ĐÁNH GIÁ HIỆU QUẢ CỦA CÁC CHIẾN LƯỢC HỌC TỪ VỰNG THEO CẢM NHẬN CỦA SINH VIÊN KHÔNG CHUYÊN ANH

EVALUATING THE EFFECTIVENESS OF VOCABULARY LEARNING STRATEGIES BASED ON THE SUBJECTIVE PERCEPTIONS OF NON-ENGLISH-MAJOR STUDENTS

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THÔNG TIN	TÓM TẮT
	Từ vựng đóng vai trò then chốt trong việc học ngoại ngữ, nhưng sinh viên không chuyên Anh thường gặp nhiều khó khăn trong việc tiếp thu và ghi nhớ từ mới. Nghiên cứu này nhằm đánh giá mức độ áp dụng và hiệu quả cảm nhận của các chiến lược học từ vựng ở sinh viên không chuyên Anh tại Trường Đại học Kinh tế TP. Hồ Chí Minh. Trên cơ sở thang đo VLS của Schmitt (1997), nghiên cứu khảo sát 142 sinh viên thông qua bảng hỏi Likert 5 mức, bao gồm năm nhóm chiến lược: chiến lược suy đoán, chiến lược xã hội, chiến lược ghi nhớ, chiến lược nhận thức và chiến lược siêu nhận thức. Dữ liệu được xử lý bằng ANOVA đo lặp, kiểm định Friedman và phân tích hậu nghiệm để so sánh sự khác biệt giữa các nhóm. Kết quả cho thấy Determination và Social là hai nhóm chiến lược được sử dụng thường xuyên và có hiệu quả cảm nhận cao nhất; Memory và Cognitive ở mức trung bình khá; trong khi Metacognitive ít được áp dụng và có hiệu quả cảm nhận thấp nhất. Những phát hiện này không chỉ cung cấp bằng chứng thực tiễn về thói quen học từ vựng của sinh viên không chuyên Anh mà còn gợi ý cho giảng viên và nhà nghiên cứu nhằm thiết kế các chương trình hỗ trợ, đặc biệt khuyến khích sinh viên tăng cường sử dụng các chiến lược Metacognitive để cải thiện khả năng tự điều chỉnh và tối ưu hóa quá trình học tập.
	ABSTRACT *Vocabulary plays a key role in learning a foreign language, but non-English-major students often have many difficulties in absorbing and remembering new words. This study aims to evaluate the applicability and perceived effectiveness of Vocabulary Learning Strategies (VLS) in non-English-major students at the University of Economics Ho Chi Minh City. Based on Schmitt's VLS scale (1997), the study surveyed 142 students through a 5-level Likert questionnaire, including five strategic groups: Determination, Social, Memory, Cognitive and Metacognitive. Data was processed*

using ANOVA measurements, Friedman testing, and Post Hoc analysis to compare differences between groups. The results show that Determination and Social are the two groups of strategies that are used frequently and have the highest perceived effectiveness; Memory and Cognitive are moderate, while Metacognitive is less applied and has the lowest perceived effectiveness. These findings not only provide practical evidence of the vocabulary learning habits of non-English-major students but also suggest that lecturers and professional researchers should design support programs that encourage students to increase their use of metacognitive strategies to improve self-regulation and optimise learning practices.

1. Introduction

Vocabulary plays a key role in learning a foreign language, because it is a factor that helps learners grasp input information and express their thoughts clearly. Learners often have difficulty communicating if their vocabulary is limited, even if they have mastered the grammatical structure. However, absorbing and memorizing vocabulary is always one of the biggest challenges for English language learners, especially non-specialized students. In the learning process, they often apply many Vocabulary Learning Strategies (VLS) such as copying words, using flashcards, learning phrases, associating images, looking up dictionaries or using supporting applications. Not all strategies are as effective as expected and students' perceptions of each strategy are markedly different.

Although there has been a lot of research on VLS, much of it has focused on specialized language learners or in an international setting. Meanwhile, the number of non-English students in Vietnam is very large, but this group of subjects has not been fully surveyed about their vocabulary learning habits as well as the effectiveness of each strategy. This gap is even more noticeable when placed in the context of current education policies. The General Education Program 2018 identifies foreign languages as an important tool for international integration, while at the university level, many training disciplines require non-specialized students to still meet English output standards to serve their studies and careers. That shows that the need for practical research on vocabulary learning strategies of non-specialized students is increasingly urgent.

