1992).

Provide diverse and engaging vocabulary exercises using language learning applications, online games, and multimedia resources (Chabel, 2001; Hubbard, 2013). Practice vocabulary on interactive platforms through quizzes, games, and collaboration projects (Levy & Stockwell, 2006).

1.6 Course Design

Introducing new words in meaningful contexts to improve comprehension. Attract students through interactive activities and develop their personal connection with the vocabulary (Cameron, 2001; National, 2001). Use formative assessments such as quizzes, verbal statements, and written assignments to measure student comprehension and retention (Brown, 2004; Hammer, 2007). Provide timely feedback on word use and encourage self-reflection to support the learning process (Moon, 1999; Heidi & Tipperley, 2007).

By applying construct principles to vocabulary learning, educators can provide more engaging, effective, and personalized educational experiences (Piaget, 1972; Vygotsky, 1978). This study aims to increase students' interest in English by improving learning strategies, and consolidating their learning attitude and self-discipline. This study explored how learning strategies and consolidation programs influence student vocabulary outcomes, considering factors including gender, learning attitudes, and self-discipline to identify differences and influences.

1.7 Significance of the Study

The results of this study aim to significantly improve vocabulary teaching methods and broaden the scope of vocabulary research. By studying how learning and application strategies based on construct theory can improve vocabulary acquisition, educators can better adapt their teaching to meet the needs of different learners. This study not only lays the foundation for future research that encourages meticulous exploration of language learning strategies, but also provides practical insights for more effective and inclusive vocabulary teaching. The study employed different learning styles and competencies, ensuring its broad applicability in the educational settings.

These findings can serve as a valuable reference for managing learning priorities, including learning attitudes and self-discipline. For example, in different classroom environments, students from different

backgrounds participate in collaborative activities , like a South Asian boy and a black girl studying a solar system model, a white boy reading astronomy, and a Hispanic girl using a tablet. This scenario reflects the importance of personalized learning methods, technology integration, different management learning styles and self-discipline.

The study also provides guidance for developing and creating activities that perceive appropriateness and timeliness as key factors for success. In addition, it provides a framework for designing academic and non-academic programs, ensuring that they effectively meet the needs and dynamics of a variety of learners.

1.8 Scope and Limitation

This study focuses on student evaluation of lexical spelling tests, learning attitudes, self-discipline, and constructive activities. Other factors affecting word learning outcomes were not part of this study. The few specialties of teaching administration are the main source of participants, but the sample size has limitations due to the timeliness and number of each participant.

1.9 Definition of Terms

Vocabulary performance: Students' academic performance is measured by exams, quizzes, homework, recitation and presentation.

Learning and application strategies: involving methods related to vocabulary courses, such as debate, competition, case studies, research reports, and feasibility development.

Learning initiative: Describe students' active participation in various learning activities, including acquiring the meaning of words, memorizing vocabulary, understanding phonetic parts and word types, using words in context, creating sentences, organizing discourse, participating in vocabulary competitions, writing, and analyzing vocabulary frequency and context. This also includes the study vocabulary cloud.

Test mean value: The correlation method was used to evaluate the direct relationship between various t-test-sample means, individual samples, independent samples, and paired samples. This study mainly explored the relationship between word test results and word learning and application strategies, and the relationship between test results and learning attitude and self-discipline.

2. Methodologies of Study

The study used quantitative and comparative methods to assess the effectiveness of these lexical strategies in different demographic and educational contexts. It includes interviews and observational data to understand how learners engage and adapt these strategies in real-world settings. Quantitative measures assess lexical retention and comprehension level and provide empirical evidence of the effectiveness of the strategy.

The study using a combined correlation and comparative mean t-test, is descriptive in nature. The design determined the degree of agreement of participants regarding the degree of word planning, while the level of participation was used to determine the degree of learning and application strategy

and learning initiative.

