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Research Article

AN INVESTIGATION INTO THE VOCABULARY LEARNING STRATEGIES OF UNIVERSITY STUDENTS: A CASE STUDY OF THE FACULTY OF CHINESE LINGUISTICS, UNIVERSITY OF LANGUAGE AND INTERNATIONAL STUDIES, VIETNAM HANOI NATIONAL UNIVERSITY

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ABSTRACT

Vocabulary learning strategies directly influence the effectiveness of second language vocabulary acquisition. This empirical study collected data from 132 Vietnamese university students using a Chinese vocabulary learning strategy questionnaire and vocabulary test. The finding reveals that: (1) Vietnamese learners demonstrated a descending order of strategy use as follows: cognitive strategies > memory strategies > socio-affective strategies > metacognitive strategies > resource management strategies; (2) noticeable differences existed across academic years, with second-year students showing a stronger preference for metacognitive and memory-based strategies; and (3) a significant positive correlation was found between strategy use and vocabulary test performance across academic years. Notably, cognitive, memory, and socio-affective strategies showed particularly beneficial effects on both vocabulary breadth and depth. Finally, the study offers targeted suggestions for learners and educators.

Keywords: correlation; questionnaire survey; Vietnamese university students; vocabulary learning strategies

1. Research Background

Vocabulary constitutes the core of foreign language learning. The adoption of scientific vocabulary learning strategies not only markedly improves learning efficiency, but also cultivate learners' capacity for autonomous study. Especially in a context where the target language is not spoken, it becomes essential for learners to rely on appropriate strategies to master and expand their Chinese vocabulary effectively. Compared to primary and secondary school students, university learners possess a broader scope for independent learning, yet they also face more complex academic challenges. Therefore, the landscape of

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Chinese vocabulary learning strategies employed by Vietnamese university students warrants attention.

Previous studies on Vietnamese learners of Chinese have touched upon areas such as speaking (Vu, 2023) and Chinese character acquisition (Luu, 2024). As for vocabulary learning strategies, relevant investigations include those of Dinh (2013), who examined the strategic behaviors of learners in target-language environments, and Shihaiyang (2017), who focused on the strategies of high school students. These works suggest that factors such as educational stage and learning context—both subjective and objective—bear significant influence on learners' preferences for and the effectiveness of different vocabulary strategies.

There is limited research on the Chinese vocabulary learning strategies of Vietnamese university students. Key areas such as the current state of strategy use, similarities and differences across academic years, and methods for improvement remain underexplored. In light of these considerations, this study endeavors to address the following questions through empirical investigation: (1) What is the overall pattern of vocabulary learning strategy used among undergraduate students majoring in Chinese in a university in Vietnam? How do learners in different academic years diverge in their strategy use? (2) What is the level of Chinese vocabulary proficiency among students at various stages, and how does this relate to their strategic behavior? (3) What specific adjustments might be recommended for Vietnamese students to improve their vocabulary-learning strategies?

2. Research Methodology and Data Collection

2.1. Study Participants

This study examined second-, third-, and fourth-year undergraduate students majoring in Chinese Language Studies at the University of Languages and International Studies (Vietnam National University, Hanoi). First-year students were excluded from the sample due to the research timeline (September 4-6, 2024), which coincided with only two days after the start of their academic years. This limited exposure period was deemed insufficient for observing effective vocabulary-learning strategies.

2.2. Survey Instrument Development

- *Design of the Vocabulary Learning Strategy Questionnaire*

The conceptualization of language learning strategies and vocabulary acquisition frameworks has been extensively examined in prior scholarship. This questionnaire was designed based on the strategic framework (O'Malley & Chamot, 1990), the lexical acquisition principles (Nation, 2001), and the strategy inventory for language learning (Oxford, 1990). Meanwhile, it incorporates insights from recent research (Alasmari, 2020; Mahardika, 2023) and has been adapted to align with the specific characteristics of Vietnamese students. Specifically, the questionnaire encompassed five categories of vocabulary learning strategies: metacognitive, cognitive, memory, resource management, and socio-affective strategies, comprising a total of 28 items.

