

Editorial

Mapping Contemporary Vocabulary Research: Innovation, Integration, and Impact

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Vocabulary research has gained significant traction among second language (L2) researchers since the 1980s, driven by a growing recognition of its foundational role in language learning (Webb, 2020). As Wilkins (1972, p. 111) noted, “Without grammar very little can be conveyed. Without vocabulary, nothing can be conveyed.” Given the high correlation between vocabulary size and language proficiency, mastering lexical items is widely accepted as an essential component of L2 acquisition, acting as a vital catalyst for early and advanced language development alike (Schmitt, 2010). While traditional research focused predominantly on individual, single-word units, the 2000s saw a surge in the popularity of formulaic language and multi-word expressions (Wray, 2002). These formulaic sequences are just as critical as single words because they permeate native spoken and written discourse while directly enhancing L2 learners’ fluency (Schmitt, 2010). However, building a comprehensive lexicon, encompassing both single words and complex collocations, presents a dual challenge for learners and instructors, as the sheer volume of necessary words cannot be achieved through explicit, intentional instruction alone (Teng, 2023). Consequently, contemporary researchers must examine not only what types of vocabulary are learned, but also how they are acquired across explicit, intentional tasks and subconscious, meaning-focused incidental input (Teng, 2023). To showcase cutting-edge developments in these areas, this special issue brings together papers that explore both single-word vocabulary and multi-word expressions, investigating the diverse input sources and cognitive strategies that drive comprehensive lexical development.

This special issue focuses on “recent advances in vocabulary research in language learning and teaching”, because the rapid development of technologies has transformed the way learners acquire vocabularies, such as the emergence of generative artificial intelligence (AI), growing attention to multimodal input, and increasingly sophisticated methodological tools. At the same time, enduring questions about task design, cognitive processing, incidental learning, and individual differences continue to drive empirical inquiry. Taken together, these developments signal not merely incremental progress

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but a broad reconfiguration of the field. This special issue responds to this moment by bringing together cutting-edge studies that illuminate how vocabulary learning is being redefined across technological, cognitive, pedagogical, and methodological dimensions.

The articles in the special issue could be grouped into four themes, each focusing on AI, technology, cognition, and individual differences respectively.

The first theme foregrounds generative AI and its implications for vocabulary, which includes two papers. Zhou et al. (2026) compared phrasal verb usage in human-written versus ChatGPT-generated academic essays, finding that humans used these verbs five times more frequently and with double the diversity of the AI. The findings revealed that human writing was more flexible, spontaneous, and contextually specific, whereas AI writing tended to be more formulaic, rigid, and predictable. Nguyen et al. (2026) conducted a corpus-based study on the lexical profiles of ChatGPT-generated reading materials for different CEFR levels, finding that while lexical demand generally increased with the target level, the AI struggled to accurately match the expected vocabulary size for the lowest and highest proficiency bands. The authors emphasized that while ChatGPT was a powerful tool for material creation, human checking and adjustment remained essential to ensure texts are level-appropriate.

The second theme focuses on technology-enhanced vocabulary learning. Among the four studies in this topic, three were dedicated to captioned viewing and incidental vocabulary learning in particular.

Firstly, Kaderoğlu (2026) explored the effects of L1/L2 subtitles and on-screen imagery on incidental learning of vocabulary, finding that L2 captions were uniquely effective for meaning recall, but on-screen imagery did not provide a consistent benefit and actually had a negative effect on form recognition. Prior vocabulary knowledge and cognateness remained powerful predictors of incidental vocabulary learning. The paper by Ehsani (2026) examined how textual enhancement in captions affected incidental vocabulary learning, revealing that it significantly improved the recall of multi-word items but not single words. The findings suggested that perceptual salience can selectively support the learning of complex lexical units without necessarily increasing cognitive load. Conducted in the same context of captioned viewing, Teng (2026) is a method tutorial which provides step-by-step guidance on using linear mixed-effects modeling (LMEM) in R to analyze incidental vocabulary learning from captioned viewing. It argues that LMEM is a more robust and versatile alternative to traditional ANOVA for handling the nested observations and variability common in applied linguistics data.

