After the First 2,000: A Response to Horst's "Mainstreaming Second Language Vocabulary Acquisition"

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Abstract

This paper is a response to Horst's (2013) proposal that language teaching should incorporate opportunities for English language learners to acquire the 2,000 most frequent word families in English. She does this by setting out the vital role vocabulary plays in English language proficiency, outlining how knowing high frequency vocabulary unlocks English language proficiency, and establishing why vocabulary learning opportunities need to be part of classroom instruction. Horst's argument creates a convincing lexical goal for English language learners because it is these first 2,000 word families that will create the foundation for the future vocabulary growth necessary to engage independently in increasingly complex language tasks. However, knowledge of the most frequent 2,000 word families in English is only the first threshold to eventually becoming a proficient user of English. Once the first 2,000 word families are part of an English language learner's vocabulary, there remain further lexical thresholds to cross on the way to increasing levels of English language proficiency.

Résumé

Cet article est une réponse à la proposition de Horst (2013) que l'enseignement de l'anglais langue seconde doit intégrer des occasions pour les étudiants d'acquérir les 2 000 familles de mots les plus fréquentes en anglais. Elle décrit le rôle vital que joue le vocabulaire dans la maîtrise de la langue anglaise, comment la connaissance du vocabulaire de haute fréquence permet la maîtrise de la langue anglaise et pourquoi l'apprentissage du vocabulaire doit faire partie de l'enseignement en classe. L'argument de Horst est convaincant pour les apprenants de langue seconde parce que les premières 2 000 familles de mots créent les bases de la croissance future du vocabulaire qui leur seront nécessaires pour s'impliquer de façon automatique dans des tâches langagières plus complexes. Cependant, la connaissance des 2 000 familles de mots les plus fréquentes en anglais n'est que le premier seuil pour devenir un utilisateur avancé de l'anglais. Après que les 2 000 premières familles de mots font partie du vocabulaire d'un étudiant d'anglais langue seconde, il reste d'autres seuils lexicaux à franchir sur le chemin de l'augmentation des niveaux de compétence en langue anglaise.

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Introduction

As Horst (2013) pointed out, since the beginning of the 1980s, vocabulary research has been increasingly recognized as a field of worthwhile academic endeavour, but for language teacher education and language teaching in general, a principled focus on vocabulary appears to remain on the margins. Horst's article serves to mitigate this marginalization and bring vocabulary research into the language classroom by emphasizing the importance of employing the frequency principle to plan a program of vocabulary instruction. Her work further underscores how corpus-based research supports the employment of the frequency principle. Out of this analysis comes the conclusion that the 2,000 most frequent word families in the English language bring tremendous benefits for English language learners, exposing them to a relatively large number of English vocabulary items that they encounter when using the language. However, this principled approach to vocabulary still appears to be missing in the majority of classroom input, such as teacher talk, textbooks, and student materials. Horst's article focuses attention on this fact and points the way to recognising the centrality of vocabulary acquisition within general English language acquisition. The 2,000 word families proposed by Horst are an excellent start for English language learners as these word families will unlock much of the proficiency that is needed for these learners to acquire communicative language proficiency. However, with just 2,000 word families, academic language proficiency is still out of reach for these learners. Understanding the lexical thresholds that lie beyond the 2,000 most frequent words is imperative for a long-term understanding of how the vocabulary strand of a comprehensive English language program of studies should unfold.

