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Understanding Vocabulary Learning and Teaching: Implications for Language Program Development

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Introduction

Vocabulary Learning and Teaching: Variables, Relationships, Materials, and Curriculum Development

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Vocabulary acquisition is an indispensable part of second language acquisition (L2). It is crucial in the development of overall language proficiency and sub-skills, such as listening, reading, speaking, and writing (Nation, 2013). Learners and teachers of languages will intuitively agree with Wilkins' (1972) frequently cited statement that "while without grammar very little can be conveyed, without vocabulary nothing can be conveyed" (pp. 111–112). Since Wilkins' statement 45 years ago, the learning of words in another language has become a vibrant and interdisciplinary research area. Subsequent linguistic, cognitive, sociocultural, and classroom-focused studies have brought to light the multidimensional nature of vocabulary learning, knowledge, and use.

Yet, Schmitt (2008) has cautioned that many L2 learners are not aware of the complexity of word knowledge and equate learning a new word merely with learning its spoken and written L2 form and its word meaning. Such a limited understanding of the learning task likely confines students' focus to pronunciation, spelling, and L1 to L2 correspondences, thereby diminishing the time and effort they spend on learning words.

What is it that L2 learners need to learn of a specific word?

Although lexical research has resulted in many insights about the learning of L2 words, a theoretically grounded and evidence-based framework to effectively integrate lexical development in an L2 curriculum is still lacking. Nevertheless, most lexical researchers subscribe to a set of empirical findings that testify, in particular, to the challenge of developing a functional lexicon in an instructed learning environment. A functional lexicon generally refers to the ability to access and retrieve words automatically for comprehending and producing ideas in all

four modalities. Such an advanced fluency requires knowledge of multiple aspects of word knowledge that Nation (2001) described as follows:

Word form includes:

- the spoken form (pronunciation), written form (spelling), and word parts (e.g., prefixes and suffixes).

Word meaning includes:

- the availability of the context-specific meaning of a word form (e.g., *file* refers to organizing papers in the context of paperwork, whereas *file* refers to a surface-smoothing tool in the context of fixing or building something);
- the knowledge of concept and referents (e.g., in English the concept of *riding* includes the riding of a horse, bike, and bus); and
- the ability to access associations of words that could be used in a particular context (angry, irate, furious, outraged).

Word use includes the understanding of:

- grammatical functions (e.g., the verb *love* always requires an object, whereas the construction *in love* does not, and if an object is used with the latter the preposition *with* is required);
- conventionalized expressions, such as collocations (one *rides a bike* and does not **drive a bike*); and
- constraints in usage (*a priori* is used in written texts and less in oral discourse).

How much of a vocabulary do L2 learners have to learn?

Researchers and practitioners agree that L2 students need to learn thousands of words in order to become functionally proficient in a language. However, researchers have yet to provide empirical evidence for how many words L2 learners must learn in order to acquire advanced language abilities for specific languages. Research-based estimates for L2 English provide a general idea of what vocabulary knowledge could be required for certain tasks. Corpus studies suggest that 8,000–9,000 word families are necessary for comprehending academic texts in English (Hazenberg & Hulstijn, 1996), while 5,000–7,000 words may be sufficient for oral discourse (Nation, 2006). Although some of the words for reading and oral discourse might overlap, many might not because certain words are only used in written discourse and colloquialisms are only encountered in oral interaction. Thus, it is still quite unclear how many words learners of languages other than English need to know in order to reach a certain proficiency level. Research that correlates L2 learners' overall language proficiency or proficiency in specific language skills with vocabulary knowledge (see Tschirner, Hacking, and Rubio, this volume) may generate data that could allow for more refined estimates of the word knowledge that is needed at different

proficiency levels. Such data will help language program directors specify the vocabulary knowledge that L2 learners are expected to achieve within their programs and curricula.

What are the challenges that L2 learners encounter when learning new words?

