



## Unstated so not Understood? Questioning the Fundamentals in Foreign Language Vocabulary Acquisition

**W. L. Quint Oga-Baldwin**

*Waseda University, Japan*  
quint@waseda.jp

**Luke K. Fryer**

*University of Hong Kong, Hong Kong*  
fryer@hku.hk

### Abstract

This paper challenges the conventional atomistic approach to foreign language vocabulary acquisition, particularly within the context of formal schooling where many students encounter a new language through relatively isolated contact. While the prevailing view pushes explicit study of individual vocabulary items and extensive reading to drive L2 vocabulary growth, this perspective often overlooks the foundational cognitive skills that enable effective reading and the critical non-cognitive factors that sustain it. Drawing from cognitive science, educational psychology, and second language acquisition research, we propose an integrated model that addresses these understated elements, moving beyond the prevalent “whole-language-drip-feed” instructional methods. We argue that the Simple View of Reading (SVR) provides a necessary framework, positing that effective vocabulary uptake from text is contingent upon learners’ phonological processing and decoding abilities. Pedagogical approaches that bypass explicit phonics instruction create teacher dependency and may inadvertently undermine learners’ internal motivational resources. The proposed model emphasizes five core principles: systematic phoneme-grapheme instruction, integrated reading-listening development, fostering learner agency through autonomy-supportive practices, tailored high-dosage practice, and technology-enhanced personalized

assessment. This integrated framework aims to improve educational outcomes by providing learners with the fundamental decoding skills necessary for independent vocabulary acquisition and sustained engagement with L2 texts, a critical goal given the social and economic value of foreign language skills.

**Keywords:** reading, phonology, fundamental skills, decoding

## Introduction

Schooling in any language, fundamentally seeks to teach one thing: literacy. While schools inarguably teach myriad other skills, the primary societal function of schooling is enabling learners to access the complete recorded history of human knowledge through the skill of reading. Indeed, a school that taught mathematics but did not teach students to read would be regarded as failing despite its success, while a school that had completely illiterate students who were also well-versed in the sciences would beg an incredulous “*How?*” The counter case in fact shows robust evidence: students’ literacy shows wide-ranging transfer effects on achievement in subjects (Purpura & Schmitt, 2019). At its most basic, learning in schools sits upon the fundamental idea that learning to read is the mechanism for transmission of all other knowledge. In teaching new languages to learners, literacy functions to expand the potential accessible body of knowledge and range of experiences beyond a single cultural and linguistic milieu.

The ability to read in both first and second languages is, also unsurprisingly, robustly connected with a students’ vocabulary (Siegelman et al., 2024). Likewise, a persistent contention within second language acquisition (SLA) has been the primacy of reading, especially extensive reading, as a principal conduit for vocabulary growth, though with the caveat of a baseline threshold of known words (Nation, 2022). While the role of reading in language development is undeniably significant (Sparks, 2021), this perspective often understates the foundational cognitive skills that enable effective reading and frequently overlooks the critical cognitive and non-cognitive factors that drive a learner’s engagement with text. In this paper, we seek to raise the issue of some of the unstated elements of reading to integrate these disparate elements into a comprehensive theoretical model. This model will address significant gaps in our understanding of how L2 learners, particularly those in foreign language learning contexts, acquire vocabulary through the structures of formalized classroom schooling. By synthesizing research from cognitive science, educational psychology, and SLA, this review argues that a model of vocabulary acquisition must be built upon the interplay of phonological processing building toward reading comprehension *in addition to* the existing literature on spacing and timing of vocabulary, as well as the motivational dynamics that govern learner agency.

## The Cognitive Architecture of Reading: Phonological Processing as a Foundational Mechanism

At its most fundamental level, reading is a process of mapping orthographic symbols to their corresponding phonological representations (Bisani & Ney, 2008; Ehri, 2022).