A Similar Vocabulary Journey

Horst's (2013) anecdotes of teaching in Egypt and Oman vividly brought back my own teaching experiences overseas and my first intimations that vocabulary was an important underlying variable in language proficiency. I remember once in the early 2000s I was crossing the campus of the university I taught at in Japan. Just before I entered the building where I was to teach my next class, there was one of my students, Rie (name changed), sitting on the ground holding a book and crying. This was one of the most outgoing students in my English Communication class. She was always eager to share her stories, and her English communication skills were particularly well developed. I could see that she took a quiet pride in her ability to take part in my class, and that much of her identity was wrapped up in being known as a good English student. However, there she was, crying silently to herself. I gently inquired as to what was the matter, and she sobbed out that she could not understand and she handed me a book. It was the unabridged and unadapted version of Orwell's *1984*. In other words, it was the same book that I had first read in my high school literature class designed for students from English speaking backgrounds. I randomly opened it up to the first chapter, and I was immediately struck by a sea of translation. Above every third or fourth word were the Japanese *kanji* equivalents. It appeared that much of the book remained beyond Rie's current set of English vocabulary knowledge. For someone hitherto considered an advanced user of English, it must have

been devastating to find that after years of English study, she was not able to read the novel set in her English literature class.

In her analysis of the power of knowing 2,000 frequent word families, Horst (2013) presented data from Laufer (2000) indicating that a Japanese university student might have a total of 2,000 vocabulary words after 800-1,200 hours of instruction. Horst qualified this number by hypothesizing that those 2,000 words would be from a range of vocabulary frequencies, and there would not be a solid understanding of the first 2,000 most frequent English word families. However, assuming knowledge of the 2,000 most frequent word families, a closer look can be taken at the novel Rie had been assigned to read. Analysing 107 running words taken from the first chapter of Orwell's *1984* with VP Complete BNC-20 (available on www.lextutor.ca), reveals what vocabulary would be accessible to a reader with knowledge of only the 2,000 most frequent word families in English:

> Were there always these ███ of █████ nineteenth-century houses, their sides ██████ up with ████ of █████, their windows patched with ███████ and their roofs with ████████ iron, their ███ garden walls ██████ in all directions? And the bombed sites where the ██████ dust ██████ in the air and the █████-██ ████████ over the ███ of █████; and the places where the bombs had cleared a larger patch and there had sprung up ██████ ████████ of wooden ███████ like chicken-houses? But it was no use, he could not remember: nothing remained of his childhood except a series of bright-lit ███████ occurring against no background and mostly ██████████. (Orwell, 2004, pp. 9-10)

Interestingly enough, knowledge of the 2,000 most frequent word families found in the British National Corpus (BNC) provides coverage of around 81% of the text in the above excerpt from Orwell's *1984*. This is close to the 80% coverage mentioned by Horst (2013). Yet, Rie was still reduced to tears by her frustration in not being able to make meaning of the text. Rie knew that she needed to know more vocabulary to understand the book, and she implored me to give her advice on how to improve her English. Having just recently come out of an MEd program, I was sure that I knew most of the answers, but as I shared with her advice on guessing meaning from context, sketched out a flow chart on what to do when new vocabulary is encountered, encouraged her to skip words she didn't know, recommended she try reading for the general gist, begged her to stop translating word for word, and had her promise to only use monolingual dictionaries (as a last resort), I had a sinking feeling that my pedestrian advice would have very little impact on her immediate requirement to read and understand Orwell's *1984* in order to write a paper about it in English. Even worse, I knew that my strategy-based advice was not what she needed to free herself from a conscious and belaboured act of reading in order to permit her to enter Orwell's dystopian world without restraint. Instead, my advice on employing vocabulary strategies was more a pedagogical refuge from the daunting reality that automatic knowledge of thousands of word families was needed to read this novel.

Cummins's (1981) conception of four stages of language acquisition as interpreted by Roessingh (2006) can provide a useful framework for understanding what was going on with Rie's vocabulary acquisition and why she was able to perform so well in my English Communication class, but was basically unable to read a novel that was a common required text for high school students from English speaking backgrounds. Figure 1 illustrates Cummins's (1981) four stages of language acquisition as interpreted by Roessingh (2006),