One aspect that complicates the calculation of how many words or word families need to be learned is the fact that many words have multiple meanings (polysemy) and many words are used in conventionalized multiword expressions (e.g., collocations, lexical phrases, and phraseologisms etc.). When L2 users encounter words in new contexts, knowing the core meaning of a word is not sufficient, in particular if there is no literal correspondence in any of the other languages they know. For example, if the salesperson in a coffee shop asks, "Room?" the question is not whether the coffee should be charged to the room or whether the coffee should be brought to a specific room, but rather whether the cup should be filled to the brim or if there should be *room for milk*. In other words, L2 learners also have to learn the sociopragmatic meaning of *room*. *Room* not only refers to the walled, physical space in a building but also to the space at the top of a coffee mug. Similarly, the context of use determines the meaning of a word, such as for the phrasal verb *put down*. Students might first learn this phrase's core meaning of physical placement, as in *put the fork down* (place the fork on the table) or *put the baby down* (put the baby in the crib to sleep), before learning its metaphorical extensions, such as *put the dog down* (euthanize the dog) or *put someone down* (talk negatively about them). For learners of English, the task is to expand and refine the meaning of the multiword form *put down*. In contrast, native speakers of English who are learning another language might need to learn word forms for which the form–meaning pair overlaps between their L1 and the L2. English learners of L2 German, for example, can frequently rely on such a correspondence. Both languages have corresponding verbal forms for the physical placement of *putting down*. Germans use the verb *hinlegen* for the context of *putting down the baby and the fork*. In contrast, they use *einschläfern* in the context of euthanizing a dog and *herabsetzen* for talking negatively about a person. Boogards (2001) demonstrated that the learning effort is higher for learning a new form as compared to learning an additional meaning for an already familiar form. That is, depending on the L1, other languages a student knows, and the target L2, the learning effort required for individual polysemous words can vary widely. Determining which of the conventionalized expressions are congruent between the L1(s) and the target language is mostly unpredictable for learners.

Nonetheless, L2 learners start acquiring individual word forms by automatically adopting one meaning that they assume corresponds to a translation equivalent from the L1 or another L2 (Hall & Ecke, 2003). While this assumption will often be correct, it can lead to the construction of erroneous lexical representations if there is no equivalence, or no precise equivalence, in meaning or in the grammatical function of the word pairs in question (Hall, Newbrand, Ecke, Sperr,

Marchand, & Hayes, 2009; Jiang, this volume). Formal similarity of new words with known L1 or L2 words (as in cognates or false cognates/false friends) will often strengthen learners' postulation of meaning equivalence (Hall, 2002). This will make it relatively easy to learn cognates, but it can also lead to errors if there is a difference in meaning and/or grammatical specification between the word pairs perceived as equivalents. For example, the Spanish word *tuna* does not refer to the fish *tuna* as in English but to the cactus species *prickly pear*. The German verb *warten* (wait) does not subcategorize the preposition *für* (for) as in English *waiting for*. Instead, it requires the preposition *auf* (on). Such cases of partial similarity and difference are predestined to cause problems for L2 learners. Models of L2 vocabulary acquisition have sketched out the underlying processes that affect success or failure in the learning of new individual words in second and subsequently learned languages as well as the role played by formerly established lexical representations from L1 and L2 in the acquisition process (e.g., Ecke, 2015; Hall & Ecke, 2003; Jiang, 2000). Learners detect and use similarity between new and known words and use this similarity effectively to reduce the learning burden. Based on partial similarity, they assume overall equivalence, which will help them build and use temporary representations but may also result in the construction and use of deviant lexical structures (errors). While textbooks frequently explain how useful cognates are for comprehending and using the target language, they generally neglect to point out that learners need to attend to congruent, partially congruent, and incongruent aspects between the target language and other languages they know. Providing students the tools to notice word aspects helps them to learn words more effectively.

For efficient learning (and encoding in memory) a thorough understanding of the letter-sound correspondences of the target language is crucial. Gardner (2013) has provided the example of learning the French word for appetizer *hors d'oeuvres*. He explains that if learners are not familiar with the French letter-sound correspondence they might encode the word as *horse devors* instead of using the correct pronunciation *ordurves*. If the word is initially encoded incorrectly, restructuring to accommodate the correct pronunciation will require additional learning effort. Meanwhile, learners might miss valuable input opportunities to strengthen the lexical entry in long-term memory. Likewise, learners' incorrect pronunciation might lead to miscommunication. Consequently, an early focus on the letter-sound correspondence of the L2 can help students encode and learn words independently.

How do L2 learners successfully acquire thousands of words?

