


Learning Strategies in Acquiring Instructional Vocabulary among Pre-service English Teachers

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A B S T R A C T

This study investigated the vocabulary learning strategies (VLS) employed by 47 pre-service English teachers enrolled in the Instructional Vocabulary course. This study employed a mixed-method design by combining quantitative data from questionnaires and qualitative data from interviews to provide a more comprehensive understanding of students' strategy use. Using Schmitt's (1997) taxonomy as an analytical framework, the findings showed that participants used various strategies, with cognitive strategies being the most dominant (32%), reflecting their practical and task-focused approach to vocabulary learning. Metacognitive (22%) and determination strategies (18%) were used moderately, while memory (15%) and social strategies (13%) appeared less frequently, indicating limited reflective and collaborative learning in vocabulary acquisition. Qualitative interview data revealed that students' strategy preferences were influenced by their learning goals, course requirements, and individual learning styles. The study concludes that although participants demonstrated awareness of multiple strategy types, they still require explicit instruction and guided practice.

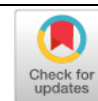
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INTRODUCTION

Instructional vocabulary is the group of words that teachers use in lessons, tests, and other teaching materials (Kame'enui & Baumann, 2012). Pre-service English teachers need to know this kind of vocabulary very well because it helps them understand teaching guidelines, figure out learning objectives, and talk to students in the classroom. These students will be future teachers, so they need to not only know what instructional words mean, but also how to use them correctly when making lesson plans and telling students what to do. Proficiency in instructional language significantly enhances teaching clarity and facilitates learner understanding in English as a Foreign Language (EFL) classroom (Yusuf & Novita, 2020). In many universities, vocabulary instruction tends to emphasize general or academic vocabulary, while instructional vocabulary is implicitly embedded in methodology or microteaching courses rather than treated as a discrete area of study (Tantri et al., 2025; Zeng et al., 2025). This shows a broader issue in language education, where vocabulary is often taught as support rather than as a main focus. Recent research explains that teaching vocabulary is not only about giving word meanings, but also about helping learners use words in meaningful contexts and develop strategies to remember them (Zeng et al., 2025). This means that if instructional vocabulary is not taught explicitly, pre-service teachers may not be fully prepared to use effective classroom language.

In addition, studies in teacher education show that the language used by teachers during teaching practice is rarely taught directly. Instead, it is usually evaluated after the teaching activity. For example, research on microteaching shows that teacher talk needs to be analyzed to see whether it is effective in supporting learning (Iliasov et al., 2025). However, this kind of

analysis often happens after practice, not as part of structured vocabulary learning. As a result, student teachers may develop teaching skills without strong awareness of the instructional language they use. Furthermore, recent classroom studies also show that vocabulary teaching still focuses more on helping students understand words, using techniques like translation and visual aids, rather than focusing on how teachers use language in the classroom (Ihsan, 2025). This creates an imbalance, where student vocabulary development is prioritized, but teacher language is not given enough attention. Therefore, it is important for teacher education programs to treat instructional vocabulary as an important and separate area of study, so that future teachers can communicate more clearly and effectively in the classroom.

Despite its importance, pre-service English teachers still struggle with understanding or applying instructional vocabulary accurately in academic and pedagogical contexts (Decraene et al., 2023; Dzormeku et al., 2024). Pre-service teachers did not prioritize or lacked concrete strategies for vocabulary teaching, which implies limited practical mastery of instructional vocabulary and related pedagogical moves (Decraene et al., 2023). Restricted vocabulary knowledge undermined pre-service teachers' ability to perform instructional tasks and reduced teaching self-efficacy (Dzormeku et al., 2024). These difficulties are often linked to limited exposure to instructional discourse, insufficient emphasis on pedagogical vocabulary in teacher education curricula, and the overreliance on general English vocabulary learning approaches. Pre-service teachers frequently misunderstand task instructions or rubric descriptors due to inadequate familiarity with instructional terms. Hilden et al. (2024) found that pre-service teachers have not yet fully mastered assessment literacy, including the understanding of instructional terms and rubric descriptors which supports the idea that inadequate familiarity with such terminology can hinder their comprehension of task instructions and assessment rubrics. Studies on teachers' beliefs about vocabulary instruction show that vocabulary teaching is often not treated as a priority area, even though it is essential for language learning (Alshumrani, 2024). This suggests that pre-service teachers may not develop concrete strategies for teaching vocabulary because it is not emphasized clearly in their training. Therefore, their lack of focus on vocabulary teaching can lead to limited mastery of instructional vocabulary and related pedagogical practices. Such gaps can negatively affect teaching preparation and classroom management, highlighting the need for explicit attention to instructional vocabulary learning in teacher training programs.