This principle is the bedrock of the Simple View of Reading (SVR), a robust and widely validated model positing that reading comprehension (RC) is the product of decoding (D) and linguistic comprehension (LC) (Lee et al., 2022; Lee et al., 2024; Sparks, 2021). The decoding component, which is the ability to accurately and fluently read words, is heavily dependent on a learner's phonemic awareness and their grasp of systematic phonics (Ehri, 2022; Sparks, 2021). Research consistently demonstrates that a reader's sensitivity to the statistical regularities between orthography and phonology (O-P) is a powerful predictor of early reading skill, while an over-reliance on less systematic semantic cues is associated with weaker reading outcomes (Siegelman et al., 2020; 2022). This suggests that phonological processing is not a peripheral skill but the essential cognitive mechanism underpinning efficient word recognition. A key element of this process is the ability to flexibly apply phonological and orthographic knowledge to resolve mismatches between a decoded form and a known lexical pronunciation (Edwards et al., 2022). Without this solid phonological foundation, the cognitive load of decoding remains high, significantly impeding a reader's ability to comprehend text and, consequently, to acquire new vocabulary through reading. Just as there are thresholds of background knowledge for the ability to adequately process text (Nation, 2022), there are likely phonological processing constraints preventing uptake with words that cannot be effectively decoded.

The orthographic characteristics of the language in question can play a significant role in how and whether new words can be processed phonologically. This is particularly salient in L2 contexts, where a learner's L1 can influence their processing of the L2 (Kahn-Horwitz et al., 2005). For instance, a study of Japanese adult learners of English found that phonemic awareness still significantly contributed to reading comprehension via its effect on decoding (Yoshikawa & Yamashita, 2014). A meta-analysis of reading in Spanish, a language with a highly transparent orthography, found that while phonemic awareness is important, awareness of larger syllabic units is also a strong predictor of reading ability (Míguez-Álvarez et al., 2022). This indicates that while the core principle of mapping print to sound is universal, the instructional focus may need to adapt to the target language's structure. The Simple View of Reading has been shown to hold as valid when dealing with learners of a new language (Jeon & In'nami, 2023; Hamada et al., 2024). This would logically mean that any gains in vocabulary from text based tools, including word cards, vocabulary notebooks, and extensive reading of graded readers all stand upon the fundamental need for phonological processing and decoding of the target words. Without more fine-grained connections between the phonological decoding of words, learners may be unable to efficiently process the words they encounter in text-based modalities. In the initial and continued teaching of the language, this means that an atomized treatment of nouns, verbs, and adjectives as the fundamental smallest units will ill-serve students.

## **Pedagogical Implications and the Limitations of the Atomistic Models of Vocabulary**

Much of the research published on the study of vocabulary naturally treats words as the basic unit (*cf.* Nation, 2022). In many EFL settings, the phonological aspect of

instruction often relies on whole-word reading and “listen-and-repeat” methods, bypassing the explicit phonics instruction necessary for independent decoding. This pedagogical choice creates a “drip-feeding” model where the teacher becomes the sole arbiter of new vocabulary, hindering the development of learner autonomy. Many teachers opt for unconscious use of what amounts to the whole-language method (Ehri, 2022), what we will call the “whole-language-drip-feed” (WLDF) approach, wherein the teacher intones a collection of specific words students will be expected to learn in a lesson, or reads aloud the words from a text that students do not know as part of a lesson. This very standard teaching practice stands in stark contrast to the goal of fostering the skills necessary for independent, extensive reading for pleasure and learning (Nation, 2022), even though many teachers in these settings actively seek extensive reading as a goal (McLean & Roualt, 2017). There is thus a need to bridge the gap towards an integrated model of phonology and orthography in the teaching of vocabulary that more comprehensively scaffolds students toward the basic skills necessary for truly autonomous, self-directed learning.

It is worth noting that work by Saito and Uchiyama has been particularly instrumental in integrating phonology into the study of L2 vocabulary. Their research distinguishes between *declarative* phonological knowledge (the explicit understanding of a word’s form and meaning) and *automatized* knowledge (the ability to spontaneously and accurately retrieve words in context). Their findings consistently show that while declarative knowledge is necessary, it is this automatized knowledge that is a stronger predictor of listening comprehension and overall proficiency (Saito et al., 2023; Uchiyama et al., 2024). This is a crucial step in developing basic connections between phonology and orthography, though still does not address the issue of the more fundamental fine-grained phoneme-grapheme representations that learners need for more accurate and reliable decoding.

This distinction is crucial, as it suggests a developmental continuum that instruction must support. General statistical learning (SL) ability—a non-linguistic capacity to detect patterns—has been shown to predict successful L2 literacy acquisition (Frost et al., 2013), as it underlies a learner’s ability to internalize the statistical regularities of a new orthographic system (Brice et al., 2021). A synergistic relationship between implicit SL and working memory (WM) has also been found to predict language development in adolescents, suggesting this interplay is a key mechanism for strengthening a learner’s mental representation of language (Pili-Moss et al., 2025). The role of WM itself appears to be developmental; its influence is largely domain-general in early grades but becomes more language-specific as learners gain experience (Peng et al., 2018). These findings, along with meta-analyses supporting the SVR’s applicability in L2 contexts (Hamada et al., 2024; Lee et al., 2022), underscore the need for an instructional model that explicitly integrates phonology and accounts for the development of both declarative and automatized knowledge.

