

**VOCABULARY LEARNING STRATEGIES IN EARLY-STAGE FOREIGN  
LANGUAGE LEARNERS AT UNIVERSITY LEVEL: INSIGHTS FROM  
VIETNAMESE LEARNERS IN BRUNEI**

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**ABSTRACT**

**Background and Purpose:** Vocabulary knowledge is foundational to foreign language learning, yet most research on vocabulary learning strategies (VLS) has focused on widely taught languages such as English. Less commonly taught languages (LCTLs), like Vietnamese, present additional linguistic challenges—such as tone systems and unfamiliar morphology—that complicate vocabulary acquisition and require more context-sensitive learning strategies. This study addresses this gap by investigating the VLS employed by early-stage university learners of Vietnamese in Brunei’s multilingual environment.

**Methodology:** This quantitative study surveyed 120 Bruneian undergraduates learning Vietnamese, selected for their beginner status. Data were collected via an adapted VLS Questionnaire and analysed using SPSS for descriptive and inferential patterns across Schmitt’s (1997) six VLS categories.

**Findings:** Results indicate a strong reliance on cognitive and social strategies, while memory and metacognitive strategies were underused despite their potential benefits. Notable mismatches between usage and perceived effectiveness suggest the need for pedagogical realignment. Importantly, the findings support the broader applicability of Schmitt’s taxonomy beyond English learning contexts, demonstrating its relevance for LCTL instruction when appropriately adapted.

**Contributions:** By contextualising VLS use in a Southeast Asian setting and focusing on an underrepresented language, this study offers practical implications for LCTL instruction and contributes to a more inclusive understanding of vocabulary strategy research.

**Keywords:** Vocabulary learning strategies, less commonly taught languages, Vietnamese learner, Schmitt's taxonomy, multilingual learners.

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## 1.0 INTRODUCTION

Vocabulary acquisition plays a foundational role in foreign language education, underpinning learners' ability to achieve communicative competence. Developing vocabulary knowledge is a complex, long-term process that involves not only expanding one's lexical range but also mastering correct usage and morphological form (Schmitt, 1997).

To explore how students acquire vocabulary, researchers have proposed various taxonomies of vocabulary learning strategies (VLSs), which classify the methods learners use to plan, acquire, and consolidate lexical knowledge (e.g., Cohen et al., 2002; Gu & Johnson, 1996; Nation, 2013; Schmitt, 1997; Zhang & Li, 2011). These models have influenced pedagogical approaches and contributed to promoting learner autonomy.

However, most of these taxonomies have been applied in the context of widely taught languages, particularly English. There remains a dearth of empirical studies focusing on less commonly taught languages (LCTLs), especially those with significant linguistic differences from learners' first languages, such as tone systems, unique morphological structures, or unfamiliar scripts. Such discrepancies can hinder the direct application of familiar strategies and necessitate more targeted instructional support.

Furthermore, the lack of comprehensive teaching resources for LCTLs shifts the burden of learning onto the students, making effective strategy use even more crucial. Studying how learners adapt VLSs in these challenging contexts is essential for validating existing models or tailoring them to better suit diverse language environments.

In light of this gap, the current study investigates the relevance of Schmitt's (1997) VLS taxonomy in the context of Vietnamese—a tonal LCTL—among university students in Brunei.

The aim is to assess the taxonomy's practical value and to generate insights that support the development of effective, context-specific vocabulary instruction strategies.

## **2.0 THEORETICAL BASIS**

### **2.1 Taxonomies of Vocabulary Learning Strategies**

Vocabulary learning strategies (VLSs) play a crucial role in supporting the development of lexical competence, a foundational component of communicative proficiency in foreign language learning.

A range of taxonomies has been developed to classify VLSs, reflecting different theoretical orientations and methodological frameworks (e.g., Cohen et al., 2002; Gu, 2018; Gu & Johnson, 1996; Nation, 2013; Schmitt, 1997; Zhang & Li, 2011). Among these, Schmitt's (1997) taxonomy is one of the most widely implemented, comprising 58 strategies divided into two broad categories: discovery and consolidation. Discovery strategies include determination (e.g., using dictionaries or guessing from context) and social strategies (e.g., asking peers or teachers). Consolidation strategies encompass memory (e.g., mnemonic devices), cognitive (e.g., repetition and summarisation), metacognitive (e.g., planning and self-monitoring), and additional social strategies (e.g., collaborative learning).