To enhance contextual relevance, the questionnaire incorporated three targeted innovations: dedicated items addressing HSK examination preparation strategies, exploration of the role of Sino-Vietnamese lexemes in vocabulary acquisition, and investigation of cultural input mechanisms. Responses were collected using Oxford's validated five-point Likert scale, ranging from 1 ("completely untrue") to 5 ("completely true"). The structure and content of the vocabulary learning strategy questionnaire are summarized in the following table:

Table 1. *Vocabulary Learning Strategy Questionnaire Design*

Vocabulary learning strategy	Questionnaire Items	Strategy Content Description
Metacognitive strategies	Q1, Q2, Q3, Q4, Q5, Q6	Planning Strategies (e.g., setting goals, self-management and evaluation, pre-learning) Monitoring Strategies.
Cognitive strategies	Q7, Q8, Q9, Q10, Q11, Q12, Q13, Q14	Utilizing language resources, substitution, classification, restructuring, induction, guessing, imagery, transfer, note-taking, and translation.
Memory strategies	Q15, Q16, Q17, Q18, Q19, Q20, Q21	Repetition, context, and the expansion of association: The author places strategies related to Sino-Vietnamese cognates in this section.
Resource management strategies	Q22, Q23, Q24	Resource management, time management, and learning environment management.
Socio-affective strategies	Q25, Q26, Q27, Q28	Inquiry, consultation, cooperation, and emotion management. Based on the characteristics of Chinese classrooms, the design incorporates strategies such as consulting teachers or classmates and studying with peers.

- *Vocabulary Proficiency Test*

This study evaluated learners' lexical competence through two critical dimensions, vocabulary breadth and depth, aiming to investigate the correlation between vocabulary learning strategies and proficiency levels. The lexical assessment scope was systematically established through a comprehensive analysis of vocabulary items across three academic years' Chinese course textbooks, integrated with the lexical requirements outlined in the International Chinese Language Education Chinese Proficiency Standards (2021) and HSK's three-stage nine-level framework. Vocabulary was categorized by parts of speech and stratified according to proficiency tiers defined in the standards. The test items were sampled probabilistically from high-frequency lexical categories to ensure representativeness. The assessment instruments were designed as follows.

(1) The vocabulary breadth assessment, informed by Nation (2001) Vocabulary Levels

Test framework, was operationalized as a dual-component instrument: lexical definition matching, and Sino-Vietnamese translation. The matching task consisted of 18 target lexical items and 12 definitions, requiring participants to identify semantically congruent pairs. This deliberate mismatch between item quantity and definition count served as a methodological safeguard against random guessing. The Sino-Vietnamese word translation section consists of 8 items, requiring students to translate given Sino-Vietnamese words into their corresponding Chinese equivalents.

(2) The vocabulary depth assessment instrument comprised two task modalities: collocational competence evaluation and semantic comprehension analysis. The collocational component consisted of six discrete items, each presenting a target lexical item alongside six associated words (including three valid collocations), requiring participants to identify all legitimate collocational pairs. The word meaning comprehension section contains a total of six items. The target word is underlined, and several interpretation options are provided. Students are required to select an accurate meaning for the underlined word.

- *Data Collection and Statistical Tools*

With the assistance of instructors from various academic years in the Chinese Department at the University of Languages and International Studies, Vietnam National University, we distributed electronic questionnaires, including both the vocabulary learning strategy survey and vocabulary test, to 145 students via QR codes. A total of 140 responses were collected, 132 of which were deemed valid. Following data collection, statistical analyses were conducted using SPSS 27.0.

3. Results and Discussion

3.1. The use of vocabulary-learning strategies of Vietnamese university students

- *An overall view of the use of vocabulary-learning strategies*

Table 2. *The Overall View of the Use of Vocabulary Learning Strategies*

	No. of items	N	Mean	SD
Overall mean	28	132	3.81	.483
Metacognitive strategies	6	132	3.52	.566
Cognitive strategies	8	132	3.74	.592
Memory strategies	7	132	3.69	.673
Resource management strategies	3	132	3.43	.622
Socio-affective strategies	4	132	3.57	.647

The questionnaire's internal consistency was verified (Cronbach's alpha = 0.87). Among the 132 students surveyed, the overall score for vocabulary learning strategy use was 3.81, which suggests that Vietnamese students frequently employ vocabulary-learning strategies. The five categories of strategies were ranked in the following order of usage: cognitive strategies > memory strategies > socio-affective strategies > metacognitive strategies > resource management strategies. A noticeable variation was observed in the frequency of use across strategy types, with cognitive strategies being employed most

frequently, whereas resource management strategies were used least often. Meanwhile, there remains some room for improvement at the overall level.