To develop automatized knowledge of reading, high volume of targeted practice with new (younger) language learners is fundamental toward building decoding fluency (Lee et al., 2022; Yoshikawa & Yamashita, 2014). Issues such as orthographic opacity (Brice et al., 2021; Hao et al., 2022), and sustained engagement with words over time leads to greater retention (Yanagisawa & Webb, 2021). All of this means that the baseline level of ability and fluency necessary for children in the L1

(Ehri, 2022) naturally also extends to L2 learners overcoming the process of literacy in a new language (Siegelman et al., 2024). Time on task defines the final bottleneck that learners must pass in order to get appropriately automated processing of the sounds and letters.

An instructional model that aims to be effective must be one that systematically builds learner competence and, in doing so, fosters the agency and intrinsic motivation necessary for sustained engagement. This leads to the hypothesis that for the reciprocal acquisition of reading and vocabulary, learners must pass a basic phonological processing threshold (Chen et al., 2010) in order to process new words without triggering excessive cognitive load (Yanagisawa & Webb, 2021; Jong, 2009).

## The Interpersonal Context: Teacher Competence and the Fostering of Learner Agency

The effectiveness of any instructional model is ultimately contingent upon the teacher. However, research has revealed significant gaps in EFL teachers' knowledge of foundational linguistics, leading to a discrepancy between their stated beliefs about the importance of skills like spelling and their actual classroom practices (Kahn-Horwitz, 2020; Saban & Kahn-Horwitz, 2022). This "Peter Effect" (Russak & Kahn-Horwitz, 2015), where teachers cannot effectively teach what they do not themselves fully understand, can perpetuate a reliance on whole-word memorization and create a cycle of dependency for students, particularly those who are already struggling. Much of these problems stem from teachers who have themselves learned from the WLDF method of vocabulary instruction (Kikuchi & Browne, 2009).

Teacher dependency is antithetical to the development of learner agency, a cornerstone of high-quality motivation. Drawing from Self-Determination Theory (SDT; Ryan & Deci, 2000), the concept of *agentic engagement*, defined as a student's proactive and constructive efforts to shape their own learning (Reeve et al., 2022), thrives in autonomy-supportive environments where teachers listen to student input and provide meaningful choices. A large-scale meta-analysis provides robust, cumulative evidence for the benefits of this approach, finding that autonomous motivation is positively correlated with L2 achievement and negatively with anxiety, while controlled motivation shows the opposite pattern (Alamer et al., 2025). This underscores the central role of fostering intrinsic motivation. Our own work has highlighted that a key predictor of this motivation is the satisfaction of the need for competence, defined as the feeling of success in comprehending and using the new language (Oga-Baldwin & Ryan, 2025). This situated sense of competence has been shown to be a strong and stable predictor of autonomous motivation in longitudinal studies of young Japanese learners (Oga-Baldwin et al., 2017). By retaining control through the WLDF approach to the phonological aspects of vocabulary instruction, teachers likely undercut students' feelings of competence by providing support when no support is wanted (Kono et al., 2024)—a situation that may end up thwarting all the three basic needs of autonomy, relatedness, and competence. This approach to vocabulary instruction infantilizes students at a key point in their emotional and social development during adolescence—a common point for first exposure to a new language (Saito, 2022).

## **The Role of Technology for Assessment of Sound, Vocabulary, and Reading**

To remedy the lack of teacher knowledge of sound-letter connections while building competence and fostering agency, technology offers a path towards instruction that guides high-quality, psychometrically robust, personalized assessment. Methodological reviews highlight key challenges in measuring vocabulary growth, such as balancing a test's breadth of coverage with its depth of sampling and accounting for confounding factors like loanwords (Albalawi, 2024). For example, a study developing a vocabulary size test for Japanese junior high school students found their knowledge was higher than curricular expectations, largely due to exposure to loanwords, and that their growth was non-linear (Sato, 2021). Predictive models have even been developed to estimate which English loanwords Japanese primary schoolers are likely to know based on word length and grade level, providing a simple, data-driven tool for teachers (Kanayama, 2021). These findings collectively demonstrate that word learning is not a uniform process and requires nuanced assessment. Big data approaches can help assess and remedy these issues.