The novelty of this study is that it focuses directly on non-English majors, a large group that has been rarely analysed in previous studies and at the same time stops at not only surveying the level of use but also evaluating the perceived effectiveness of each strategy. The combination of quantitative surveys with comparative analysis helps to clarify differences in learning behavior, thereby supplementing practical evidence for the design of support programs that are suitable for the Vietnamese educational context.

2. Literature review

2.1. Vocabulary and its role in the learning acquisition process

Vocabulary is crucial to language learners as it develops their receptive (listening, reading) and productive skills (speaking, writing) in learning the foreign language (Nation, 2001). Weiwei Shi (2025) seems to second this point by saying that "vocabulary plays an essential part in L2 learning" because it greatly enhances the learners' ability to decode and encode in the target language accurately, fluently and communicatively. Richards (1976) asserted that

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the insufficiency of vocabulary was probably the most severe barrier to expressing or understanding ideas in learners' communicative competence.

Keith S. Folse (2012) also explains this quite well: Comprehensible input allows learners to see how a language works and thereby the role of vocabulary in communication. But if we try to listen to or read a foreign language that has an abundance of new words, this forms an interruption in learning, as the comprehension rate drops drastically. In other words, if input is not comprehensible - let alone authentic input - then it ceases to truly be both input and possible.

Since Vocabulary learning is essentially an autonomous process, we also must engage the nature of English Self-efficacy. From the base of self-efficacy, many researchers have used the term English self-efficacy to identify how learners feel about their ability regarding listening, reading, writing and speaking regarding core language skills (Wang et al., 2013).

2.2. Vocabulary learning strategies - VLS

Making choices and taking actions that have major, long-term effects are associated with "strategy" in the context of contemporary business (W. Glenn and Sergii, 2025). Learning a word in a second language is a complicated process that encompasses nine different aspects related to its form, meaning and usage, according to Nation's (2001) framework. Oxford (1990) defined vocabulary learning strategies as the methods that students use to learn, remember and apply new words successfully.

Schmitt (1997) pointed out that there are five different categories into which vocabulary learning strategies (VLS) can be divided:

Determination strategies (D): These involve using dictionaries or context-based guessing to find the meanings of new words.

Social strategies (S): These focus on how students use social interaction to foster vocabulary development, such as conversing with their teachers or peers.

Memory strategies (M): These are concerned with the use of words with the help of mental associations, imagery or using mnemonic devices like linking the words to similar-sounding words.

Cognitive strategies (C): These focus on students employing more cerebral exercises, such as writing the words, creating flash cards, or grouping the words.

Metacognitive strategies (MC): These are concerned with planning, monitoring and evaluating learning in the context of vocabulary development, with setting learning objectives and assessing vocabulary goals.

2.3. Vocabulary learning effectiveness and its evaluation

According to Kennedy (2007), a learning outcome is a necessary outcome or objective that must be accomplished during the learning process. According to Bandura (1997), the study's definition of vocabulary learning effectiveness is students' subjective assessment of a strategy's efficacy. The subjective assessment of a learning strategy's effectiveness is influenced by the implementation of suitable tactics, according to an increasing amount of research (Nation, 2001; Tseng et al., 2006).

This process can be considered a matter of self-efficacy since the effectiveness of learning words depends on the learners' perception. This term refers to an individual's belief in their ability to perform a particular task using the skills they have (Bandura, 1997) and is generally considered to be dependent on the specific task and context (Pintrich & Schunk, 1996).

2.4. Review of previous studies

Although students regularly used memory techniques, Pawlak (2009) discovered that they gave metacognitive techniques more long-term value.

According to a Vietnamese study (Nguyen and Nation, 2011), students who did not major in English tended to rely more on cognitive and memory strategies (M) than on metacognitive ones (MC).