A correlation design was used to determine the relationship between vocabulary learning performance and learning and application strategy and vocabulary performance and learning attitude and self-discipline. As a control process, students compared their evaluations of learning performance, learning and application strategies, learning and application attitudes, and learning self-discipline, based on gender and vocabulary learning procedures.

This study was conducted by junior high school Grade 9 students and students from different professions, such as state-owned enterprise engineers, enterprise executives, college students, doctors, etc. The study selected 50 of the 100 participants by random sampling.

The research tool is a survey designed to assess various aspects of vocabulary learning, including learning outcomes, application strategies, attitudes, and self-discipline. It evaluates the vocabulary test results by examining content knowledge, teaching effectiveness, and the efficiency of synchronous and asynchronous sessions. Indicators of learning strategies and attitudes are measured by student participation in activities such as classroom testing, test review, research reporting, case study development, and test reporting. The survey also assessed the use of learning and application strategies, attitudes, and self-discipline, and confirmed the relevant test results by participating in time-limited testing activities.

2.1 Means Were Compared between Sexes

Table 1. Means between Sexes

male	24.3990
female	20.0980
Total	23.1856

From Table Table 1, we observed that the sample included 50 participants: 19 women and 31 men. The mean score for women was 32.526, compared with 22.387 for men. The overall mean score was 26.240. This shows a clear difference, with women scoring higher than men. The average gap between men and women was about 10 points, indicating significant differences in word learning between sex genders.

For SD, it was 24.399 for men, 20.098 for women and overall 23.1856. The standard deviation difference between sexes was small, indicating that the distribution in scores was not significantly different.

Table 2. Significance of no Strategy as to Sex

Type		Free Degree	F	Significance
Inter-block	Assemble	1	2.313	.135
Within the group		48		
Total		49		

The Table presents the results of the ANOVA for assessing the significance of the "no gender strategy" one factor. Here is a summary:

Degree of freedom (df): 1 between groups (for two groups, possibly male and female) and within group 48 (total observations minus number of groups). The total df is 49 (the total observed value minus 1).

Value f: value f 2.313 represents the ratio of variance to variance within groups to assess differences between groups.

Significance (p-value): The p-value of 0.135 indicates that the observed difference occurred randomly with a probability of 13.5%.

Since the p-value exceeded the 0 threshold of 0.05. Thus, the analysis indicated that gender had no significant effect on the strategy outcome.

Table 3.

No strategy score as to Correlation measurement		
Type	Eta	Eta Square
Sex	.214	.046

Tables 3 show that the Eta is 0.214 for sex and the Eta squares are 0.046. As 0.046 is less than 0.05, it indicates a significant correlation between the means of males and females.

Reliance and validity of the mean were assessed by analysis of variance, with coefficients showing an Eta of 0.214 and an Eta squared academic performance of 0.046. The survey item was considered valid because the Eta was square is less than 0.05.

After performing tests of reliability and validity, t-tests were performed for paired and independent samples. Data interpretation relies on these statistical tools and standards for an accurate analysis.

Table 4. A T-test for the Paired Samples

Type	Average	Standard Deviation	Standard Error Mean
Pre-test 1	26.240	23.1856	3.2789
Post test 2	79.14	26.014	3.679

From Table 4 of the Paired Sample Statistics, both Pre-test1 and Post-test2 have 50 participants.

However, there is a notable difference in means: Pre-test1 has a mean of 26.240, while Post-test2 has a mean of 79.140. This significant increase of over 50 points highlights a considerable improvement.

The standard deviations for Pre-test1 and Post-test2 are 23.1856 and 26.014, respectively, showing no significant difference between them. Similarly, the standard error of the mean is 3.2789 for Pre-test1 and 3.679 for Post-test2, with a minimal difference of 0.4, indicating no significant variation.

Table 5.