Adaptive learning systems can diagnose a student's knowledge and deliver a personalized, high-volume stream of vocabulary, leading to significant and measurable gains (Mueller & Hays, 2022). Technology can also be used to deliver targeted interventions, such as shared book-reading programs designed to teach complex emotional vocabulary to preschoolers, providing a model for how explicit teaching can be integrated with technology to promote both cognitive and non-cognitive skills (Dennis et al., 2024). There are ongoing interventions which can help push this field forward (Liang et al., 2024; O'Brien et al., 2022; Richter et al., 2022), but this frontier will need to be built on a solid foundation of good hypotheses—else the risk of garbage in, garbage out (Sabatini et al., 2023).

## **Toward a Unified Model of Instructed Vocabulary Acquisition**

The foregoing review necessitates a new instructional model that integrates these cognitive, pedagogical, and motivational principles. Such a model moves beyond the false dichotomy of a “reading problem vs. language problem” (Ehri, 2022) and instead treats L2 reading as a process that requires simultaneous attention to both decoding and language comprehension, all within a motivationally supportive context. The core principles are as follows:

1. **Phonological and Orthographic Skills First:** Instruction must begin with systematic and explicit teaching of phoneme-grapheme correspondences to build the foundational skills for decoding and orthographic mapping (Ehri, 2022; Edwards et al., 2022). This is particularly crucial for beginning learners and must be adapted to the orthographic transparency of the target language (Míguez-Álvarez et al., 2022).
2. **Integrate Reading and Listening:** Listening and reading should be developed in tandem, as they rely on a shared set of underlying skills (Edele & Stanat, 2016). Instruction should provide rich, multi-modal input that develops both declarative and automatized knowledge, recognizing that spoken vocabulary is

best learned and assessed through spoken modalities (Uchihara, 2022; Uchihara et al., 2024), but that both modalities require integration (Brice et al., 2021; Siegelman et al., 2024).

3. **Foster Agency and Motivation:** By equipping learners with decoding skills, the model shifts the locus of control from the teacher to the student, allowing them to read texts of personal interest. This fosters intrinsic motivation, self-efficacy, and agentic engagement, creating a positive feedback loop with autonomy-supportive teaching practices (Duke & Cartwright, 2021; Reeve et al., 2022). This approach is strongly supported by meta-analytic evidence demonstrating the positive link between autonomous motivation and L2 achievement (Alamer et al., 2025). This approach is largely in line with the research on extensive reading (*cf.* Nation, 2022), though standing on the baseline threshold of skills for independent action.
4. **Dosage, Efficiency, and Language-Specificity Matter:** The model emphasizes a high volume of targeted practice to build decoding fluency, particularly in the early stages (Lee et al., 2022), though as necessary with older learners as well (Yoshikawa & Yamashita, 2014). It acknowledges that instruction must be tailored to the specific demands of the L2, such as its orthographic opacity (Hao et al., 2022), and that active, effortful engagement with words leads to greater retention (Yanagisawa & Webb, 2021). It also leverages modern metrics like learning efficiency to personalize instruction (Suzuki et al., 2024).
5. **A New Approach to Pedagogy and Assessment:** The model advocates for a curriculum that actively utilizes adaptive technology to deliver personalized instruction and provide teachers with fine-grained diagnostic data (Mueller & Hays, 2022; Kanayama, 2021). This data-informed approach allows for more rigorous, psychometrically sound assessment, enabling the field to build a more robust science of instructed language learning (Kyle, 2022; Vitta, 2024). Utilizing the tools at hand can significantly improve second language vocabulary for the purpose of improving literacy instruction (Sabatini et al., 2023).

## Conclusion

As researchers in an applied field, our choices have a direct impact on the learning that takes place in classrooms. These very real applications and implications mean that selecting effective methods beyond an atomized approach to vocabulary instruction could have real motivational and cognitive effects on the lives of our students, improving the educational outcomes for real people in real classrooms. The integration of more fine-grained decoding instruction, especially for learners who struggle with vocabulary, may help to allay some of the cognitive burdens and help them overcome reading difficulties (Branum-Martin et al., 2012; Kahn-Horwitz, 2020). Recognizing how the existing groundwork is already underway (Uchihara et al., 2024), the final step will be to bridge the gap to integrate and improve instruction for the purpose of decoding words taught beyond the existing whole language drip feed model. Moving forward will require improvement of teacher training programs, programs of research in vocabulary, and granular measurement at both word and phoneme levels to adequately indicate difficulties that learners face in acquiring the fundamental aspects of vocabulary.