- *Differences in the Use of Vocabulary Learning Strategies among Different Grades*

To further explore differences in the use of vocabulary learning strategies among Vietnamese students in different academic years, this study employed an analysis of variance.

Table 3. *One-Way Analysis of Variance on the Use of Vocabulary Learning Strategies*

		Sum of Square	Degree of Freedom	Mean Square	F	Significance*
Metacognitive strategies	Between group	90.624	2	45.312	4.116	.018
Cognitive strategies	Between group	270.527	2	135.263	6.533	.002
Memory strategies	Between group	274.832	2	137.416	6.734	.002
Socio-affective strategies	Between group	111.345	2	55.672	11.991	.000
Resource management strategies	Between group	11.565	2	5.783	1.603	.205

*Note. * The significance level is 0.05*

The above data indicate statistically significant differences among students at three different years of study in the use of four types of vocabulary learning strategies: metacognitive, cognitive, memory, and socio-affective strategies. Specifically, the significance levels (p-values) for these strategies were as follows: metacognitive, cognitive, memory, and socio-affective strategies, all of which were below the threshold of 0.05. Among these, the most pronounced difference is observed in socio-affective strategies, suggesting that students' needs and abilities in emotional regulation and social interaction change markedly as they progress through their academic years. Normality and homogeneity of variance were tested and met.

To further examine the nature of these differences, a post-hoc Tukey HSD (Honestly Significant Difference) test was conducted.

Table 4. *Multiple Comparison Analysis of Vocabulary Learning Strategy Use*

Dependents	(I) Year of study	(J) Year of study	Difference in mean values (I-J)	Significance
Metacognitive strategies	Second-year students	Third-year students	2.000*	.014
		Fourth-year students	.852	.457
Cognitive strategies	Second-year students	Third-year students	3.356*	.002
		Fourth-year students	.903	.625
	Third-year students	Second-year students	-3.356*	.002
		Fourth-year students	-2.452*	.035
	Fourth-year students	Second-year students	-.903	.625
		Third-year students	2.452*	.035
Memory strategies	Second-year students	Third-year students	3.489*	.001
		Fourth-year students	1.927	.119
	Third-year students	Second-year students	-3.489*	.001
		Fourth-year students	-1.561	.244
Socio-affective strategies	Second-year students	Third-year students	2.156*	.000
		Fourth-year students	1.565*	.003

Note.* *The significance level is 0.05*

Second-year students reported the highest frequency of using metacognitive and cognitive strategies, with a significant difference compared with third-year students. While fourth-year students slightly outperformed third-year students in cognitive strategy use, no significant differences in metacognitive strategies were observed across academic years. This pattern suggests that second-year learners, who are transitioning from basic vocabulary acquisition to more complex grammatical structures, tend to rely more on these strategies, whereas fourth-year students are likely to develop more stable metacognitive abilities.

In terms of memory strategies, second-year students demonstrated significantly higher usage than third-year students, whereas no notable differences emerged between the fourth-year group and the other two groups. This may reflect second-year students' greater reliance on memory-based techniques to consolidate their fundamental vocabulary and grammar. Regarding socio-affective strategies, second-year students used them significantly more than both third- and fourth-year students. Therefore, early-stage learners rely more on emotional regulation and interpersonal support to sustain motivation, while such needs may diminish as proficiency increases and learning becomes more internalized.

3.2. Vocabulary Test Scores of Vietnamese College Students in Different Academic Years

The vocabulary breadth test consisted of 20 questions, with a maximum score of 20. Second-year students demonstrated relatively concentrated performance, with both mean and median scores reaching 15. Third-year students achieved the highest overall results, with a mean score of 16.5 and a median of 18, suggesting that the majority performed in the higher score range. Fourth-year students obtained a mean score of 16 and a median of 17.5, reflecting a stable distribution within the mid-to-high score range.