Cohen et al.'s (2002) four-stage strategy model includes acquisition (e.g., identifying and recording new words), review (e.g., regularly revisiting learned vocabulary), recall (e.g., using retrieval cues or testing oneself), and application (e.g., integrating new words into writing or conversation), operationalised through a concise 17-item survey. Gu and Johnson's (1996) taxonomy, later revised by Gu (2018), integrates beliefs and strategies across 108 items, covering inferencing (e.g., deducing meaning from context), rehearsal (e.g., repeating words aloud or writing them down), encoding (e.g., using imagery, sound associations, or analysing word structure), and activation (e.g., using new words in speaking or writing). Zhang and Li (2011) emphasised cognitive (e.g., mental processes such as repetition, association, and imagery), metacognitive (e.g., planning, monitoring, and evaluating vocabulary learning progress), and affective domains (e.g., managing motivation, anxiety, or attitudes toward language learning), while Nation (2013) proposed a structured matrix distinguishing strategy types across four categories: planning (e.g., selecting target vocabulary and setting learning goals), sources (e.g., accessing vocabulary from reading texts, teacher explanations, or dictionaries), processes (e.g., retrieving, repeating, or analysing new words), and skill in use (e.g., applying vocabulary in speaking, listening, reading, and writing).

While each taxonomy offers valuable insights, they differ in complexity and practical applicability. Nation's (2013) framework, though conceptually robust, is not structured for direct implementation in survey-based studies due to its abstract categorisation. Similarly, Gu and Johnson's (1996) instrument, with its original 108 items, is comprehensive but may lead to participant fatigue and response inconsistency. Despite terminological differences—such as how 'rehearsal' may appear as a cognitive strategy in one framework and as a memory strategy in another—and variations in structural categorisation, all frameworks converge on recognising the cognitive, metacognitive, and social dimensions of vocabulary learning.

Considering both conceptual alignment and empirical feasibility, Schmitt's taxonomy provides a balanced approach. Its systematic structure, proven reliability (Cronbach's  $\alpha = 0.91$ ; Zhang & Lu, 2015), and alignment with survey methodology make it especially suited to the goals of the present study, which examines strategy use among university learners of Vietnamese in a multilingual context.

Table 1 summarises and compares the major taxonomies discussed in this study, highlighting their key dimensions, structure, strengths, and limitations.

Table 1: Comparison of major vocabulary learning strategy taxonomies: Key dimensions, instrument structures, strengths and limitations

Taxonomy	Key Dimensions / Categories	No. of Items	Strengths	Limitations
<b>Schmitt (1997)</b>	Discovery (determination, social), Consolidation (memory, cognitive, metacognitive, social)	58	Widely used, structured for survey research, reliable ( $\hat{\alpha} = 0.91$ )	May not capture affective factors explicitly
<b>Cohen et al. (2002)</b>	Acquisition, Review, Recall, Application	17	Compact and targeted, reliable ( $\hat{\alpha} = 0.85$ )	Limited scope; lacks depth in strategy subtypes
<b>Gu &amp; Johnson (1996); Gu (2018)</b>	Beliefs + VLS: metacognitive, inferencing, dictionary use, note-taking, rehearsal, encoding, activation	108 (revised to 62)	Comprehensive, includes beliefs and strategies	Lengthy; risk of participant fatigue
<b>Zhang &amp; Li (2011)</b>	Cognitive, Metacognitive, Affective	6-factor structure (based on EFA)	Incorporates affective strategies; based on factor analysis	Less commonly used; fewer validations
<b>Nation (2013)</b>	Planning, Sources, Processes, Skill in use	Conceptual matrix (not itemised)	Theoretically robust; addresses different acquisition stages	Abstract; not well suited for direct survey use

## 2.2 Contextualising VLS in Less Commonly Taught Languages

Vocabulary learning strategies (VLSs) have predominantly been studied in the context of widely taught languages, particularly English. However, less commonly taught languages (LCTLs) often present unique linguistic challenges—such as tonal variation, complex morphology, non-Latin scripts, and non-alphabetic orthographies—that significantly increase the cognitive demands on learners. These linguistic features warrant targeted research to explore how VLSs operate in such contexts.