2.5. Research model and research hypothesis
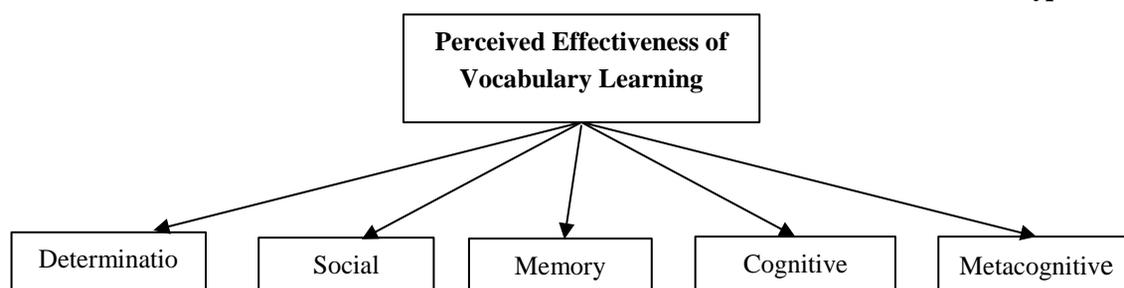
Figure 1. The research model evaluates the effectiveness of vocabulary learning strategies as perceived by non-English-major students

H1 (Determination): The Determination strategy has a positive effect on the perceived effectiveness in vocabulary learning of non-English-major students.

H2 (Social): The Social strategy has a positive effect on the perceived effectiveness of non-English-major students in learning vocabulary.

H3 (Memory): The Memory strategy has a positive effect on the perceived effectiveness of non-English-major students in learning vocabulary.

H4 (Cognitive): The Cognitive strategy has a positive effect on the perceived effectiveness in vocabulary learning of non-English-major students.

H5 (Metacognitive): The Metacognitive strategy has a positive effect on the perceived effectiveness of vocabulary learning of non-English-major students.

3. Methodology

3.1. Research design

The study applied a quantitative design of descriptive combined comparison to evaluate the difference in the level of application and perceived effectiveness of lexical strategy groups. The data was collected through a self-filled questionnaire, using a 5-point Likert scale, ranging from 1 - Totally disagree to 5 - Completely agree. The study uses both Repeated Measures, ANOVA and non-parametric tests to ensure highly reliable analysis results when the data does not follow the standard distribution.

3.2. Study subjects and samples

The research subjects are non-English-major students studying at the University of Economics Ho Chi Minh City (UEH), which offers multidisciplinary undergraduate programs in Vietnam.

Sample selection criteria: Students who are not in English language majors or English pedagogy, have completed at least one basic English module.

Sample selection method: Convenient sample selection (Convenience sampling).

Sample size: 142 students, ensuring to exceed the minimum level for repeated ANOVA analysis and Friedman Test (Field, 2013).

3.3. Survey tool (5-level Likert questionnaire for each component strategy)

The questionnaire is based on Schmitt's (1997) Vocabulary Learning Strategies (VLS) scale, which has been adapted for the Vietnamese context. The scale consists of 10 component strategies divided into 5 main groups, including: (1) Determination (D1-D2), (2) Social (S1-S2), (3) Memory (M1-M2), (4) Cognitive (C1-C3), (5) Metacognitive (MC1-MC2).

Each survey item is evaluated on a 5-point Likert scale (1 = Completely disagree, 5 = Completely agree). The questionnaire consists of two parts: Personal information and learning characteristics of respondents; The level of

application and perceived effectiveness of each component strategy.

The questionnaire was tested for reliability using the Cronbach's Alpha coefficient, all strategy groups reached the acceptable threshold (> 0.7).

3.4. Data collection process

The data collection process is implemented through four successive stages. First, the research team developed questionnaires, translated and corrected the language and consulted with experts to ensure clarity and relevance to the research context. Next, the questionnaire was piloted with 20 students to assess the ease of understanding of the questions and the time to complete, thereby making the necessary adjustments. After the pilot phase, the formal questionnaire was streamed live in the classroom and sent via an online form over a two-week period. Finally, the recalled survey forms are checked, removing invalid votes due to lack of many answers or signs of answering according to a fixed pattern, to ensure the quality and reliability of the data before conducting analysis.