## References

- Albalawi, A. (2024). Key issues and considerations in measuring vocabulary growth: A methodological overview. *Vocabulary Learning and Instruction*, 13(2), 1–13.
- Alamer, A., Robat, E. S., Shirvan, M. E., & Ryan, R. (2025). Self-determination theory and language learning: a multilevel meta-analysis. *Educational Psychology Review*, 37(2), 59. <https://doi.org/10.1007/s10648-025-10038-y>
- Bisani, M., & Ney, H. (2008). Joint-sequence models for grapheme-to-phoneme conversion. *Speech Communication*, 50(5), 434–451. <https://doi.org/10.1016/j.specom.2008.01.002>
- Branum-Martin, L., Tao, S., Garnaat, S., Bunta, F., & Francis, D. J. (2012). Meta-analysis of bilingual phonological awareness: language, age, and psycholinguistic grain size. *Journal of Educational Psychology*, 104(4), 932–944. <https://doi.org/10.1037/a0027755>
- Brice, H., Siegelman, N., Bunt, M. van den, Frost, S. J., Rueckl, J. G., Pugh, K. R., & Frost, R. (2021). Individual differences in L2 literacy acquisition: Predicting reading skill from sensitivity to regularities between orthography, phonology, and semantics. *Studies in Second Language Acquisition*, 1–22. <https://doi.org/10.1017/s0272263121000528>
- Chen, X., Xu, F., Nguyen, T.-K., Hong, G., & Wang, Y. (2010). Effects of cross-language transfer on first-language phonological awareness and literacy skills in Chinese children receiving English instruction. *Journal of Educational Psychology*, 102(3), 712–728. <https://doi.org/10.1037/a0018802>
- Dennis, L., & Wade, T. (2024). The effects of shared book reading on the emotional vocabulary development of preschool children. *Vocabulary Learning and Instruction*, 13(2), 1–22. <https://doi.org/10.29140/vli.v13n2.1186>
- Duke, N. K., & Cartwright, K. B. (2021). The science of reading progresses: communicating advances beyond the simple view of reading. *Reading Research Quarterly*, 56(S1), S25–S44. <https://doi.org/10.1002/rrq.411>
- Edele, A., & Stanat, P. (2016). The role of first-language listening comprehension in second-language reading comprehension. *Journal of Educational Psychology*, 108(2), 163–180. <https://doi.org/10.1037/edu0000060>
- Edwards, A. A., Steacy, L. M., Siegelman, N., Rigobon, V. M., Kearns, D. M., Rueckl, J. G., & Compton, D. L. (2022). Unpacking the unique relationship between set for variability and word reading development: Examining word- and child-level predictors of performance. *Journal of Educational Psychology*, 114(6), 1242–1256. <https://doi.org/10.1037/edu0000696>
- Ehri, L. C. (2022). What teachers need to know and do to teach letter-sounds, phonemic awareness, word reading, and phonics. *The Reading Teacher*, 76(1), 53–61. <https://doi.org/10.1002/trtr.2095>
- Elhassan, Z., Crewther, S. G., & Bavin, E. L. (2017). The contribution of phonological awareness to reading fluency and its individual sub-skills in readers aged 9- to 12-years. *Frontiers in Psychology*, 8. <https://www.frontiersin.org/articles/10.3389/fpsyg.2017.00533>
- Frost, R., Siegelman, N., Narkiss, A., & Afek, L. (2013). What predicts successful literacy acquisition in a second language? *Psychological Science*, 24(7), 1243–1252. <https://doi.org/10.1177/0956797612472207>