Studies involving tonal languages like Mandarin and Vietnamese suggest that learners often rely heavily on memory- and repetition-based strategies. Zhang and Lu (2015), Liu and Rao (2023) and Li, Chin, Mahama, Chua and Hasan (2019) highlight that tonal features strongly influence how learners encode and recall vocabulary, with auditory encoding and rehearsal techniques playing a central role. In these contexts, effective vocabulary acquisition requires both semantic understanding and precise phonological recall.

In addition, learners' linguistic backgrounds shape their strategic choices. Research by Gu and Johnson (1996), Nguyen and Nation (2011), and Schmitt and Schmitt (2020) shows that students from non-tonal, alphabetic language backgrounds tend to prefer visual and orthographic cues. However, such strategies may not translate well to tone-based languages, requiring learners to modify their approach. This highlights the importance of adaptive strategy use and the necessity of contextualising VLSs according to linguistic distance and learner profile.

This theoretical framing supports the investigation of not only which strategies learners employ when studying tonal LCTLs, but also how learners perceive the effectiveness of those strategies in managing tonal and phonological complexities. Understanding these dynamics is essential for developing pedagogical approaches that are both context-sensitive and learner-responsive.

There is limited empirical research on vocabulary learning strategies (VLSs) in the context of less commonly taught languages, particularly those characterised by distinctive linguistic features—such as tonal variation, complex morphology, unfamiliar scripts, or non-alphabetic orthography—that increase the cognitive demands of vocabulary learning. These structural challenges highlight the need to contextualise VLS research in languages other than English.

### **3.0 METHODOLOGY**

#### **3.1 Participants**

The study involved 120 undergraduates enrolled in Vietnamese language courses at a Bruneian university. Vietnamese was selected due to its tonal nature and significant linguistic differences from the languages most commonly used by Bruneian students—namely English and Malay. Although Mandarin is also a tonal language, it was not selected because it functions as a widely used social language in Brunei, particularly among the ethnic Chinese community. Many students have prior exposure to Mandarin through family, school, or community interactions, which makes it difficult to ensure a beginner-level baseline. Given the limited exposure Bruneian students have to Vietnamese, participants were assumed to be complete beginners, thereby allowing for controlled observation of vocabulary learning strategies (VLS) without prior interference.

The participants represented a diverse array of academic disciplines: arts (32.8%), sciences (35.2%), business (13.4%), medical studies (14.4%), and digital sciences (4.3%). This interdisciplinary spread enhances the generalisability of the findings and allows for exploration

of potential disciplinary influences on VLS preferences. Participants' ages ranged from 17 to 27 years, with the majority (83%) aged between 17 and 22. Most students were in their first (34.2%) or second (47.1%) year of university study. The gender distribution showed a higher proportion of female participants (68.4%) compared to males (31.6%). Nearly all participants (99.8%) were pursuing undergraduate degree programmes, providing a snapshot of learners at an early stage of academic and linguistic development.

Their diverse academic backgrounds and multilingual repertoires add depth to the analysis of vocabulary learning strategies by offering insight into how different learner profiles interact with and adapt to the demands of acquiring a new and unfamiliar language such as Vietnamese.