Vocabulary learning strategies (VLS) have long been recognized as essential tools that help learners manage, store, and recall new lexical items. Schmitt (1997) taxonomy classifies these strategies into five main categories: determination, social, memory, cognitive, and metacognitive strategies. Schmitt's (1997) Taxonomy of Vocabulary Learning Strategies provides a comprehensive framework for understanding how learners acquire and manage new lexical items. The taxonomy classifies vocabulary learning strategies into five main categories. First, Determination strategies, involve techniques used to discover the meaning of new words independently, such as consulting a dictionary or inferring meaning from context. Second, Social strategies, rely on interaction, including asking teachers or peers for explanations or examples. Third, Memory strategies, help learners store and recall vocabulary through associations, imagery, or mnemonic devices. Fourth, Cognitive strategies, focus on mechanical processes like note-taking, repetition, and organizing words into lists or groups. Finally, metacognitive strategies involve planning, monitoring, and evaluating one's learning, such as through self-testing or exposure to English media for review. Together, these categories capture both the cognitive and social dimensions of vocabulary learning and provide a valuable model for examining learners' strategic behavior in vocabulary acquisition. More recent studies emphasize that learners' choice of strategy often depends on factors such as learning motivation, metalinguistic awareness, and previous experience (Durán, Gutiérrez & Ramírez., 2022; Kikas et al., 2024). However, most existing studies focus on general or academic vocabulary, while research on strategies used for acquiring instructional or pedagogical vocabulary remains scarce.

The limited focus on instructional vocabulary learning represents a notable research gap. While domain-specific vocabulary has received increasing scholarly attention in recent years, studies rarely address how pre-service English teachers develop their understanding of instructional terms, which are central to their future professional communication. Exploring domain-specific lexical learning in teacher education can deepen our understanding of how teachers acquire pedagogical competence and language awareness (Banegas & Arellano, 2024; Lindl & Hilbert, 2023). Therefore, examining the learning strategies pre-service teachers employ to acquire instructional vocabulary may reveal valuable insights into effective learning behaviors and inform curriculum design in teacher preparation programs.

Grounded in this context, the present study aims to explore the learning strategies used by pre-service English teachers in acquiring instructional vocabulary. It investigates the types of strategies students use and the reasons behind their strategy preferences. The findings are expected to contribute to a deeper understanding of vocabulary learning in teacher education and to provide practical implications for designing more targeted instructional support for vocabulary development.

Instructional Vocabulary

Instructional vocabulary denotes the set of words routinely employed to convey expectations, procedures, and tasks in classroom settings. Kame'enui & Baumann (2012) characterize these items as part of the "language of instruction," which mediates students' access to lesson goals, task requirements, and assessment criteria. Because instructional vocabulary is functionally oriented rather than content-specific, its mastery enables learners to decode teacher directives and to perform academic tasks as intended which is without such mastery, content knowledge alone may be insufficient for successful task completion.

Research on vocabulary instruction emphasizes that terms with instructional functions should be taught intentionally and systematically, using repeated, contextualized exposure and opportunities for active use (Kame'enui & Baumann, 2012). Recent empirical work reinforces this point by demonstrating that targeted interventions such as guided interactive reading and spaced retrieval practice improve learners' comprehension and application of instructional terms. Therefore, integrating "Instructional Vocabulary" as a course within English Education departments can bridge the gap between language knowledge and teaching competence. This inclusion would align with current calls for evidence-based vocabulary instruction and for preparing future teachers to operate confidently in English-medium instruction settings (Dzormeku et al., 2024).

Pre-service English Teachers

Pre-service English teachers represent a population with dual needs: they must develop both language proficiency and pedagogical language awareness. Studies show that many trainee teachers possess declarative knowledge about the importance of vocabulary instruction but lack practical strategies or sufficient lexical repertoire to implement explicit vocabulary teaching in classroom practice (Decraene et al., 2023; Lee & Abidin, 2023). Such gaps manifest in misinterpretation of rubrics, uncertainty when giving directions, and lower instructional confidence. Investigations across diverse contexts further indicate that limited vocabulary knowledge and weak command of instructional language can undermine teaching self-efficacy and classroom performance (Dzormeku et al., 2024). Consequently, teacher education programs are increasingly urged to incorporate domain-specific vocabulary training – focusing on both recognition and production of instructional terms – and to provide scaffolded opportunities for trainees to rehearse pedagogical discourse in authentic or simulated teaching contexts (Chung & Zainuddin, 2025). Addressing these needs is essential to prepare teachers who can both understand and use instructional vocabulary accurately.