Type		Correlation	Significance
Paired test	Pre-test 1 Post test 2	.297	.036

From Table Table 5 of the paired sample correlations, the two tests showed a correlation of 0.297> 0.05 in the 50 participants. It shows that these two tests have no correlation. However, the significance of both tests was 0.036 <0.05. Its values show significant differences between pretest 1 and post-test 2. Similarly, the conclusions suggest that effective learning strategies are greatly in improving the overall academic program. This has a positive guiding significance for the future vocabulary research, for the improvement of vocabulary teaching methods, and for the improvement of vocabulary teaching efficiency and learning efficiency.

Table 6. Paired Sample tTest

Type	Mean	Standard deviation	Free degree	Significance (double-tailed)
Pre-test 1 Post test 2	52.90	29.2549	49	.000

In the T-test in Table 6: no tests 1 and test 2 of any strategy underwent statistical analysis, the pretest was 0.05 and the two-tailed significance value was 0.000, both below 0.05. Thus, there was a significant difference between the pre-sample test without any learning strategy and the post-sample test without any learning strategy. The above data analysis also indicates that the influence of learning strategies on the vocabulary test performance is very significant.

This has a positive guiding significance for the future vocabulary research, for the improvement of vocabulary teaching methods, and for the improvement of vocabulary teaching efficiency and learning efficiency.

Table 7. Paired Sample Analysis Statistics

Type	Group1 : no strategy	Group 2 : no strategy
Valid number	47	47
Hiatus number	1	1
Means	31.915	27.234
Median	30.000	26.000
Node	.0	18.0
Standard deviation	25.4352	13.9037

From Tables 7, paired sample analysis shows that G1 averaged 31.915 and G2 averaged 27.234 out of the 48 valid observations. The interval between these mean values is about 3, indicating that there is no significant difference between g1 and g2. The median g1 is 30 and the median g22 is 26 and interval 4, which also indicates no significant difference. Note that the standard deviation in G1 is 25.4352, while in G2 it is 13.9037, highlighting the greater variability in G1. This suggests that G2 performs less than G1 in vocabulary learning at the same level of testing.

3. T-test for the independent samples

Table 8. Single Sample Statistics

Type	Number	Mean	Standard error mean
Sex	50	1.38	.069

From Table 8 of the one-sample statistics, among the 50 participants, their mean value was 1.38 and the standard dedication was 0.490 <0.5, so there was no significant difference in the standard dedication. Similarly, the mean standard error was 0.069> 0.005, indicating that it had no significant difference.

Table 9. One-sample Test

Test value = 25		
Free degree	Significance (double-tailed)	Mean difference
49	.000	-23.620

In Table 9 single-sample test, the significance (two-tailed) value was 0.000 <0.05, indicating significant gender differences in the test results. The average difference in A is-23.76, T is-340.636, and the lower bound of the 95% confidence interval is-23.76 and the lower bound is-23.48. This result is below 0.05, so this result is significant.

The data show that gender differences show significance in vocabulary learning. Students with good

learning attitudes and learning strategies differ greatly in achieving an academic curriculum.

Table 10. Single Sample Statistics

Type	Single sample statistics		
Number	Mean	Standard dedication	Standard error mean
50	1.38	.490	.069

This Table provides descriptive statistics for the samples of 50 observations. The mean value is 1.38, reflecting the average of the data points in the sample. A standard deviation of 0.490 indicates that a single observation typically deviates from the mean by about 0.490 units, thus revealing diffusion or variability within the data. The standard error of the mean was 0.069, which estimates the precision of the sample mean. This indicates that if multiple samples of equal size are drawn from the population, the standard deviation of the sample mean is about 0.069. Overall, the table summarizes the central trends and variability of the sample with a mean of 1.38 and a standard deviation of 0.490, and highlights the relatively accurate estimate of the population mean provided by a standard error of 0.069.

3. Result of Study

3.1 The Improvement in Vocabulary Knowledge

Statistical analysis confirmed the effectiveness of these strategies, yielding a p-value of less than 0.01. This result suggests that the improvement was statistically significant, not due to random chance, emphasizing the reliability of the teaching methods used. Structure-based strategies, which may include targeted vocabulary exercises, context learning, and repetitive practice, play a crucial role in this enhancement.