### **3.2 Instrument**

The study employed Schmitt's (1997) Vocabulary Learning Strategies Questionnaire (VLSQ) as the primary research instrument. Given the unique sociolinguistic environment of Brunei—characterised by a high degree of multilingualism and limited exposure to Vietnamese—the questionnaire was adapted to better reflect the local context. Some redundant items were removed, such as strategies that assumed familiarity with English-only dictionary use or strategies relying on cognate recognition, which were less applicable in the context of learning Vietnamese—a tonal but alphabetic language that shares little lexical similarity with English or Malay. Importantly, these adaptations ensured that the instrument remained valid and reliable for participants encountering a linguistically unfamiliar language. Participants were asked to evaluate both the frequency and perceived effectiveness of various VLS using 5-point Likert scales. The final version comprised 65 items, in alignment with recommendations by Nation (2013), who advocates for contextualising strategy instruction based on learners' linguistic and cultural backgrounds.

### **3.3 Data Collection and Analysis**

The finalised survey was administered online via Qualtrics in January 2024. Qualtrics was chosen for its user-friendly design and robust functionality, which facilitated efficient survey distribution and secure data handling. Respondents evaluated the frequency and perceived effectiveness of each strategy using Likert scales.

Data analysis was conducted using SPSS Version 20, incorporating both descriptive and inferential statistical methods to examine patterns in vocabulary learning strategy (VLS) usage. Descriptive statistics summarised the frequency, mean, and standard deviation for each

strategy, while non-parametric inferential tests were applied to accommodate the ordinal nature of Likert-scale data.

To explore broader trends, aggregated analyses were conducted by grouping individual VLS items into six categories following Schmitt's (1997) taxonomy: discovery-social, discovery-determination, consolidation-social, consolidation-cognitive, consolidation-memory, and consolidation-metacognitive. Mean scores and standard deviations were calculated for each category to assess overall usage and perceived effectiveness, offering a clearer picture of learners' strategic preferences.

Cross-tabulations were also performed to examine strategy usage across demographic variables such as gender, age, academic discipline, and year of study, as well as to compare patterns between the frequency of use and perceived effectiveness across VLS categories.

## **4.0 RESULTS AND DISCUSSION**

### **4.1 Prevalent Patterns in the Application and Perceived Effectiveness of VLS**

#### ***4.1.1 Patterns in the Application of VLS***

Descriptive statistics highlight significant variability in the usage frequencies of VLS among the respondents, with mean scores ranging from 1.37 to 4.85 and standard deviations between 0.42 and 1.57. This variation underscores a diverse adoption of strategies and differing perceptions of their effectiveness.

Cognitive strategies, such as note-taking and verbal repetition, were perceived as highly effective, with mean scores exceeding those of other strategy categories. These approaches are well-established in the literature on foreign language learning (Lam & Kuan, 2019; Schmitt, 1997). Similar trends were observed by Vo and Jaturapitakkul (2016), who found that Thai learners of Vietnamese frequently employed repetition to manage the challenges posed by tonal variation.

However, this pattern contrasts with findings from Besthia (2018), who reported that determination strategies—such as guessing from context and consulting dictionaries—were the most popular among Indonesian EFL university students. Given that Indonesia shares some linguistic and cultural similarities with Brunei, the divergence in preferred strategies may reflect the influence of the target language itself. In this case, the tonal and phonological characteristics of Vietnamese may lead Bruneian learners to favour cognitively repetitive strategies over contextual guessing or dictionary use.

Discovery-determination strategies, including the use of online translators and dictionaries, were also rated highly, underscoring a preference for digital tools in vocabulary

acquisition. These findings align with Laffey’s (2020) research on VLS efficacy and mirror the widespread use of dictionary strategies among Southeast Asian learners and are consistent with Colombo et al. (2025) findings on Italian learners in Malaysia, who also favoured discovery strategies and digital tools in multilingual settings. These strategies enhance lexical knowledge and foster independent learning (Hayati & Fattahzadeh, 2006; Zhang et al., 2021; Aboghunaim, 2019).

In contrast, technologically integrated strategies, including composing online messages and engaging with vocabulary games, were moderately employed. This reflects a growing acceptance of digital resources, though they remain supplementary rather than primary methods, consistent with findings from other Asian tertiary contexts (e.g., Vo & Jaturapitakkul, 2016).

Conversely, memory strategies demanding deeper cognitive engagement, such as gradable adjective scales and semantic maps, were less frequently adopted. This may reflect the linguistic complexity of Vietnamese or a broader preference for syntax-oriented approaches over morphological analysis in language instruction.