Vocabulary Learning Strategies (VLS)

Vocabulary Learning Strategies (VLS) provide a theoretical and practical lens for examining how learners acquire lexical items. Schmitt's (1997) taxonomy, comprising determination, social, memory, cognitive, and metacognitive strategies, has remained

influential in research and practice, offering a parsimonious framework for categorizing strategic behaviors. Contemporary studies confirm that strategy choice is shaped by learners' metacognitive awareness, access to resources (including digital tools), and the instructional environment; for instance, memory and metacognitive strategies frequently correlate with higher retention, whereas social and determination strategies are invoked when interaction or reference tools are available. Recent empirical work on pre-service and in-service populations highlights variability in strategy adoption and effectiveness. Some studies report that trainees predominantly rely on mnemonic and rehearsal techniques for short-term retention, while others show an increased use of metacognitive tactics (self-testing, planning) when learners are explicitly trained to do so (Rahman et al., 2024). Moreover, interventions that integrate technology (e.g., digital flashcards, guided video input) and structured opportunities for deliberate practice tend to enhance strategy effectiveness and transfer to pedagogical tasks. Taken together, the VLS literature suggests that fostering strategic awareness and providing structured strategy training are promising directions for improving pre-service teachers' acquisition and application of instructional vocabulary.

METHOD

This study employed a mixed-method design, combining descriptive quantitative and qualitative approaches to explore the vocabulary learning strategies used by pre-service English teachers in acquiring instructional vocabulary. The quantitative component aimed to identify the frequency and distribution of strategy use, while the qualitative component sought to explain the reasons behind students' strategy preferences. Schmitt's (1997) taxonomy of vocabulary learning strategies including determination, social, memory, cognitive, and metacognitive strategies, served as the analytical framework for this investigation.

Respondents

The participants of this study were 47 seventh-semester students enrolled in the Instructional Vocabulary course in an English Education Department. The participants were selected through purposive sampling, as they had been explicitly learning and applying instructional vocabulary throughout the semester. This group was considered suitable because of their direct engagement with the target vocabulary both in coursework and teaching practice simulations.

Instruments

Two instruments were used to collect both quantitative and qualitative data. First, a questionnaire adapted from Schmitt's (1997) Vocabulary Learning Strategy Taxonomy was administered to all participants. The questionnaire consisted of Likert-scale items (e.g., 1 = never to 5 = always) designed to measure the frequency of each strategy used. Second, a semi-structured interview protocol was developed to explore participants' reasons for selecting particular strategies. A total of 6–8 participants were selected for interviews based on their questionnaire responses, representing different levels and patterns of strategy use.

Procedures

The study was carried out in two stages. First, the structured questionnaire adapted from Schmitt's (1997) taxonomy was administered to all students in the Instructional Vocabulary course to measure the frequency of their strategy use. The results were analyzed to identify dominant and less-used strategies. Next, based on these results, 6–8 students were purposively selected for semi-structured interviews to explore their reasons for choosing particular strategies. Data from both instruments were then interpreted to gain a comprehensive understanding of students' vocabulary learning practices.

Data Analysis

Quantitative data from the questionnaire were analyzed using descriptive statistics. The frequency of each response was calculated and converted into percentages using the formula:

$$\text{percentage} = \frac{\text{total responses for each strategy}}{\text{total responses}} \times 100\%$$

total number of responses

The percentages were then used to determine the dominance of each strategy category.

Qualitative data from the interviews were analyzed using qualitative content analysis based on Matthew B. Miles et al. (2014). The analysis involved data reduction, data display, and conclusion drawing. Interview transcripts were coded and categorized according to Schmitt's five strategy groups, followed by identifying emerging themes related to students' reasons for strategy use. This process is closely aligned with thematic analysis, as patterns and meanings were systematically identified and interpreted.