Considering the large number of words that L2 learners need to master, the general assumption is that students need to become independent learners by either immersing themselves into the target culture through study abroad (e.g., Kinginger, 2013), engaging in mass reading (e.g., Luppescu & Day, 1993), or watching TV shows (e.g., Peters, 2018). The three types of language immersion,

however, can only be fruitful if learners have a basic vocabulary they can draw on (e.g., Grabe & Stoller, 2002) to comprehend the majority of the input and infer the meanings of unfamiliar word forms. For the comprehension of written texts, the ballpark figure that has generally been accepted as a baseline vocabulary is 3,000 word families (Nation, 2006). The advantage of learning words in natural use contexts and thereby encountering and processing multiple form, meaning, and use patterns (Nation, 2001) can be offset by the need to frequently encounter and process a given word. Repeated, long-term exposure to new words can be enhanced through explicit learning exercises using targeted instructional materials. In order to maximize learning time spent on each word, it is useful to create varied materials that target the learning of specific word aspects most useful for each word. The aspect of fluency (in comprehension and production) should play an important role in teaching and materials design, because fluency requires repeated practice opportunities.

What are the challenges for L2 vocabulary teaching and program development?

It becomes obvious that language program directors have to keep many specific linguistic and learning aspects in mind when outlining an effective lexical curriculum. Therefore, choosing a textbook for a language program sequence can only be the starting point for building a goal-oriented program. Obviously many textbooks are written for a generic learner population with general learning goals. Yet student populations are becoming increasingly diverse. Students might know multiple languages, have studied abroad, have friends who speak the target language, or, in turn, might not have any experience with the target language community at all. Also, the length of study can vary widely among students. While some students might just start as beginners in the program, others might have studied the target language previously in other learning settings. Although previous learning experiences cannot predict future learning, there is certainly a difference between learners who start completely anew with a language and learners who can reactivate some words, grammar, pronunciation, reading, speaking, and writing experiences. Naturally, a diverse student population potentially leads to a set of varied learning goals, such as for career advancement, a specific profession, travel, heritage exploration, or academic study. Consequently, decisions need to be made about which words to teach and which word aspect(s) to focus on first.

Few textbooks distinguish between words that mainly serve comprehension purposes and need to be known receptively and words that need to be learned for productive use. Instead, normally all words are treated equally in L1–L2 word pair lists. Thematic sets of words are often chosen because of topics that serve the learning of a particular grammatical structure. For example, in German the learning of reflexive verbs is frequently introduced with the topic of daily hygiene, a topic with very low communicative relevance because shaving, showering, and putting on lotion and makeup are rarely discussed in public and with people who are not close acquaintances. Likewise, textbooks usually do not address word learning strategies

for students who already speak multiple languages. Accordingly, Nation (2007) has pointed out that teachers and curriculum developers need to fine-tune learning affordances provided in textbooks and create lexical assignments that target a specific student population and institution-specific program goals.

What is the contribution of this volume?

Given the essential nature of vocabulary in language learning and use and the magnitude of the lexical learning task, it seems surprising that none of the 28 past volumes of *Issues in Language Program Direction* have focused on vocabulary learning and teaching in second language programs. We will fill this gap with this volume and a series of contributions that present research findings to a broad audience that goes beyond researchers working in the field of vocabulary acquisition. Like previous AAUSC volumes, this collection of articles is addressed primarily to language program directors, teacher trainers, graduate students, teaching assistants, and language teachers as well as second language textbook authors and material developers. The volume provides insights into vocabulary learning mechanisms and discusses how these insights are relevant to improved vocabulary development, classroom teaching, material and textbook design, and curriculum development. The studies in this volume provide only a glimpse into the lexical research work that lies ahead.

We have grouped the nine contributions into two (related) parts: (a) Vocabulary Learning and Use: Variables and Relationships and (b) Vocabulary Teaching, Materials, and Curricula. In the first chapter, "Semantic Development and L2 Vocabulary Teaching," Nan Jiang explains what the process of developing a new semantic system involves. Using error examples from learners of Chinese and other languages, he demonstrates how challenging it is to assign the correct meaning to new L2 word forms. He shows in what ways the L1 and L2 semantic systems may differ, explains how the L1 system will often interfere with the development of an L2 system, and provides suggestions for pedagogical strategies that instructors may use to facilitate the assignment of meaning to new L2 word forms.

In the second chapter, "Supporting Your Brain Learning Words," Ulf Schuetze discusses how vocabulary learning is affected by memory, selective attention, and the senses. He reviews relevant research findings from cognitive psychology, neuropsychology, and applied linguistics, and based on these, provides suggestions for effective vocabulary learning and teaching.