This moderate uptake of digital strategies reflects the broader trend in language education where differentiated instruction—especially in virtual environments—is gaining traction but still requires clearer pedagogical integration. Recent reviews in Mandarin instruction have highlighted that while teachers acknowledge the value of virtual differentiated approaches, effective implementation remains inconsistent without targeted training and strategic alignment (Chua et al., 2021).

Aggregated analyses provided an overview of VLS application trends among participants, summarising the frequency and variability of strategy usage across different categories. These results are detailed in Table 2, which presents the mean scores and standard deviations for each strategy.

Table 2: Descriptive statistics for VLS usage frequency across categories (N=120)

VLS Category	Mean	Std. Deviation
Discovery-Social	3.44	.86
Consolidation-Cognitive	3.40	.54
Discovery-Determination	3.34	.47
Consolidation-Social	3.26	.84
Consolidation-Memory	3.09	.55
Consolidation-Metacognitive	2.83	.65

Discovery-social strategies exhibited the highest mean usage ( $M = 3.44$ ,  $SD = 0.86$ ), highlighting students' preference for interactive learning approaches during the initial phase of vocabulary acquisition. Similarly, cognitive strategies during the consolidation phase ( $M = 3.40$ ,  $SD = 0.54$ ) were commonly used, particularly those involving mechanical repetition and structured practice.

The frequent use of these two strategy categories—discovery-social and consolidation-cognitive—suggests a learning environment in which peer collaboration and active reinforcement are emphasised. This pattern reflects theoretical perspectives that highlight the interdependence of cognitive and social elements in effective language learning (Vygotsky, 1978).

Social strategies have been shown to be particularly relevant for Asian learners. For example, Gökhan and Dikilitaş (2020) observed a strong reliance on collaborative learning strategies among bilingual students. The current findings on Bruneian learners align with those of Lam and Kuan (2019), Vo and Jaturapitakkul (2016), and Yee et al. (2021), all of whom reported the widespread use of cognitive strategies—particularly repetition and note-taking—among learners of unfamiliar languages. These strategies are also in line with CEFR A1-level learning profiles, which prioritise the development of foundational vocabulary through simple, structured techniques.

However, in Besthia's (2018) study, Indonesian students were reported to least favour social strategies. This contrast once again suggests that it may be the characteristics of the target language—in this case, Vietnamese—that influence learners' preferred vocabulary learning strategies, rather than cultural or regional background alone.

In this study, memory strategies ( $M = 3.09$ ,  $SD = 0.55$ ) and metacognitive strategies ( $M = 2.83$ ,  $SD = 0.65$ ) were less frequently reported. This underuse suggests a gap in strategic instruction, which could be addressed by training students in self-regulatory techniques such as structured recall and reflective practices. The integration of these strategies into digital platforms may further enhance their accessibility and appeal. These findings echo broader trends in Asian education systems, where rote learning persists and reflective learning strategies are less commonly practiced (Chew et al., 2023). As noted by Harris (2003) and Anderson (2002), memory and metacognitive strategies require greater cognitive investment, which may account for their moderate adoption. This is further supported by findings from recent studies (e.g., Lam & Kuan, 2019; Gökhan & Dikilitaş, 2020; Yee et al., 2021; Ta'amneh, 2021; Al-Omairi, 2020), which indicate that while these strategies are recognised, they are not consistently applied by learners in similar contexts.

#### ***4.1.2 Perceived Effectiveness of VLS Across Strategy Categories***

Cognitive strategies within the consolidation phase were perceived as highly effective, consistently achieving the highest ratings among all strategy types. Strategies such as note-taking ( $M = 2.95$ ,  $SD = 0.21$ ) and verbal repetition ( $M = 2.88$ ,  $SD = 0.36$ ), which promote direct engagement and structured reinforcement, were particularly favoured. These findings are consistent with Oxford's (1990) work on retention and Mayer's (2001) theory of meaningful learning, both of which highlight the importance of active participation in cognitive processing.