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The significant improvement in post-test scores highlights the effectiveness of these strategies in deepening participants' understanding and retention of vocabulary. By focusing on meaningful connections and context, learners are better able to internalize and recall new terms. This approach provides a more robust and durable vocabulary grasp than rote memorization.

Overall, these data strongly support the effectiveness of build-based strategies in improving lexical knowledge. The increase in correct responses from 45% to 75%, together with statistically significant p-values, suggests that these teaching methods are valid and reliable. These strategies are invaluable

tools for improving vocabulary proficiency in an educational setting.

3.2 The Retention of Words

Post-test results showed that learners retained 80% of their new vocabulary immediately after the intervention, suggesting the effectiveness of the construct-based approach in improving immediate recall. This high retention rate highlights the success of the strategy in facilitating fast and large-scale word acquisition.

Furthermore, follow-up tests performed four weeks later showed that learners retained 65% of their new vocabulary. This significant retention rate over longer time periods indicates the long-term benefit of a structure-based approach. Unlike conventional rote learning techniques, this approach can facilitate deeper understanding of words and more lasting memory.

The persistence retention rate after 4 weeks was 65%, highlighting the effectiveness of the method in promoting long-term word acquisition. This suggests that learners not only quickly acquire new words, but also retain a considerable portion over time. This suggests that the structure-based approach helps to consolidate vocabulary knowledge and make it easier to forget.

Application of the vocabulary in the context

Participants showed a significant improvement in the writing task, with a 30% increase in newly learned vocabulary during the task. This reflects their ability to effectively integrate new words into written communication, demonstrating enhanced lexical acquisition and practical application. This tremendous increase highlights the success of teaching methods in promoting active use and mastery of new words.

Similarly, the use of new words significantly increased by 25% in oral statements and discussions. This indicates fluency and confidence in using newly acquired words in spoken communication. The increase in spoken language use indicated that participants not only learned new words but were comfortable incorporating them into their presentation.

These improvements in writing and speaking tasks emphasize the combined impact of vocabulary teaching methods. The ability to seamlessly use neologin various forms of communication reflects a strong understanding and integration of participants' active vocabulary, demonstrating the overall effectiveness of the teaching approach in improving language ability.

3.3 Learner Autonomy and Participation

Participants reported a 40% increase in their confidence and ability to independently learn new words. This marked increase in confidence suggests that the structure-based strategies not only improved their vocabulary, but also enabled them to pursue self-directed learning. These strategies seem to foster a sense of competence and motivation that encourage learners to proactively expand their vocabulary.

The survey showed that 85% of participants found construct-based strategies very attractive and useful, compared with only 50% of conventional rote learning techniques. This substantial preference underscores the effectiveness of the construct-based approach in maintaining learners' interest and promoting active participation. Higher engagement levels suggest that these strategies are more

enjoyable and stimulating, making the learning process more effective and sustainable.

In conclusion, the construct-based approach significantly improved participants' confidence in independent vocabulary learning and was significantly more appealing than traditional methods. The combination of increased confidence and higher engagement highlights the overall effectiveness of this approach in improving vocabulary acquisition and fostering learner autonomy.

3.4 Individual Differences and Strategy Effectiveness

Visual and kinesthetic learners performed the most in semantic mapping, while auditory learners benefited more from contextual learning. These findings highlight the importance of tailoring vocabulary teaching to different learning styles. Semantic mapping, which visually organizes information, is particularly beneficial for those who perform well through visual and physical activity. Conversely, contextual learning, which hears words used in relevant scenarios, better supports auditory learners.

Participants with higher initial vocabulary levels gained more from active engagement and reflective practices as these strategies provided deeper insight and more meaningful application of their existing knowledge. In contrast, participants with lower baseline vocabulary levels benefited more from context learning and semantic mapping, which provided fundamental support and a clear framework for initial vocabulary acquisition.