- Hamada, A., Shimizu, H., Hoshino, Y., Takaki, S., & Ushiro, Y. (2024). Robust evidence for the simple view of second language reading: Secondary meta-analysis of Jeon and Yamashita (2022). *Studies in Second Language Acquisition*, 1–18. <https://doi.org/10.1017/s0272263124000226>
- Hao, M., Fang, X., Sun, Z., & Liu, Y. (2022). The extended simple view of reading in adult learners of Chinese as a second language. *Frontiers in Psychology*, 13, 846967. <https://doi.org/10.3389/fpsyg.2022.846967>
- Jeon, E. H., & In'nami, Y. (Eds.). (2022). *Understanding L2 proficiency: Theoretical and meta-analytic investigations*. John Benjamins Publishing Company.
- Jong, T. (2009). Cognitive load theory, educational research, and instructional design: some food for thought. *Instructional Science*, 38(2), 105–134. <https://doi.org/10.1007/s11251-009-9110-0>
- Kahn-Horwitz, J. (2020). 'I didn't even know one of the conventions before': Explicit EFL spelling instruction and individual differences. *Cognitive Development*, 55, 100880. <https://doi.org/10.1016/j.cogdev.2020.100880>
- Kahn-Horwitz, J., Shimron, J., & Sparks, R. L. (2005). predicting foreign language reading achievement in elementary school students. *Reading and Writing*, 18(6), 527–558. <https://doi.org/10.1007/s11145-005-3179-x>
- Kanayama, K. (2021). Predicting Japanese primary schoolchildren's English vocabulary knowledge from a sound-meaning recognition test. *Vocabulary Learning and Instruction*, 10(1), 16–29. <https://doi.org/10.7820/vli.v10.1.kanayama>
- Kikuchi, K., & Browne, C. (2009). English educational policy for high schools in Japan. *RELJ Journal*, 40(2), 172–191. <https://doi.org/10.1177/0033688209105865>
- Klassen, K. (2022). Orthographic processing of proper Names: A proposal to investigate the orthographic cue for second language readers. *Vocabulary Learning and Instruction*, 11(2), 94–100. <https://doi.org/10.7820/vli.v11.2.klassen>
- Kono, Y., Hirokawa, E., & Oga-Baldwin, W. L. Q. (2024). Some language learners don't want help: Self-efficacy and teacher support in primary school foreign language classrooms. *Language Teaching Research*, 13621688241305750. <https://doi.org/10.1177/13621688241305750>
- Kuperman, V., Siegelman, N., Schroeder, S., Acartürk, C., Alexeeva, S., Amenta, S., Bertram, R., Bonandrini, R., Brysbaert, M., Chernova, D., Fonseca, S. M. D., Dirix, N., Duyck, W., Fella, A., Frost, R., Gattei, C. A., Kalaitzi, A., Lõo, K., Marelli, M., ... Usal, K. A. (2023). Text reading in English as a second language: Evidence from the Multilingual Eye-Movements Corpus. *Studies in Second Language Acquisition*, 45(1), 3–37. <https://doi.org/10.1017/s0272263121000954>
- Kyle, K. (2022). Some trends in vocabulary research: A discussion of three papers presented at the JALT Vocabulary SIG. *Vocabulary Learning and Instruction*, 11(2), 38–47. <https://doi.org/10.7820/vli.v11.2.kyle>
- Lee, H., Jung, G., & Lee, J. H. (2022). Simple view of second language reading: A meta-analytic structural equation modeling approach. *Scientific Studies of Reading*, 26(6), 585–603. <https://doi.org/10.1080/10888438.2022.2087526>
- Lee, H., & Lee, J. H. (2024). Extending the simple view of reading in second and foreign language learning: A meta-analytic structural equation modeling approach. *Review of Educational Research*, 94(4), 467–500. <https://doi.org/10.3102/00346543231186605>