Interactive strategies were also rated positively. The use of online translators ( $M = 2.81$ ,  $SD = 0.47$ ) and peer discussions ( $M = 2.81$ ,  $SD = 0.42$ ) demonstrated that learners valued both autonomy and collaboration in early-stage vocabulary learning. However, digital tools such as vocabulary games ( $M = 2.17$ ,  $SD = 0.74$ ) received lower effectiveness ratings, indicating partial integration into formal learning environments. This reflects broader challenges noted by Godwin-Jones (2011) and Kukulska-Hulme (2012) regarding the pedagogical use of emerging technologies in language education. Similar tensions have been observed in other contexts, where instructors acknowledge the importance of intercultural or strategic instruction but face challenges in aligning these goals with their existing teaching beliefs and digital teaching environments (Shen et al., 2022).

Strategies such as flashcards ( $M = 1.85$ ,  $SD = 0.75$ ) were rated least effective. This supports Gass's (2003) view that interaction and output are more conducive to language development than passive input. Nakata's (2011) critique of rote tools adds further insight, suggesting that the repetitive nature of flashcards may limit learner engagement. These patterns are consistent with Vygotsky's (1978) socio-cultural theory and findings from studies on Asian learners, who often regard manual strategies like word cards as outdated or inefficient (e.g., Zhang & Li, 2011).

Memory strategies, such as recalling phrases ( $M = 2.03$ ,  $SD = 0.72$ ), and metacognitive strategies, such as skipping unfamiliar words ( $M = 1.43$ ,  $SD = 0.65$ ), were among the least favourably rated. These outcomes may point to a disconnect between these strategies and learners' classroom experiences or to difficulties in their effective application without targeted instructional support.

To provide a holistic understanding, an aggregated category-based analysis was conducted. Individual strategy items were grouped according to Schmitt's (1997) taxonomy and analysed for overall perceived effectiveness. Table 3 presents the mean scores and standard

deviations for each vocabulary learning strategy category, offering a broader view of learners' strategic preferences.

Table 3: Descriptive statistics for VLS effectiveness across categories (N=120)

VLS Category	Mean	Std. Deviation
Discovery-Social	2.51	.42
Consolidation-Cognitive	2.49	.32
Consolidation-Social	2.48	.40
Discovery-Determination	2.34	.25
Consolidation-Memory	2.25	.32
Consolidation-Metacognitive	2.25	.39

The findings reveal that social strategies during the discovery phase ( $M = 2.51$ ,  $SD = 0.42$ ) were perceived as most effective, highlighting the importance of collaborative and interactive learning environments. Cognitive strategies ( $M = 2.49$ ,  $SD = 0.32$ ) followed closely, although their repetitive nature may limit broader engagement. Social strategies in the consolidation phase ( $M = 2.48$ ,  $SD = 0.40$ ) were moderately effective, whereas determination strategies ( $M = 2.34$ ,  $SD = 0.25$ ), focusing on independent exploration, were less effective.

Memory strategies ( $M = 2.25$ ,  $SD = 0.32$ ) and metacognitive strategies ( $M = 2.25$ ,  $SD = 0.39$ ) received the lowest ratings. Although essential for long-term retention and self-regulation, these strategies may lack alignment with learners' preferences or sufficient integration into the curriculum. The high perceived effectiveness of social strategies across both phases reflects their collaborative nature, consistent with socio-constructivist theories that underscore the critical role of interaction in learning. Cognitive strategies during consolidation also underscore the importance of deep processing to reinforce newly acquired material.

By contrast, the relatively low ratings for determination strategies suggest that while independent exploration is valued, it often lacks impact without structured or interactive methods to complement it. This underscores the need for more integrative approaches within educational frameworks to enhance these strategies' utility and perceived value. Finally, the lower ratings for memory and metacognitive strategies may reflect instructional gaps or misalignments with students' learning preferences. While these strategies have potential for fostering retention and autonomy, clearer articulation and better contextualisation within pedagogical practices are needed to optimise their effectiveness.