Different from the above three studies, Mellati and Akbarian (2026) assessed the integration of technology tools like Telegram and Xmind into EFL vocabulary learning, reporting significant improvements in student acquisition and motivation. Qualitative data further revealed that while these tools alleviated learning difficulties, they also introduced challenges related to internet stability and the time required for technical management.

The third theme in this special issue is innovation in traditional cognitive perspectives in vocabulary acquisition. Based on the Cognitive Load Theory, Iwata (2026) investigated the role of time pressure in learners' acquisition of new vocabulary. This study found that while time restrictions did not immediately improve recognition speed, they led to higher practice counts and superior long-term retention. Time-pressured practice could be an effective pedagogical tool by facilitating the automatization of lexical access through increased engagement. Szudarski and Muir (2026) conducted a replication and extension study of Hulstijn and Laufer's influential Involvement Load Hypothesis (2001). This study found that reading plus fill-in and writing tasks resulted in similar lexical gains, only partially confirming original predictions regarding task-induced involvement load. It also highlighted the critical role of learner-related variables, such as the dynamic nature of task engagement and the impact of emotions like shame or embarrassment during the learning process.

The last strand in this special issue focuses on individual variation and lexical development. Chee et al. (2026) investigated ESL/EFL teachers' productive emotion vocabulary, finding that their accuracy significantly declined for mid-to-lower frequency words. The results suggested that language proficiency

was the strongest predictor of this knowledge and highlighted a need for more explicit training in nuanced affective labeling for teachers. Park et al. (2026) conducted structural equation modeling and found that L2 vocabulary fully mediates the relationship between L1 reading ability and L2 proficiency in Japanese university students. The findings underscored vocabulary as the primary channel through which literacy advantages from a learner's first language influence their second language performance. Sun et al. (2026) investigated how Chinese EFL learners utilized syntactic and semantic cues to distinguish synonyms, finding that both types of knowledge were often inadequately mastered. The results indicated that high-proficiency learners were better at using semantic cues than syntactic ones, with factors like lexical frequency and explicit instruction playing key roles.

Taken together, the eleven contributions in this special issue filled niched and meaningful gaps in the literature, pushing new boundaries in vocabulary research. Across the four themes, vocabulary emerges not as an isolated component of language proficiency but as a dynamic interface linking input, cognition, technology, and learner characteristics. The studies on generative AI interrogate the nature and quality of lexical input in an era where machine-generated texts are readily available, prompting renewed reflection on authenticity, diversity, and level appropriateness. The technology-enhanced and captioned-viewing research demonstrates how subtle manipulations of multimodal input, such as captions, textual enhancement, and digital tools, can shape incidental learning trajectories, while also highlighting the importance of perceptual salience and prior knowledge (Ehsani, 2026). The cognitively oriented studies revisit foundational cognitive theories, refining our understanding of how task conditions and engagement influence retention and automatization. Finally, the research on individual differences foregrounds vocabulary as both outcome and mediator: lexical knowledge is shown to underpin broader proficiency, to interact with literacy backgrounds, and to vary systematically according to proficiency, frequency, and affective factors. Collectively, these studies examined how words are noticed, processed, retained, and used across diverse learning ecologies against the backdrop of advanced technologies and rigorous methodologies.

Looking ahead, several directions emerge from the contributions in this volume. First, as generative AI becomes increasingly embedded in language education, future research will further examine how AI can be integrated into vocabulary learning and teaching. Second, research on multimodal and technology-mediated learning could explore its impact on different formulaic language and the role of different new technology platforms. Third, the interest in cognitive constructs influencing vocabulary learning could leverage neurolinguistic methods such as eye-tracking and EEG (electroencephalogram). Finally, the consistent prominence of individual differences across studies underscores the importance of adopting multilevel and mixed-effects approaches that can model variability at learner, item, and contextual levels simultaneously. By integrating technological innovation with cognitive theory and methodological sophistication, future vocabulary research can continue to bridge learning and teaching, ensuring that theoretical advances translate into meaningful pedagogical impact.

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