3.5. Data analysis process

The data processing and analysis process is carried out in five consecutive steps: (1) conducting descriptive statistics for each component strategy and strategy group, including the mean, standard deviation, smallest and largest values; (2) testing the standard distribution of data by Shapiro-Wilk testing; (3)

in cases where the data do not follow the standard distribution, apply Friedman accreditation to assess differences between strategic groups; (4) using Conover Post Hoc post-hoc testing to identify pairs of strategic groups with statistically significant differences and (5) synthesize and compare the results of the analysis with previous studies to draw notable findings.

4. Results

4.1. Statistics describing component strategies

Table 1 presents descriptive data for 10 component strategies in five lexical strategy groups. The mean score ranges from 2,282 (MC1 - a sub-item of the hypercognitive strategy) to 4,542 (D2 - a sub-item of the determination strategy). The strategies in the Determination (D1, D2) and Social (S1, S2) groups all achieved a high average score of over 4.3, reflecting the level of regular application and high perceived effectiveness. In contrast, items in the Metacognitive group (MC1, MC2) had the lowest average scores (2,282 and 2,303), indicating limited frequency of use and perceived effectiveness. The standard deviation (SD) ranges from 0.546 (D1) to 0.989 (MC2), indicating a relatively low level of score dispersion in frequently applied strategies and higher in less used strategies. The range of values from minimum to maximum ranges from 1,000 to 5,000, reflecting significant differences in the level of application between individuals.

Table 1. Statistics describing component strategies

	D1	D2	S1	S2	M1	M2	C1	C2	C3	MC1	MC2
Descriptive Statistics											
Valid	142	142	142	142	142	142	142	142	142	142	142
Mean	4.345	4.542	4.465	4.444	3.479	3.768	3.655	3.754	3.824	2.282	2.303
Std.Deviation	0.546	0.591	0.591	0.590	0.731	0.822	0.715	0.852	0.819	0.886	0.989
Minimum	3.000	2.000	3.000	2.000	2.000	2.000	2.000	1.000	1.000	1.000	1.000
Maximum	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000

From the scores of the component strategy, the study calculated the average score of each strategy group (Determination, Social, Memory, Cognitive, Metacognitive) for further analysis. This is an important intermediate step before conducting a baseline distribution assumption test and comparison between strategic teams.

4.2. Verification of distribution assumptions and descriptive statistical analysis

To evaluate the differences in applicability and perceived effectiveness between the lexical strategist groups, the study first conducted a standard distribution hypothesis test by the Shapiro-Wilk test and described the basic statistical characteristics of the data.

Table 2. Descriptive statistics and Shapiro-wilk normality test results

Descriptive Statistics and P-value of Shapiro-Wilk					
	Mean D	**Mean S**	**Mean M**	**Mean C**	**Mean MC**
Valid	142	142	142	142	142
Mean	4.444	4.454	3.623	3.744	2.292
Std. Deviation	0.372	0.437	0.617	0.617	0.863
Shapiro-Wilk	0.818	0.843	0.925	0.962	0.897
P-value of Shapiro-Wilk	<.001	<.001	<.001	<.001	<.001

The results in Table 2 show that the p-value of the Shapiro-Wilk test for all five strategic groups is less than 0.001, lower than the meaningful level of 0.05. This indicates that the data does not follow the standard distribution in any of the strategy groups. Therefore, when comparing the level of applicability and perceived effectiveness between groups, it should be noted that the assumption of distribution preparation is violated, which can influence the choice of analysis method and interpretation of the results.

Table 3. Statistical results describe the general description by each strategy group

Descriptives					
Strategy	**N**	**Mean**	**SD**	**SE**	**Coefficient of variation**
Determination	142	4.444	0.372	0.031	0.084
Social	142	4.454	0.437	0.037	0.098
Memory	142	3.623	0.617	0.052	0.170
Cognitive	142	3.744	0.617	0.052	0.165
Metacognitive	142	2.292	0.863	0.072	0.377

Table 3 presents descriptive statistics, showing that the average score of the strategy groups ranges from 2,292 to 4,454. The two groups, Social (M = 4.454, SD = 0.437) and Determination (M = 4.444, SD = 0.372), achieved the highest average scores, reflecting that these are strategies that students apply regularly and are evaluated as effective. The Cognitive (M = 3.744, SD = 0.617) and Memory (M = 3.623, SD = 0.617) groups had a decent average score, showing an average application frequency and perceived effect. In contrast, the Metacognitive group (M = 2.292, SD = 0.863) had the lowest mean and the highest standard deviation, indicating that the level of application and evaluation of effectiveness was both low and lacking uniformity among students. The stark differences in mean values between these

strategy groups suggest the possibility of statistically significant differences. To test this claim and determine the extent of the differences between the groups, the study continued to conduct ANOVA testing.