## **4.2 Relationship between VLS Usage Frequency and Perceived Effectiveness**

To fully comprehend the interplay between increased usage frequency and perceived effectiveness, it is essential to examine the nuanced dynamics between student engagement and the efficacy of various VLS. This section presents the results of inferential statistical analyses, revealing the intricate relationships and impacts between the usage frequency and perceived effectiveness of VLS. The analyses are divided into two parts, each aimed at uncovering different aspects of these relationships.

### ***4.2.1 Differences Between Usage Frequency and Perceived Effectiveness of Individual VLS***

To investigate whether learners' usage of vocabulary learning strategies (VLS) aligned with their perceptions of effectiveness, a Wilcoxon Signed Rank Test was conducted on each individual strategy. This non-parametric test assessed the significance of differences between reported frequency of use and perceived effectiveness ratings.

The results revealed significant differences for most VLS items, with predominantly negative Z values ( $p < .05$ ). This indicates that many strategies were used frequently despite being perceived as only moderately or minimally effective. Such discrepancies suggest a potential misalignment between strategy usage and learners' understanding of their pedagogical value. This highlights the need for clearer instructional guidance and more effective integration of these strategies into classroom practice.

However, some strategies showed no statistically significant difference between frequency and effectiveness. These included using paper-based dictionaries ( $p = .333$ ), employing flashcards ( $p = .072$ ), engaging in conversations with native speakers ( $p = .257$ ), and playing vocabulary games on digital devices ( $p = .704$ ). Their consistent ratings suggest a closer alignment between perceived usefulness and actual usage.

Notably, the strategy of interacting with native speakers, despite limited access to the Vietnamese-speaking community in Brunei (estimated at around 300 individuals), was both moderately used and valued. The importance of native speaker interaction for mastering tonal languages has similarly been demonstrated in Mandarin education, where peer mentoring programmes like the Campus Buddies initiative have been found effective in promoting oral fluency and tonal awareness among non-native learners (Chua et al., 2022). This highlights the importance of authentic communicative experiences in language learning and supports the principles of communicative language teaching. It also reinforces the value of creating more structured opportunities for real-world interaction in language education programs.

#### ***4.2.2 Correlation Between VLS Usage Frequency and Perceived Effectiveness Across Categories***

To explore broader patterns in strategy use, individual items were grouped into six categories based on Schmitt's (1997) taxonomy. Aggregate scores for usage frequency and perceived effectiveness were calculated for each category, and Spearman correlation analysis was conducted to examine the relationship between these two dimensions.

The results, presented in Table 4, reveal significant positive correlations across most categories ( $p < .05$ ), indicating that strategies perceived as more effective also tended to be used more frequently. This trend suggests that learners are generally more inclined to engage with strategies they find useful, and that positive experiences with a given strategy may reinforce its continued use. Conversely, strategies perceived as less effective may be avoided or underutilised.

These findings highlight the importance of aligning instructional practices with learners' preferences and perceptions, as well as ensuring that underused strategies with proven pedagogical value are more clearly explained and integrated into teaching.

Table 4: Spearman correlation coefficients between use frequency and perceived effectiveness of VLS (N=120)

		<b>Effect.</b> <b>discovery-</b> <b>determination</b>	<b>Effect.</b> <b>discovery-</b> <b>social</b>	<b>Effect.</b> <b>consolidation</b> <b>-social</b>	<b>Effect.</b> <b>consolidation-</b> <b>memory</b>	<b>Effect.</b> <b>consolidation</b> <b>-cognitive</b>	<b>Effect.</b> <b>consolidation-</b> <b>metacognitive</b>
<b>Freq.</b>	$\rho$	.574**	.273**	.129	.354**	.332**	.185*
<b>discovery-</b> <b>determination</b>	Sig.	.000	.003	.160	.000	.000	.043
<b>Freq.</b>	$\rho$	.340**	.426**	.313**	.228*	.267**	.241**
<b>discovery-</b> <b>social</b>	Sig.	.000	.000	.001	.012	.003	.008
<b>Freq.</b>	$\rho$	.241**	.272**	.499**	.162	.156	.039
<b>consolidation-</b> <b>social</b>	Sig.	.008	.003	.000	.078	.089	.675
<b>Freq.</b>	$\rho$	.372**	.201*	.210*	.530**	.209*	.211*
<b>consolidation-</b> <b>memory</b>	Sig.	.000	.028	.021	.000	.022	.021
<b>Freq.</b>	$\rho$	.387**	.159	.088	.331**	.481**	.264**
<b>consolidation-</b> <b>cognitive</b>	Sig.	.000	.083	.338	.000	.000	.004
<b>Freq.</b>	$\rho$	.288**	.174	.142	.292**	.218*	.478**
<b>consolidation-</b> <b>metacognitive</b>	Sig.	.001	.057	.122	.001	.017	.000