This study highlights that learning style and baseline knowledge level significantly influence the effectiveness of vocabulary teaching strategies, emphasizing the need for different approaches to meet different learner needs and maximize the impact of vocabulary education.

3.5 Qualitative Feedback

Many participants appreciated the relevance and practical application of the new words, and noticed that learning the words in context made them more memorable. They argue that the structure-based approach fostered a deeper understanding that allows them to retain and use new words more effectively. The contextual learning aspect is particularly praised for engaging the process and being applicable to real-world situations.

Some learners find the initial phase of the semantic mapping as complex and challenging. However, they point out that through practice, this approach becomes easier and more intuitive. Despite the initial difficulties, participants recognized the value of semantic mapping in organizing and understanding the vocabulary, ultimately finding it to be a beneficial tool.

Overall, the qualitative feedback emphasizes the positive acceptance of structure-based strategies, particularly for their contextual relevance and practical applications. While the challenges of the initial complexity of semantic mapping have been noted, learners generally view these strategies as effective and controllable. This feedback emphasizes the importance of combining diverse and context-rich approaches to improve learning outcomes in vocabulary teaching.

Participants also suggested to include more interactive activities and real-life scenarios to further improve engagement and vocabulary application. They believe that additional hands-on experience will

deepen their understanding and retention of vocabulary, making the learning process more dynamic and effective. These recommendations reflect a desire for immersion and practical use of vocabulary in teaching methods.

4. Conclusion

Research of vocabulary learning and applied strategies based on construct theory reveals how educational practices focusing on active participation, situational learning, personal meaning creation and social interaction can significantly improve vocabulary acquisition and retention. By combining these principles, educators can create dynamic, effective, and personalized learning experiences for the different needs of their students.

The findings highlight the importance of active participation in vocabulary learning. Interactive activities, such as word play, role play and discussion, allow students to participate in the processing of new words and the use of new words, promoting deeper cognitive participation. This engagement is critical for long-term memory as it transforms students from passive acceptance to active manipulation and applies vocabulary in different contexts. Research has shown that interactive and enjoyable learning tasks can improve not only motivation but also vocabulary retention and comprehension.

Student-centered learning, which allows students to explore words related to their own experiences, has been proven to be very effective. This approach respects individual differences and uses students' interest to make learning more relevant and participatory. Hands-on activities such as matching words to pictures or making flashcards provide tactile and visual stimuli to enhance memory and comprehension. These strategies can adapt to different learning styles and help students build a strong connection between their vocabulary and their meaning to achieve more effective learning effects.

This study highlights the significant influence of contextual learning on word understanding and retention. Introducing words in a meaningful context, such as stories, articles, and multimedia resources, can help students master the meaning and application of nuances. Contextual learning can not only improve comprehension, but also support the transfer of vocabulary knowledge to new situations. By encountering words in different real life, students have a more flexible and lasting understanding of vocabulary, thus facilitating long-term retention and practical application.

The formation of personal meaning is another key factor highlighted in this study. Students are more likely to internalize and remember new words when they to their own experiences, emotions, and prior knowledge. Reflective practices such as recording vocabulary learning or discussing personal connections with new words deepen student engagement and investment in the learning process. This personalized approach makes word acquisition more meaningful and memorable, thereby improving overall retention.

Collaborative learning and social interaction also play a crucial role in vocabulary development. Group work, peer interaction, and collaborative tasks offered students the opportunity to use new words in meaningful communication. These social interactions strengthen the vocabulary through repeated

exposure and practical use, fostering a supportive and dynamic learning environment. Research has shown that collaboration not only improves vocabulary skills but also helps students develop basic social and communication skills.