4.3. *Comparative testing between strategic groups (ANOVA and Post Hoc)*

Although the results of the Shapiro-Wilk test in section 4.2 show that the data do not follow the standard distribution, the study still conducted Repeated Measures ANOVA to compare the mean values between the strategy groups. The implementation of ANOVA in this case is intended to provide a parallel parametric perspective to the Friedman non-parametric test in section 4.4, thereby ensuring comprehensive and comparable analysis results for consistency between the two methods.

Table 4. Repeated measures ANOVA inspection results

Within Subjects Effects					
Cases	**Sum of Squares**	**df**	**Mean Square**	**F**	**p**
Strategy	441.738[a]	4[a]	110.435[a]	361.793[a]	< .001[a]
Residuals	172.157	564	0.305		

Note. Type Ill Sum of Squares

[a] *Mauchly's test of sphericity indicates that the assumption of sphericity is violated (p<.05).*

Between Subjects Effects					
Cases	**Sum of Squares**	**Df**	**Mean Square**	**F**	**p**
Residuals	86.742	141	0.615	–	–

Note. Type III Sum of Squares

The results of table 4 showed that there was a statistically significant difference between the five vocabulary learning strategy groups F $(4,564) = 361,793$, p <.001. The Mauchly test of sphericity gives a hypothetical violation result (p < .05), so the result is interpreted with adjustment. The average values for each strategy group showed that the two groups of Determination (M = 4.444, SD = 0.372) and Social (M = 4.454, SD = 0.437) scored the highest, followed by Cognitive (M = 3.744, SD = 0.617) and Memory (M = 3.623, SD = 0.617). The Metacognitive group had the lowest average score (M = 2.292, SD = 0.863), indicating that the level of adoption and perceived effectiveness of this strategy group was significantly lower than that of the other groups. The ANOVA results will be compared with the Friedman non-parametric test in section 4.4 to reconfirm the divergent trend between the strategic groups.

Table 5. Post Hoc Accreditation Results

Post Hoc Comparisons - Strategy					
		Mean Difference	**SE**	**t**	**Pholm**
Determination	Social	-0.011	0.066	-0.161	0.872
	Memory	0.820	0.066	12.513	<.001
	Cognitive	0.699	0.066	10.665	<.001

Post Hoc Comparisons - Strategy					
		Mean Difference	**SE**	**t**	**Pholm**
	Metacognitive	2.151	0.066	32.812	<.001
Social	Memory	0.831	0.066	12.674	<.001
	Cognitive	0.710	0.066	10.826	<.001
	Metacognitive	2.162	0.066	32.973	<.001
Memory	Cognitive	-0.121	0.066	-1.847	0.130
	Metacognitive	1.331	0.066	20.299	<.001
Cognitive	Metacognitive	1.452	0.066	22.147	<.001

Note. P-value adjusted for comparing a family of 10

To specifically identify pairs of strategic groups with statistically significant differences, Post Hoc analysis with Holm adjustment was performed (table 5). The results showed that there was no significant difference between the Determination and Social groups (p = 0.872). However, both groups had markedly higher average scores than the Memory, Cognitive and especially Metacognitive groups (p <.001). The Memory and Cognitive groups did not differ significantly in mean scores (p = 0.130), but both were significantly higher than those of the Metacognitive group (p <.001). This result reinforces the assertion from the analysis that Determination and Social are the two groups of strategies most applied by students and feel the highest effectiveness, while Metacognitive is least applied and has the lowest perceived effect.