Data Trustworthiness

To ensure the trustworthiness of the data, this study applied triangulation to strengthen both validity and reliability. Following Lincoln & Guba (1985), data triangulation was conducted by using two instruments, namely questionnaires and interviews, allowing the researcher to cross-check and confirm the consistency of findings across different data sources, thus enhancing validity. The alignment between quantitative results (e.g., frequency and percentage of strategy use) and qualitative insights (students' explanations) indicates that the data accurately represent participants' experiences. In addition, participant validation was conducted to confirm the accuracy of interpretations, further strengthening validity. In terms of reliability, the study followed a systematic data analysis procedure based on Miles et al. (2014), including organizing, coding, categorizing, and interpreting the data consistently. The use of Schmitt's (1997) taxonomy also ensured consistency in classifying vocabulary learning strategies. Through these processes, the study achieved a high level of trustworthiness, making the findings both credible and dependable.

FINDINGS AND DISCUSSION

The analysis of the questionnaire data revealed that participants employed a variety of strategies to acquire instructional vocabulary, with differing levels of frequency. Among the five categories of Schmitt's (1997) taxonomy, cognitive strategies were found as the most frequently used, followed by metacognitive strategies, determination, memory, and social strategies, as can be seen in Figure 1.

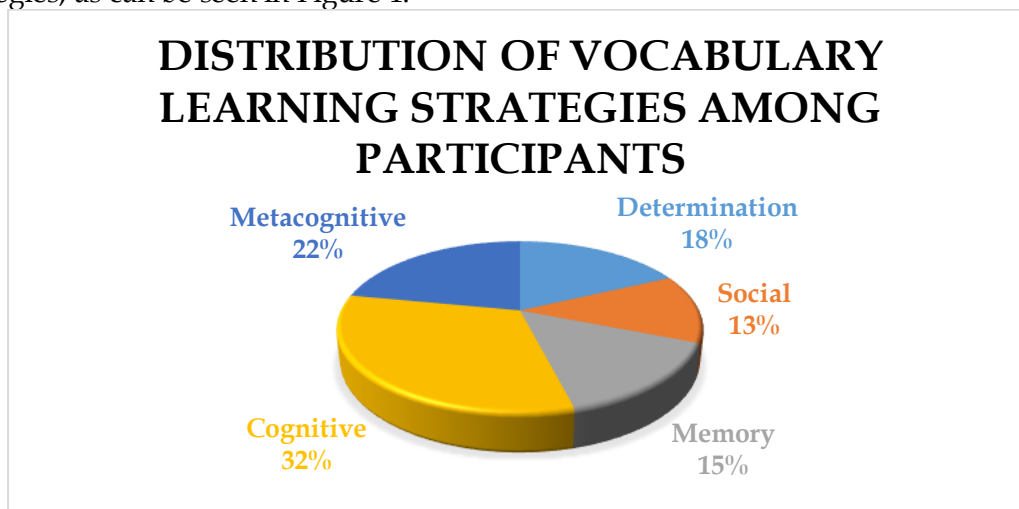


Figure 1. Distribution of Vocabulary Learning Strategies among Participants

Cognitive Strategies were found to be the most dominant among participants (32%). The pre-service English teachers tended to write down and categorize words according to their pedagogical functions, such as verbs used for instruction or evaluation. Several participants mentioned that writing and reusing these words in lesson plan drafts helped reinforce retention and accuracy of usage.

"I always make a list of task verbs used in rubrics and try to include them in my microteaching lesson plans." (Participant 12)

This finding aligns with Handayani & Nadrin (2024), who observed that active engagement through note-taking and written rehearsal enhances vocabulary recall and practical

application among EFL learners. Most participants reported frequently using note-taking, repetition, and self-testing as part of their learning routines. For instance, they often maintained vocabulary journals or created digital flashcards to review key instructional verbs such as identify, compare, summarize, and describe. These findings indicate that the majority of pre-service English teachers actively regulate their vocabulary learning processes, a tendency consistent with cognitive awareness typically found in advanced learners (Tantri et al., 2025). Among non-English-major university students, cognitive strategies were the most frequently used, especially using new words in sentences and frequent review (Wahyudin et al., 2021). Another study also showed that high-achieving undergraduate students used strategies like repeating words to themselves, taking notes about new words, and using consolidation through writing exercises as the most common approaches (Tahmina, 2023). These findings suggest that cognitive strategies are central to how pre-service English teachers learn instructional vocabulary. Such strategies help with retention (being able to remember words over time) and accuracy (using correct forms and contexts). However, it's important to note that use of strategies like categorization and reuse depends on students' motivation and how much support or instruction they receive in the course to develop good habits of practice.