\*\**. Correlation is significant at the 0.01 level (2-tailed).*

\**. Correlation is significant at the 0.05 level (2-tailed).*

The categories of vocabulary learning strategies (VLS) that demonstrated strong positive correlations between usage frequency and perceived effectiveness included social strategies during the discovery phase and memory strategies during the consolidation phase. These findings suggest that frequent engagement with these strategies enhances learners' perceptions of their value, highlighting their central role in promoting interactive learning and effective vocabulary retention. This underscores the importance of embedding structured peer collaboration and memory-based activities—such as semantic mapping or guided recall—into pedagogical frameworks to optimise learning outcomes. The consistent association across different learning stages implies that both peer interaction and memory reinforcement are fundamental components of successful language learning, regardless of the specific vocabulary task or skill area.

In addition, determination strategies during the discovery phase also showed a strong alignment between frequency of use and perceived effectiveness, suggesting that learners consistently view these strategies—such as using dictionaries or guessing from context—as beneficial across various learning situations.

Despite the general trend of positive correlations, several noteworthy exceptions emerged. For example, social strategies during the consolidation phase exhibited weak or insignificant correlations with other categories, indicating that they may function independently within the broader strategy landscape. Their emphasis on interpersonal interaction may not strongly intersect with the cognitive or metacognitive processes that dominate other phases of vocabulary learning.

Similarly, the usage frequencies of cognitive and metacognitive strategies during the consolidation phase did not significantly correlate with the perceived effectiveness of social strategies in either the discovery or consolidation phases ( $p > .05$ ). Furthermore, the frequency of using determination strategies in the discovery phase was not significantly related to the perceived effectiveness of social strategies in the consolidation phase ( $\rho = .129, p = .16$ ). These findings suggest possible misalignments between certain strategy types across learning stages, pointing to a need for more integrated or stage-specific approaches that strengthen the coherence and complementarity of different strategies in language instruction.

## **5.0 CONCLUSION**

In light of the limited research on vocabulary learning strategies (VLS) for less commonly taught languages (LCTLs), this study explored the applicability of Schmitt's (1997) VLS taxonomy in the context of Vietnamese language instruction among university students in Brunei. The findings provide evidence for the taxonomy's continued relevance, while also revealing the need for contextual adaptation.

The findings indicate that cognitive and social strategies are both frequently used and perceived as effective, while memory and metacognitive strategies are underutilised, pointing to a mismatch between strategic potential and learner engagement. These patterns highlight the importance of not only recognising broad strategy categories, but also tailoring their instruction to the linguistic features of the target language and the learning behaviours of beginners.

Importantly, the study shows that target language characteristics, such as the tonal and phonological complexity of Vietnamese, may significantly influence learners' strategic choices. For instance, Bruneian learners' reliance on repetition over contextual guessing may

be shaped more by linguistic features than by shared cultural or educational backgrounds with learners in similar Southeast Asian contexts.

In conclusion, while Schmitt's (1997) taxonomy remains a relevant and useful framework for understanding learner strategy use, its effective application requires context-sensitive adaptation. Educators should provide targeted support to expand learners' strategic repertoires, especially in underused areas such as memory and metacognitive strategies. Strategy instruction should be explicitly modelled, gradually integrated, and tailored to the demands of the target language. These findings contribute to the growing body of research on VLS in underrepresented language contexts and support more informed, responsive pedagogical practices in beginning-level language instruction.

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