The vocabulary depth test consisted of 12 questions with a total score of 24. Second-year students achieved a mean and median score of 18, indicating a relatively balanced performance. Third-year students showed slightly stronger performance, with both the mean

and median at 19, and a more concentrated score distribution. Fourth-year students had a mean score of 18 and a median score of 19, with a wider score range and some high achievers.

3.3. Correlation between Vocabulary Learning Strategies and Scores

- *Second-year Students*

Table 5. *Correlation between Strategy Use and Vocabulary Scores of Second-year Students*

	Vocabulary Learning Strategies and Breadth Test		**Vocabulary Learning Strategies and Depth Test**	
	Correlation Coefficient R Value	Significance Level P Value	Correlation Coefficient R Value	Significance Level P Value
Metacognitive strategies	.535	0.15	.359	0.015
Cognitive strategies	.769	0.02	.581	0.014
Memory strategies	.722	0.00	.560	0.00
Resource management strategies	.776	0.016	.595	0.00
Socio-affective strategies	.319**	0.037	.381**	0.01

Memory, cognitive, and socio-affective strategies showed significant and strong positive correlations with vocabulary breadth. These strategies play a key role in second-year students' vocabulary learning, suggesting that more frequent use is associated with better performance. In contrast, metacognitive and resource management strategies were positively but not significantly correlated with vocabulary breadth, implying a limited direct impact. Although metacognitive strategies are used more often, they may reflect attitudes rather than directly contribute to vocabulary growth.

All five strategies were significantly correlated with the vocabulary depth scores. In particular, cognitive and socio-affective strategies showed stronger correlations, highlighting their importance in enhancing students' memory, inference, and problem-solving skills, which are key components in deeper vocabulary learning.

- *Third-year Students*

Table 6. *Correlation between Strategy Use and Vocabulary Scores of Third-year Students*

	Vocabulary Learning Strategies and Breadth Test		**Vocabulary Learning Strategies and Depth Test**	
	Correlation Coefficient R Value	Significance Level P Value	Correlation Coefficient R Value	Significance Level P Value
Metacognitive strategies	.657	0.00	.617	0.00
Cognitive strategies	.459	0.02	.497	0.01
Memory strategies	.558	0.00	.353	0.017
Socio-affective strategies	.531	0.016	.502	0.000
Resource management strategies	.143	0.347	.133	0.383

Metacognitive strategies showed the strongest correlation with vocabulary breadth, indicating that better self-monitoring and planning are associated with higher vocabulary breadth. Memory strategies and socio-affective strategies also exhibited significant positive correlations, with socio-affective strategies showing a slightly stronger correlation than cognitive strategies. This suggests that for third-year students, factors such as emotional management and peer interaction play a crucial role in vocabulary learning.

Regarding vocabulary depth, metacognitive strategies showed the strongest correlation. As the curriculum became more specialized in the third year, self-planning, self-monitoring, and evaluation have become vital strategies to help students keep up with the pace of learning and to improve their effectiveness. Socioaffective strategies ranked second, underscoring their contribution to the deepening of vocabulary knowledge. The correlation between cognitive strategies and vocabulary depth was stronger than that with vocabulary breadth.

- *Fourth-year Students*

Table 7. *Correlation between Strategy Use and Vocabulary Scores of Fourth-year Students*

	Vocabulary Learning Strategies and Breadth Test		**Vocabulary Learning Strategies and Depth Test**	
	Correlation Coefficient R Value	Significance Level P Value	Correlation Coefficient R Value	Significance Level P Value
Metacognitive strategies	.513	0.01	.504	0.01
Cognitive strategies	.639	0.00	.515	0.00
Memory strategies	.530	0.00	.414	0.006
Socio-affective strategies	.385	0.012	.314	0.043
Resource management strategies	.267	0.088	.190	0.229

The strongest correlation with vocabulary breadth was found with cognitive strategies. Metacognitive strategies and memory strategies also showed moderate correlations, primarily influencing learning management and vocabulary storage, rather than directly expanding vocabulary. Socio-affective and resource management strategies had weaker correlations, serving more as supplementary tools.

Regarding vocabulary depth, the most significant correlations were observed with cognitive and metacognitive strategies. Memory strategies had less influence on vocabulary depth than cognitive and metacognitive strategies. While the correlation between socio-affective strategies and vocabulary depth was weak, it remained significant, suggesting that the use of these strategies still had an impact on students' performance in vocabulary depth.