In the third chapter, Maria Rogahn, Denisa Bordag, Amit Kirschenbaum, and Erwin Tschirner present the empirical study "Minor Manipulations Matter: Syntactic Position Influences the Effectiveness of Incidental Vocabulary Acquisition During L2 Reading." The study investigates how a word's position in a sentence may affect incidental vocabulary learning through reading. It reveals an acquisition advantage for the meanings of new words that appear as subjects in main clauses compared to those that appear as objects in subordinate

clauses in German as an L2. The finding has important implications for material development and effective vocabulary presentation: presenting new to-be-learned words in subject position is likely to be more effective than presenting them in less prominent positions in a sentence.

In the fourth chapter, "The Relationship Between Reading Proficiency and Vocabulary Size: An Empirical Investigation," Erwin Tschirner, Jane Hacking, and Fernando Rubio investigate the relationship between the reading proficiency and vocabulary knowledge of L2 learners of German, Russian, and Spanish. They found that the Advanced Mid/Advanced High levels of reading proficiency at the ACTFL scale were associated with a vocabulary size of 4,000 to 5,000 words for all three languages, far fewer than the 8,000 to 9,000 words that vocabulary researchers commonly assume to be necessary at this level (Nation, 2006). The finding is encouraging, as it implies that knowing 4,000–5,000 words at the end of a four-semester course sequence may be sufficient for students to comprehend a wide variety of texts. The authors recommend that language program directors provide a well-articulated sequence of vocabulary learning objectives throughout beginning, intermediate, and advanced-level courses and that the first courses should focus on the teaching of the 1,000 most frequent words.

In the fifth chapter, "Vocabulary Coverage and Lexical Characteristics in L2 Spanish Textbooks," Claudia Sánchez-Gutiérrez, Nausica Marcos Miguel, and Michael K. Olsen demonstrate that current textbooks are far from providing the adequate, articulated, and frequency-oriented approach to vocabulary teaching that is recommended by Tschirner et al. in chapter four. Sánchez-Gutiérrez and colleagues analyzed glossaries from 16 Spanish textbooks to determine the books' coverage of the 3,000 most frequent words in Spanish, the length and concreteness of the included words, and how these attributes varied between elementary and intermediate textbooks. Whereas words in intermediate textbooks were shown to be significantly longer and less concrete than words in elementary textbooks, thereby demonstrating a reasonable progression in complexity, the textbooks (at both levels) did a poor job presenting learners with the 1,000 most frequent Spanish words. The study is a call for textbook authors and language program directors to take word frequency seriously and as a guiding criterion for the selection and presentation of vocabulary in teaching materials.

Like the authors of the previous chapter, Jamie Rankin in chapter six is concerned with the inadequate provision of high-frequency words, this time, however, in German textbooks (see Lipinski, 2010). In "*der|die|das*: Integrating Vocabulary Acquisition Research into an L2 German Curriculum" Rankin describes a collaborative project that addresses the lack of high-frequency words in textbooks. In the project, the student and teacher participants develop a lexically focused curriculum for beginning German that selects its core vocabulary from a frequency list of German (Jones & Tschirner, 2006). It also describes how the presentation and review mechanisms were designed and informed by research on

vocabulary acquisition and retention. It is an example of how vocabulary research may inform and reform instructional praxis and L2 curriculum development.

Nina Vyatkina's contribution in chapter seven is another example of how research-informed (data-driven) learning can be integrated into language program curricula. In "Language Corpora for L2 Vocabulary Learning: Data-Driven Learning Across the Curriculum" the author describes how learning with an open access German language corpus has been used across the curriculum in a German Studies program at a U.S. university. She reports empirical results that show how data-driven learning can help learners improve the breadth and depth of their L2 vocabulary knowledge. She also suggests pedagogical activities with corpora to enhance L2 vocabulary knowledge at different proficiency levels. Although she uses a German program as a case study, her pedagogical suggestions can be applied to the teaching of any language for which open access corpora are available.

In chapter eight, "Setting the Lexical EAP Bar for ESL Students: Lexical Complexity of L2 Academic Presentations," Alla Zareva investigates the productive vocabulary of very advanced learners of English as a second language and how this vocabulary compares to that of L1 users. She explores what constitutes lexical complexity and to what extent its subcomponents—lexical density, lexical sophistication, and lexical diversity—are related in the vocabulary of academic presentations. Zareva finds that the lexical complexity of the L2 learners and L1 users under investigation is similar and that each of the subcomponents of lexical complexity adds unique information to the overall lexical complexity profiles of student presentations. She recommends the three-dimensional approach to lexical complexity as well as the use of free software to assess lexical complexity for learners, teachers, and material developers.