- Liang, L., Oga-Baldwin, W. L. Q., Nakao, K., Fryer, L. K., & Shum, A. (2024). Transitioning from paper to touch interface: Phoneme-grapheme recognition testing and gamification in primary school classrooms. *Technology in Language Teaching & Learning*, 6(2), 1–14. <https://doi.org/10.29140/tltl.v6n2.1067>
- McLean, S., & Rouault, G. (2017). The effectiveness and efficiency of extensive reading at developing reading rates. *System*, 70, 92–106. <https://doi.org/10.1016/j.system.2017.09.003>
- Míguez-Álvarez, C., Cuevas-Alonso, M., & Saavedra, Á. (2022). relationships between phonological awareness and reading in Spanish: A meta-analysis. *Language Learning*, 72(1), 113–157. <https://doi.org/10.1111/lang.12471>
- Mueller, K., & Hays, G. (2022). Vocabulary learning outside of the classroom: Institutional use of a spaced repetition. *Vocabulary Learning and Instruction*, 11(2), 48–56. <https://doi.org/10.7820/vli.v11.2.mueller>
- Nation, I. S. P. (2022). *Learning vocabulary in another language* (3rd ed.). Cambridge University Press.
- O'Brien, B. A., Habib, M., & Onnis, L. (2019). Technology-based tools for English literacy intervention: examining intervention grain size and individual differences. *Frontiers in Psychology*, 10, 2625. <https://doi.org/10.3389/fpsyg.2019.02625>
- Oga-Baldwin, W. L. Q. (2020). Show them how, but don't intrude: autonomy support promotes EFL classroom attendance and achievement, teacher control hinders it. *The Language Teacher*, 44(3), 3. <https://doi.org/10.37546/jaltlt.44.3-1>
- Oga-Baldwin, W. L. Q., Nakata, Y., Parker, P., & Ryan, R. M. (2017). Motivating young language learners: A longitudinal model of self-determined motivation in elementary school foreign language classes. *Contemporary Educational Psychology*, 49, 140–150. <https://doi.org/10.1016/j.cedpsych.2017.01.010>
- Oga-Baldwin, W. L. Q., & Ryan, R. M. (2025). Competence need satisfaction in language learning (and beyond): Current state of the evidence and directions for exploration. *Studies in Second Language Learning and Teaching*, 15(2), 279–299. <https://doi.org/10.14746/ssllt.48236>
- Peng, P., Barnes, M., Wang, C., Wang, W., Li, S., Swanson, H. L., Dardick, W., & Tao, S. (2018). A meta-analysis on the relation between reading and working memory. *Psychological Bulletin*, 144(1), 48–76. <https://doi.org/10.1037/bul0000124>
- Pili-Moss, D., Hamrick, P., Wendebourg, K., Schmidt, T., & Meurers, D. (2025). Implicit statistical learning and working memory predict EFL development and written task outcomes in adolescents. *System*, 131, 103656. <https://doi.org/10.1016/j.system.2025.103656>
- Purpura, D. J., & Schmitt, S. A. (2019). Cross-domain development of early academic and cognitive skills. *Early Childhood Research Quarterly*, 46, 1–4. <https://doi.org/10.1016/j.ecresq.2018.10.009>
- Raeisi-Vanani, A., Plonsky, L., Wang, W., Lee, K., & Peng, P. (2022). Applying meta-analytic structural equation modeling to second language research: an introduction. *Research Methods in Applied Linguistics*, 1(3), 100018. <https://doi.org/10.1016/j.rmal.2022.100018>
- Reeve, J., Jang, H.-R., Shin, S. H., Ahn, J. S., Matos, L., & Gargurevich, R. (2022). When students show some initiative: Two experiments on the benefits of greater

- agentic engagement. *Learning and Instruction*, 80, 101564. <https://doi.org/10.1016/j.learninstruc.2021.101564>
- Rice, M., Erbeli, F., Thompson, C. G., Sallesse, M. R., & Fogarty, M. (2022). Phonemic awareness: A meta-analysis for planning effective instruction. *Reading Research Quarterly*, 57(4), 1259–1289. <https://doi.org/10.1002/rrq.473>
- Richter, C. G., Siegelman, N., Mahaffy, K., Bunt, M. V. D., Kearns, D. M., Landi, N., Sabatini, J., Pugh, K., & Hoeft, F. (2022). The impact of computer-assisted technology on literacy acquisition during COVID-19-related school closures: Group-level effects and predictors of individual-level outcomes. *Frontiers in Psychology*, 13, 1001555. <https://doi.org/10.3389/fpsyg.2022.1001555>
- Russak, S., & Kahn-Horwitz, J. (2015). English as a foreign language spelling: Comparisons between good and poor spellers. *Journal of Research in Reading*, 38(3), 307–330. <https://doi.org/10.1111/jrir.12009>
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 67–78.
- Saban, M., & Kahn-Horwitz, J. (2022). “It’s difficult since there is no rhyme or reason”: Spelling relevance in an EFL context. *Reading and Writing*, 35(1), 245–272. <https://doi.org/10.1007/s11145-021-10178-x>
- Sabatini, J., Graesser, A. C., Hollander, J., & O’Reilly, T. (2023). A framework of literacy development and how AI can transform theory and practice. *British Journal of Educational Technology*, 54(5), 1174–1203. <https://doi.org/10.1111/bjet.13342>
- Saito, K. (2022). Age effects in spoken second language vocabulary attainment beyond the critical period. *Studies in Second Language Acquisition*, 1–25. <https://doi.org/10.1017/s0272263122000432>
- Saito, K., Uchihara, T., Takizawa, K., & Suzukida, Y. (2023). Individual differences in L2 listening proficiency revisited: Roles of form, meaning, and use aspects of phonological vocabulary knowledge. *Studies in Second Language Acquisition*, 1–27. <https://doi.org/10.1017/s027226312300044x>
- Sato, T. (2021). Longitudinal measurement of the vocabulary size of Japanese junior high school students: Developing a vocabulary size test for beginner learners. *Vocabulary Learning and Instruction*, 10(1), 30–48. <https://doi.org/10.7820/vli.v10.1.sato>
- Siegelman, N., Elgort, I., Brysbaert, M., Agrawal, N., Amenta, S., Mijalković, J. A., Chang, C. S., Chernova, D., Chetail, F., Clarke, A. J. B., Content, A., Crepaldi, D., Davaabold, N., Delgersuren, S., Deutsch, A., Dibrova, V., Drieghe, D., Đurđević, D. F., Finch, B., ... Kuperman, V. (2024). Rethinking First Language–Second Language Similarities and Differences in English Proficiency: Insights From the ENGLISH Reading Online (ENRO) Project. *Language Learning*, 74(1), 249–294. <https://doi.org/10.1111/lang.12586>
- Siegelman, N., Rueckl, J. G., Bunt, M. van den, Frijters, J. C., Zevin, J. D., Lovett, M. W., Seidenberg, M. S., Pugh, K. R., & Morris, R. D. (2022). How you read affects what you gain: individual differences in the functional organization of the reading system predict intervention gains in children with reading disabilities. *Journal of Educational Psychology*, 114(4), 855–869. <https://doi.org/10.1037/edu0000672>