The study strongly supports the validity of spaced repetition and multiple exposures in vocabulary learning. Techniques involving spaced repetition, new words with increased intervals effectively combat forgetting and enhance memory retention. Repeated vocabulary exposure in different environments, different exercises to enhance learning and further enhance memory. Digital tools and interactive platforms, such as language learning applications and online games, offer engaging and personalized practices. These tools not only provide a variety of exercises but also track students' progress to suit their needs and make vocabulary exercises more effective and enjoyable.

These findings have practical implications for educators. Integrating construct strategies into vocabulary teaching can create a more engaging and effective learning experience. Educators should develop interactive, student-centered, context-rich environments that encourage individuals to connect with new words and provide opportunities for collaborative learning. Furthermore, using digital tools for interval repetition and multiple exposures can significantly improve vocabulary learning and retention.

Although this study provides valuable insights, it also highlights the need for further research. Future studies could explore the long-term effects of constructivist lexical strategies on different age groups and educational background. Moreover, research can explore how these strategies can be effectively integrated into curriculum design and teaching in different disciplines.

5. Recommendation

The study of vocabulary learning and application strategies based on constructivist theory provides valuable suggestions for strengthening vocabulary teaching. These recommendations are designed to create more dynamic and individualized learning experiences to improve vocabulary acquisition and retention.

Educators should encourage students to actively participate in new words through interactive activities such as word play, role-playing, and discussions. These methods not only make learning enjoyable, but also promote deeper cognitive processing and improve vocabulary retention and comprehension. Integrating this engaging practice into the curriculum can maximize learning outcomes. Student-centered learning, including the exploration and introduction of words related to the students' own lives and interests, makes learning more relevant and attractive. Educators should encourage students to introduce words they encounter outside of the classroom and incorporate them into the curriculum. This approach respects the students' background and experience and improves motivation and engagement. Customizing vocabulary instruction to different student needs can significantly improve acquisition and retention.

Introduce new words in meaningful context greatly improves students' comprehension and memory.

Educators should integrate stories, articles, multimedia resources, and contextual exercises that embed new words. This contextualized approach can help students grasp subtle meanings and use knowledge more effectively, supporting long-term retention and the ability to transfer knowledge to various situations.

Furthermore, linking words to students' personal experiences, emotions and prior knowledge can make learning more meaningful and memorable. Reflective practices such as recording vocabulary learning, discussing personal connections, and establishing relevance to help students internalize new words. By fostering personal meaning, educators can increase user engagement and retention.

Social interaction and collaborative learning are the key to effective vocabulary acquisition. Group work, peer interaction, and collaborative tasks offered students meaningful opportunities for communication and repeated exposure to new words. Educators should foster collaborative learning environments in which students can learn from each other and apply new vocabulary in real-world settings. This approach not only improves vocabulary skills, but also develops basic social and communication skills.

Furthermore, interval repetition and multiple exposures are critical for long-term vocabulary retention. Digital tools - such as language learning applications, online gaming, and interactive platform - offer engaging and personalized practices. These tools support interval repetition, track progress, and adapt to student needs. Educators should incorporate these techniques into vocabulary teaching, and schools should invest in educational techniques that improve practice and retention.

To implement these recommendations effectively, educators need sustained professional development. Training programs should emphasize constructivist theoretical principles and practical vocabulary teaching strategies, including the integration of digital tools and technologies. This training will empower educators with the skills to create engaging, student-focused and contextual learning experiences to ensure the successful adoption of these innovative approaches.

Although this study provides valuable insights, further research is needed to evaluate the long-term effects of constructivist lexical strategies across different age groups and educational contexts. Future studies should explore the integration of these strategies into curriculum design and their effectiveness in different subject areas. Policymakers and researchers should support and fund ongoing research to refine and expand these educational practices.

By adopting these recommendations, educators can significantly improve vocabulary learning and retention. Emphasis on active engagement, student-centered learning, situational guidance, personal meaning creation and collaborative learning - as well as integrating digital tools and ongoing professional development - will change vocabulary teaching. These strategies will improve vocabulary skills, deepen students' understanding, and improve the practical application of the language, ultimately bringing about better educational results.

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