4.4. Friedman non-parametric testing and comparative analysis of conover pairs

In parallel with the results of the parametric analysis in section 4.3, the Friedman non-parametric test is performed to confirm the differences between strategic groups when the standard distribution assumption is not met. The results showed that the Chi-Squared value = 356.713 with p <.001, proving that there was a statistically significant difference between the groups. Kendall's coefficient W = 0.628 reflects the degree of strong influence, suggesting that the type of vocabulary learning strategy plays a significant role in this difference.

Table 6. Friedman's Test Results on Differences Between Lexical Strategists

Friedman Test				
Factor	**Chi-Squared**	**Df**	**p**	**Kendall's W**
Strategy	356.713	4	<.001	0.628

To determine which pairs are different, the study continues to perform comparative testing of Conover pairs. The results in table 6 show that most of the comparison pairs have a significant difference in p <.001 (after Bonferroni and Holm adjustments). The exceptions include the Determination-Social pair (p = 1,000) and the Memory-Cognitive pair (p > 0.05), indicating that the two pairs have similar levels of applicability and perceived efficacy. Overall, the Metacognitive group had a significantly lower mean than all other groups, while Determination and Social did not differ significantly in mean and were both higher than most of the other groups.

Table 7. Conover post-assessment results for comparison
of pairs between vocabulary learning strategy groups

Conover's Post Hoc Comparisons - Strategy								
		T-Stat	**Df**	**Wi**	**Wj**	**p**	**pbonf**	**Pholm**
Determination	Social	0.000	564	588.000	588.000	1.000	1.000	1.000
	Memory	8.399	564	588.000	372.500	<.001	<.001	<.001
	Cognitive	7.210	564	588.000	403.000	<.001	<.001	<.001
	Metacognitive	15.959	564	588.000	178.500	<.001	<.001	<.001
Social	Memory	8.399	564	588.000	372.500	<.001	<.001	<.001
	Cognitive	7.210	564	588.000	403.000	<.001	<.001	<.001
	Metacognitive	15.959	564	588.000	178.500	<.001	<.001	<.001
Memory	Cognitive	1.189	564	372.500	403.000	0.235	1.000	0.470
	Metacognitive	7.561	564	372.500	178.500	<.001	<.001	<.001
Cognitive	Metacognitive	8.749	564	403.000	178.500	<.001	<.001	<.001

Note. Grouped by subject.

5. Discussion

The results of the analysis showed a marked difference in the level of application and perceived effectiveness of the vocabulary learning strategy groups. While Determination and Social have the highest average scores, reflecting habits that rely on looking up dictionaries, guessing meanings through context or communicating with lecturers and classmates, Memory and Cognitive are average, while Metacognitive has the lowest average scores and the highest standard deviations. This suggests that not only is the use of metacognitive strategies limited but even the perception of their effectiveness lacks consistency among students.

When compared to previous studies, this result has many similarities. Gu and Johnson (1996) and Griffiths (2003) both show that language learners tend to favor direct, easy-to-observe strategies, rather than metacognitive strategies. However, the disparity in this study is deeper, showing that non-professional students in Vietnam are less likely to plan or self-monitor their learning process. In contrast, Mizumoto and Takeuchi's (2009) study of Japanese students demonstrates that when guided clearly, the effectiveness of metacognitive strategies increases significantly. This comparison shows that the problem does not lie in the nature of the strategy, but in the fact that Vietnamese students have not been systematically trained to apply them.

The reason may come from the characteristics of the current learning culture and education policies. Teaching and learning methods in Vietnam are still inclined to memorize and do homework according to the instructions of lecturers, while self-study and self-adjustment skills have not been focused (Oxford, 1990; Nation, 2001). For non-professional students, English is often considered only a compulsory subject, making learning motivation short-term and disconnected from long-term career goals (Gu & Johnson, 1996). In addition, universities do not have many independent learning skills training programs, leading to a lack of understanding and less practice of metacognitive strategies such as goal setting, self-monitoring of progress, or self-adjustment when encountered difficulties (Pintrich & Schunk, 1996; Tseng, Dörnyei & Schmitt, 2006; Wang et al., 2013).