- Siegelman, N., Rueckl, J. G., Steacy, L. M., Frost, S. J., Bunt, M. van den, Zevin, J. D., Seidenberg, M. S., Pugh, K. R., Compton, D. L., & Morris, R. D. (2020). Individual differences in learning the regularities between orthography, phonology and semantics predict early reading skills. *Journal of Memory and Language*, 114, 104145. <https://doi.org/10.1016/j.jml.2020.104145>
- Sparks, R. L. (2021). Identification and characteristics of strong, average, and weak foreign language readers: the simple view of reading model. *The Modern Language Journal*, 105(2), 507–525. <https://doi.org/10.1111/modl.12711>
- Suzuki, Y., Nakata, T., & He, X. (2024). Efficiency trumps aptitude: Individualizing computer-assisted second language vocabulary learning. *ReCALL*, 37(1), 96–113. <https://doi.org/10.1017/s095834402400020x>
- Uchiyara, T. (2022). How does the test modality of weekly quizzes influence learning the spoken forms of second language vocabulary? *TESOL Quarterly*, tesq.3176. <https://doi.org/10.1002/tesq.3176>
- Uchiyara, T., & Clenton, J. (2023). The role of spoken vocabulary knowledge in second language speaking proficiency. *The Language Learning Journal*, 51(3), 376–393. <https://doi.org/10.1080/09571736.2022.2080856>
- Uchiyara, T., & Harada, T. (2018). Roles of vocabulary knowledge for success in English-medium instruction: self-perceptions and academic outcomes of Japanese undergraduates. *TESOL Quarterly*, 52(3), 564–587. <https://doi.org/10.1002/tesq.453>
- Uchiyara, T., Saito, K., Kurokawa, S., Takizawa, K., & Suzukida, Y. (2024). Declarative and automatized phonological vocabulary knowledge: recognition, recall, lexico-semantic judgment, and listening-focused employability of second language words. *Language Learning*. <https://doi.org/10.1111/lang.12668>
- Vitta, J. P. (2024). Rigor and self-awareness in L2 instructed vocabulary research: A commentary on Isbell and colleagues (2024), Stoeckel and Ishii (2024), and Aizawa (2024). *Vocabulary Learning and Instruction*, 13(2), 2150–2150. <https://doi.org/10.29140/vli.v13n2.2150>
- Yamashita, J. (2022). A commentary on four papers in the second language vocabulary learning strand for the JALT Vocabulary SIG. *Vocabulary Learning and Instruction*, 11(2), 101–113. <https://doi.org/10.7820/vli.v11.2.yamashita>
- Yanagisawa, A., & Webb, S. (2021). To what extent does the involvement load hypothesis predict incidental L2 vocabulary learning? A meta-analysis. *Language Learning*, 71(2), 487–536. <https://doi.org/10.1111/lang.12444>
- Yoshikawa, L., & Yamashita, J. (2014). Phonemic awareness and reading comprehension among Japanese adult learners of English. *Open Journal of Modern Linguistics*, 4(4), 471–480. <https://doi.org/10.4236/ojml.2014.44039>