The second mostly used strategies were Metacognitive Strategies, with 22% of all strategies used by the students, particularly in self-testing and regular review planning. Participants reported using online tools to monitor their vocabulary progress.

"Before the quiz, I test myself using flashcards. It helps me know which words I still confuse."
(Participant 5)

This shows that students were not only memorizing words but also monitoring their learning and planning how to improve. These two actions, checking one's progress and deciding what to do next are key parts of metacognitive control, which helps learners manage their study more effectively. Pre-service teachers' preference for certain vocabulary learning methods may reflect metacognitive judgments about efficiency, ease of use, and perceived learning gains (Salihoğlu & Yağın, 2022). According to Teng & Mizumoto (2025), students who are aware of their own learning process are better at choosing and adjusting vocabulary learning strategies that work for them. Such self-regulated learning practices demonstrate growing learner autonomy, which is a critical component of teacher education (Dzormeku et al., 2024). It helps pre-service teachers become more independent and confident in using English for teaching. Metacognitive monitoring fosters long-term retention and deeper lexical understanding. Learners who frequently used metacognitive strategies achieved significantly better vocabulary acquisition outcomes compared to low-frequency users (Tu, 2025). Other studies also support this finding. Teymouri (2024) found that learners who used mobile apps with features like self-quizzes and spaced review remembered vocabulary for a longer time. This kind of learning behavior is very important. When students practice self-testing and planning vocabulary reviews, they are also developing reflective habits that are useful for their future teaching. However, because only 22% of students reported using these strategies, there is still room for improvement. Metacognitive training like teaching students how to plan, monitor, and evaluate their vocabulary learning can strengthen long-term word retention and understanding (Zeng et al., 2025).

Determination strategies were used by 18% of the participants in this study, such as guessing meanings from context or using dictionaries. A number of pre-service English teachers reported that when they encountered unfamiliar instructional verbs like 'identify', 'match', or 'underline', they often relied on contextual clues from reading passages, instructional tasks, or online glossaries to figure out what these words meant. This behavior suggests that the participants are showing developing learner autonomy, choosing to use text and context information rather than always relying on teacher explanation. Similar results have been observed in other studies. For example, research at UIN Fatmawati Soekarno Bengkulu showed that English Education students most frequently used determination strategies (mean score = 3.30) among other strategy types to learn vocabulary, indicating they often rely on methods like using dictionaries and guessing meaning from context (Yulianti et al., 2023). However, these determination strategies seem to be reactive rather than proactive.

That is, participants typically guessed word meaning only when encountering unknown words, instead of planning to use contextual inference regularly as a learning method. This suggests a surface-level use of determination strategies: they help with immediate comprehension, but may not lead to deeper learning or long-term retention.

The fourth strategies were Memory Strategies used by 15% of participants. It including associating words with images, gestures, or mnemonic devices that were used only occasionally and mostly among participants who identified themselves as visual learners.

"I remember summarizing by imagining a student writing short notes. It helps me recall the meaning quickly." (Participant 8)

This type of imagery-based learning demonstrates the potential of visual encoding to strengthen word retention, consistent with Paivio's (1991) Dual Coding Theory, which posits that verbal information paired with imagery enhances memory recall. Nevertheless, the overall sporadic use of such elaborative strategies suggests that most pre-service English teachers still rely more on mechanical repetition or rote memorization rather than on deeper, meaning-based mnemonic techniques. This finding aligns with recent studies indicating that mnemonic techniques can significantly boost memory and help learners master sequences more quickly (Radović & Manzey, 2019). Yet, despite their benefits, many teachers and pre-service teachers rarely use them. Surveys suggest that they often feel they don't have enough time to create mnemonic materials, and ready-made examples are hard to find (Drushlyak et al., 2023). As a result, mnemonics are frequently avoided because they seem too time-consuming and mentally demanding to prepare. Consequently, pre-service English teachers may benefit from explicit training in memory-based vocabulary strategies to diversify their approaches beyond repetition.