In chapter nine, "The Input-Based Incremental Approach to Vocabulary in Meaning-Oriented Instruction for Language Program Directors and Teachers," Joe Barcroft describes the tenets of input-based incremental (IBI) vocabulary instruction (Barcroft, 2012). These include (a) planning for vocabulary-learning opportunities; (b) presenting target words as input in particular ways while considering research findings and theoretical advances on lexical input processing; (c) specifying how different types of tasks promote different types of processing and, in turn, different aspects of vocabulary knowledge; (d) respecting the incremental nature of developing vocabulary knowledge; and (e) promoting learning of all aspects of vocabulary knowledge, including language-specific meanings and usage, over time. This chapter explains how language program directors and instructors can integrate the IBI approach in their programs to increase vocabulary learning in a theoretically grounded and evidence-based manner.

We hope that the contributions of this volume will spark reflection and discussion among researchers, program directors, teachers, and graduate students and contribute to the implementation of research-informed practices in curriculum design, material development, and the teaching and learning of second language vocabulary.

References

Barcroft, J. (2012). *Input-based incremental vocabulary instruction*. Alexandria, VA: TESOL International.

Boogards, P. (2001). Lexical units and the learning of foreign language vocabulary. *Studies in Second Language Acquisition*, *23*, 321–343.

Ecke, P. (2015). Parasitic vocabulary acquisition, cross-linguistic influence, and lexical retrieval in multilinguals. *Bilingualism: Language and Cognition*, *18*, 145–162.

Gardner, D. (2013). *Exploring vocabulary: Language in action*. New York, NY: Routledge.

Grabe, W., & Stoller, F. L. (2002). *Teaching and researching reading*. Harlow, UK: Longman.

Hall, C. J. (2002). The automatic cognate form assumption: Evidence for the Parasitic Model of vocabulary development. *International Review of Applied Linguistics*, *40*, 69–87.

Hall, C. J., & Ecke, P. (2003). Parasitism as a default mechanism in vocabulary acquisition. In J. Cenoz, B. Hufeisen, & U. Jessner (Eds.), *The multilingual lexicon* (pp. 71–85). Dordrecht, Netherlands: Kluwer.

Hall, C. J., Newbrand, D., Ecke, P., Sperr, U., Marchand, V., & Hayes, L. (2009). Learners' implicit assumptions about syntactic frames in new L3 words: The role of cognates, typological proximity and L2 status. *Language Learning*, *59*, 153–202.

Hazenberg, S., & Hulstijn, J. H. (1996). Defining a minimal receptive second-language vocabulary for non-native university students: An empirical investigation. *Applied Linguistics*, *17*, 145–163.

Jiang, N. (2000). Lexical representation and development in a second language. *Applied Linguistics*, *21*, 47–77.

Jones, R. L., & Tschirner, E. (2006). *Frequency dictionary of German*. London, United Kingdom: Routledge.

Kinginger, C. (2013). Identity and language learning in study abroad. *Foreign Language Annals*, *46*, 339–358.

Lipinski, S. (2010). A frequency analysis of vocabulary in three first-year textbooks of German. *Die Unterrichtspraxis*, *43*, 167–174.

Luppescu, S., & Day, R. R. (1993). Reading, dictionaries, and vocabulary learning. *Language Learning*, *43*, 263–287.

Nation, I. S. P. (2001). *Learning vocabulary in another language*. Cambridge, UK: Cambridge University Press.

Nation, I. S. P. (2006). How large a vocabulary is needed for reading and listening? *Canadian Modern Language Review*, *63*, 59–82.

Nation, I. S. P. (2007). The four strands. *Innovation in Language Learning and Teaching*, *1*, 2–13.

Nation, I. S. P. (2013). *Learning vocabulary in another language* (2nd ed.). Cambridge, UK: Cambridge University Press.

Peters, E. (2018). The effect of out-of-class exposure to English language media on learners' vocabulary knowledge. *International Journal of Applied Linguistics*, *169*, 142–168.

Schmitt, N. (2008). Instructed second language vocabulary learning. *Language Teaching Research*, *12*, 329–363.

Wilkins, D. (1972). *Linguistics in language teaching*. London, UK: Arnold.