4. Conclusion and recommendations

4.1. Conclusion

This study investigated the vocabulary learning strategies of 132 Vietnamese undergraduates. The findings reveal that cognitive strategies are the most frequently utilized

by these students, followed by memory, socio-affective, metacognitive, and resource management strategies, respectively. Significant differences in the use of vocabulary learning strategies were observed across different grade levels. For instance, second-year students demonstrate a greater tendency to utilize metacognitive, memory and socio-affective strategies. In contrast, third-year students exhibit a reduced reliance on socio-affective strategies, shifting instead toward more autonomous learning approaches. Furthermore, a significant positive correlation exists between students' strategy employment and their vocabulary test performance. Specifically, cognitive, memory and socio-affective strategies exert a positive influence on both vocabulary breadth and depth.

4.2. Recommendations

For second-year students, it is recommended to strengthen cognitive strategies and optimize memory strategies using techniques such as association and repeated practice to enhance vocabulary retention. Setting clear learning goals and utilizing high-quality resources will help improve vocabulary breadth and depth. Teachers can encourage the use of cognitive strategies, by utilizing resources and guessing word meaning. For third-year students, in addition to reinforcing metacognitive strategies, it is important to increase the use of socio-affective strategies for peer collaboration combined with memory strategies. Cognitive strategies should be used to deepen vocabulary comprehension, whereas cooperative learning will further expand vocabulary acquisition pathways. Teachers should guide them to set learning goals and engage in reflection, strengthening memory strategies. For fourth-year students, it is crucial to maintain the frequency of cognitive strategy use while continuing to strengthen metacognitive strategies. It is suggested to incorporate vocabulary structure analysis strategies using methods such as "semantic networks" to enhance memory. Teachers could design more task-based activities, cultivate students' dictionary skills and foster their positive learning motivation.

❖ ***Conflict of Interest:*** *Authors have no conflict of interest to declare.*

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NGHIÊN CỨU CHIẾN LƯỢC HỌC TỪ VỰNG CỦA SINH VIÊN VIỆT NAM: TRƯỜNG HỢP KHOA NGÔN NGỮ TRUNG QUỐC TẠI TRƯỜNG ĐẠI HỌC NGOẠI NGỮ, ĐẠI HỌC QUỐC GIA HÀ NỘI

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TÓM TẮT

Chiến lược học từ vựng ảnh hưởng trực tiếp đến hiệu quả tiếp thu từ vựng của ngôn ngữ thứ hai. Nghiên cứu này thu thập dữ liệu từ 132 sinh viên đại học Việt Nam thông qua bảng hỏi về chiến lược học từ vựng tiếng Trung và bài kiểm tra từ vựng. Nghiên cứu nhằm khảo sát các chiến lược học từ vựng mà sinh viên ở các năm học khác nhau sử dụng, đồng thời tìm hiểu mối tương quan giữa việc sử dụng chiến lược và trình độ từ vựng. Kết quả nghiên cứu chỉ ra rằng: (1) Người học tiếng Trung tại Việt Nam có xu hướng sử dụng chiến lược theo thứ tự giảm dần: chiến lược nhận thức > chiến lược ghi nhớ > chiến lược xã hội - cảm xúc > chiến lược siêu nhận thức > chiến lược quản lí tài nguyên; (2) Có sự khác biệt rõ rệt giữa các năm học, trong đó sinh viên năm hai có xu hướng ưu tiên sử dụng các chiến lược siêu nhận thức và ghi nhớ nhiều hơn; (3) Có mối tương quan dương đáng kể giữa việc sử dụng chiến lược và kết quả kiểm tra từ vựng ở tất cả các khối lớp. Đáng chú ý, các chiến lược nhận thức, ghi nhớ và xã hội - cảm xúc có ảnh hưởng tích cực rõ rệt đến cả phạm vị rộng và sâu của từ vựng. Dựa trên những phát hiện này, nghiên cứu đưa ra các đề xuất cụ thể dành cho người học và giáo viên.

Từ khóa: mối tương quan; khảo sát bảng hỏi; sinh viên đại học Việt Nam; chiến lược học từ vựng