The fifth strategies were Social Strategies. Social strategies played only a minor role (13%) in how pre-service English teachers acquired instructional vocabulary. Only a few participants reported asking peers or instructors for clarification or discussing new terms collaboratively. When they encountered unfamiliar words such as summarize, infer, or justify, most preferred to consult digital tools or self-study rather than engage in group discussions. This limited use of social interaction may be linked to the individualistic learning culture often found in higher education settings, where students are expected to be autonomous and self-reliant in managing their learning. As noted by Isty, Ginting, and Kharisma (2024), tertiary-level learners tend to perceive vocabulary acquisition as a personal cognitive task rather than a shared communicative process. This tendency may also stem from factors such as time constraints, online learning modes, or limited opportunities for peer collaboration in classroom contexts. While social strategies such as asking for examples, peer teaching, or group vocabulary games can facilitate deeper understanding through interaction and negotiation of meaning, their underutilization in this study suggests that vocabulary learning remains largely solitary among pre-service teachers. This finding points to a potential area for pedagogical improvement: encouraging more collaborative vocabulary learning activities to enhance engagement, retention, and contextual understanding.

Overall, the results indicate that pre-service English teachers predominantly rely on cognitive and metacognitive strategies, suggesting a preference for structured and self-directed learning approaches. These strategies not only facilitate vocabulary acquisition but also mirror the independent learning skills expected of future educators. However, the limited use of social and memory strategies highlights potential areas for pedagogical enhancement. Incorporating collaborative and creative learning activities such as group-based vocabulary games, mnemonic creation tasks, or visual association projects could diversify learners' strategic repertoire and improve engagement. This overall pattern of strategy use reflects broader trends in vocabulary learning research, where advanced learners increasingly adopt metacognitive control over their learning. The findings reinforce the importance of explicitly teaching vocabulary learning strategies within teacher education programs, echoing calls from recent studies (Handayani & Nadrin, 2024; Tantri et al., 2025) to integrate strategic instruction into curriculum design.

The dominance of cognitive strategies in this study can be explained by their direct and practical nature, which aligns with the immediate demands of academic tasks. Cognitive strategies such as repetition, note-taking, and practicing are relatively easy to apply and provide quick results, making them more attractive for pre-service teachers who are often focused on completing assignments and mastering course content efficiently. Recent research confirms that cognitive strategies are commonly preferred because they help learners “process and retain linguistic information” in a direct and structured way (Warouw & Neman, 2024). In addition, pre-service teachers often face linguistic challenges, particularly in productive skills and vocabulary use, which pushes them to rely on practical strategies that support immediate comprehension and usage (Dzormeku et al., 2024). This suggests that their preference for cognitive strategies is not accidental, but rather a response to academic pressure and limited linguistic confidence, leading them to prioritize efficiency over deeper or more reflective learning processes.

On the other hand, the relatively low use of social strategies may be linked to limited opportunities for collaborative learning and a stronger emphasis on individual academic performance. Social strategies, such as asking peers or discussing vocabulary with others, require interaction, confidence, and a supportive learning environment. However, many pre-service teachers tend to rely more on independent learning, especially in higher education contexts where tasks are often individually assessed. Recent studies indicate that social strategies are sometimes underutilized because learners perceive them as less essential or more intuitive, and their effectiveness is not strongly emphasized in formal instruction (Chen, 2025). Furthermore, research on pre-service teachers highlights that social and emotional aspects of language learning, including interaction and collaboration, are often not systematically integrated into teacher education programs (Lasekan et al., 2025). As a result, students may not develop strong habits of collaborative vocabulary learning, which explains the lower frequency of social strategy use in this study.

These findings indicate a gap between practical efficiency and deeper learning engagement. While cognitive strategies support immediate learning needs, the limited use of social strategies suggests that opportunities for interaction, discussion, and collaborative meaning-making are not fully utilized. Therefore, teacher education programs need to balance these approaches by not only strengthening cognitive strategy use but also actively promoting social and collaborative learning environments that can enhance reflective and contextual vocabulary acquisition.

CONCLUSIONS

This study concludes that although pre-service English teachers employed a range of vocabulary learning strategies, their use remains uneven and limited in depth. Cognitive strategies were the most dominant (32%), reflecting a strong preference for practical and task-oriented learning, followed by metacognitive (22%) and determination strategies (18%), while memory (15%) and social strategies (13%) were less frequently used, indicating limited engagement in reflective and collaborative vocabulary learning. These findings imply that teacher education programs should place greater emphasis on explicit instruction of vocabulary learning strategies, integrating them systematically into the curriculum and providing guided practice during coursework and microteaching to strengthen both pedagogical competence and instructional language use. However, this study is limited by its relatively small sample size and its focus on a single course context, which may restrict the generalizability of the findings. Therefore, future research is recommended to involve larger and more diverse samples across different institutions, as well as to examine the effectiveness of specific instructional interventions designed to enhance pre-service teachers’ strategic vocabulary learning and teaching practices.

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