From these analyses, important implications for lecturers and educational administrators can be drawn. Maintaining and promoting

Determination and Social strategies is necessary to ensure short-term learning outcomes, but more importantly, it is necessary to develop a systematic support program to enhance the ability to use metacognitive strategies. Measures may include goal-setting skills training, instructing students to use study diaries, applying checklists to self-monitor the process, and integrating peer feedback in the course. This is not only a solution at the classroom level, but also suggests the orientation of training program management to develop self-learning capacity for non-professional students in the context of international integration. At the same time, this finding opens the next direction of research, focusing on the effectiveness of metacognitive intervention programs for Vietnamese students, to strengthen the foundation for long-term and sustainable vocabulary learning.

6. Conclusion

The study analyzed five groups of vocabulary learning strategies of non-English students at UEH. The results show that Determination and Social are the most used and highly effective; Memory and Cognitive are average; while Metacognitive is the least applied and has the lowest effectiveness.

Based on these findings, the study suggests that faculty and administrators should develop support programs to improve students' metacognitive abilities, through goal-setting skills training, vocabulary diary instruction and the integration of peer feedback. Encouraging students to adopt metacognitive strategies will help improve self-regulation, improve long-term and sustainable learning performance.

Declaration: This article is an original work and has not been published elsewhere, nor is it under consideration in any other journals. The study was conducted by the author and no part of the data analysis or content was generated by AI tools. AI was only used in limited aspects of language editing and reference formatting, under the supervision of the author. The responsibility for the content and interpretations in this article rests entirely with the author.

REFERENCES

Bandura, A. (1997). *Self-efficacy: The exercise of control*. Princeton, N.J: Recording for the Blind & Dyslexic.

Cohen, A. D., & Macaro, E. (2007). *Language learner strategies: Thirty years of research and practice*. Oxford University Press.

Field, A. (2013). *Discovering statistics using IBM SPSS statistics* (4th ed.). Sage.

Griffiths, C. (2003). Patterns of language learning strategy use. *System, 31*(3), 367-383. https://doi.org/10.1016/S0346-251X(03)00048-4

Gu, Y., & Johnson, R. K. (1996). Vocabulary learning strategies and language learning outcomes. *Language Learning, 46*(4), 643-679. https://doi.org/10.1111/j.1467-1770.1996.tb01355.x

Kennedy, D. (2007). *Writing and using learning outcomes: A practical guide*. Ireland: University College Cork.

Mizumoto, A., & Takeuchi, O. (2009). Examining the effectiveness of explicit instruction of vocabulary learning strategies with Japanese EFL university students. *Language Teaching Research, 13*(4), 425-449. https://doi.org/10.1177/1362168809341511

Nation, I. S. P. (2001). *Learning vocabulary in another language*. Cambridge University Press. https://doi.org/10.1017/CBO9781139524759

Oxford, R. L. (1990). *Language learning strategies: What every teacher should know*. Heinle & Heinle.

Oxford, R. L., & Nyikos, M. (1989). Variables affecting choice of language learning strategies by university students. *The Modern Language Journal, 73*(3), 291-300. https://doi.org/10.2307/327003

Pintrich, P. R., & Schunk, D. H. (1996). *Motivation in education: Theory, research, and applications*. Englewood Cliffs, NJ: Prentice Hall.

Rowe, W. G., & Nevmerzhytskyi, S. (2025). Demonstrating the importance of the strategy implementation process to an entire organization. *Organizational Dynamics*, 101153. https://doi.org/10.1016/j.orgdyn.2025.101153

Schmitt, N. (1997). Vocabulary learning strategies. In N. Schmitt & M. McCarthy (Eds.), *Vocabulary: Description, acquisition, and pedagogy* (pp. 199-227). Cambridge University Press.

Shi, W. (2025). The application of systematic analytical thinking in teaching vocabulary for English majors. *Acta Psychologica, 257*, 105091. https://doi.org/10.1016/j.actpsy.2025.105091

Tseng, W. T., Dörnyei, Z., & Schmitt, N. (2006). A new approach to assessing strategic learning: The case of self-regulation in vocabulary acquisition. *Applied Linguistics, 27*(1), 78-102. https://doi.org/10.1093/applin/ami046

Wang, C., Kim, D. H., Bong, M., & Ahn, H. S. (2013). Examining measurement properties of an English self-efficacy scale for English language learners in Korea. *International Journal of Educational Research, 59*, 24-34. https://doi.org/10.1016/j.ijer.2013.02.004