and how these stages are created by two intersecting continua representing cognitive challenge and contextualization. The first two stages, that of cognitively undemanding and context embedded language and that of cognitively undemanding and context reduced language make up the language of Basic Interpersonal Communication Skills (BICS). This language represents communicative language proficiency, and much of a person's daily communication can be undertaken with 2,000 to 3,000 word families. This is also recognised by Horst (2013) when she referred to Nation's (2001) contention that knowledge of 2,000 frequent word families and proper nouns can provide up to 95% coverage of spoken language. It seems that Rie had the communicative language proficiency of roughly 2,000 words that enabled her to do well in my English Communication class. However, the novel *1984* represented a different type of language proficiency that falls into Cummins's (1981) categorization of Cognitive Academic Language Proficiency (CALP). CALP is language use that is increasingly decontextualized and cognitively challenging. It is academic language proficiency unlocked by knowledge of many thousands of word families of decreasing frequency in the English language. It is the language ability that is typically out of reach of English language learners with a limited set of vocabulary knowledge. As a result, English language learners can be communicatively fluent and able to describe their here and now as well as their lived experience, but words may escape them when they attempt to engage with the cognitively challenging and decontextualized language of academic endeavour.
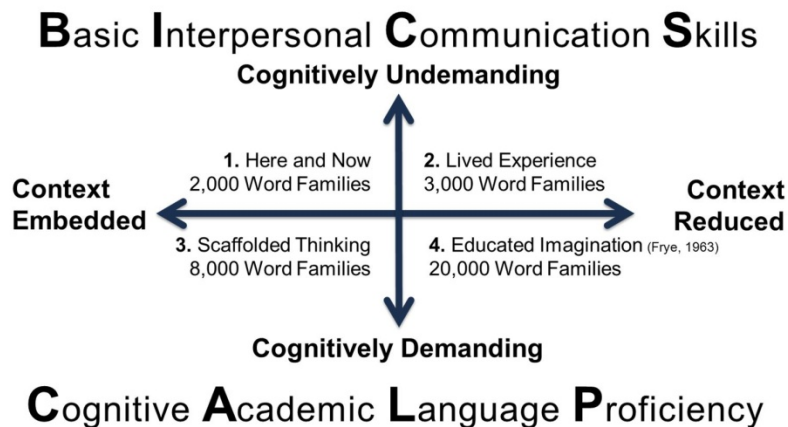

Figure 1. The BICS-CALP framework (Cummins, 1981; Douglas, 2010; Roessingh, 2006).

After two years of teaching at a Japanese university, I returned to Canada and started teaching English for Academic Purposes (EAP) at a large research-intensive university. These experiences also parallel those described by Horst (2013). Her experiences at Sultan Qaboos University in Oman reminded me of how my own EAP students, similar to hers, faced the challenge of eventually needing to be able to read undergraduate level textbooks in credit-bearing university content courses. While my students were able to effectively understand the scaffolded and modified English in our EAP textbooks, there appeared to be a vast lexical gap between what was demanded in those EAP textbooks and the readings students would eventually have assigned to them by their future university professors. The passage "Exploring the Arctic" presented by Horst

serves as an example of the gap that exists between instructional/testing materials and undergraduate textbooks designed for English-medium programs of study.

As Horst (2013) pointed out, knowledge of 2,000 frequent word families provides almost 96% coverage of the "Exploring the Arctic" text. She further pointed out how this coverage nears the 98% threshold recommended by Nation (2006) as necessary to facilitate the use of lexical acquisition strategies such as guessing the meaning of unknown vocabulary from context. However, understanding a reading passage such as "Exploring the Arctic" is just the first step towards being eventually able to read independently at the undergraduate level. A comparative excerpt in length and topic to the "Exploring the Arctic" excerpt can be taken from *Environmental Change & Challenge, 4th Edition* (Dearden & Mitchell, 2012), a textbook used by Bernier (2013) and Canessa (2013) for their first year undergraduate courses:

A second <u>hypothesis</u> builds on this idea but suggests that as populations of small animals such as <u>lemmings</u> increase, then more <u>nutrients</u> <u>vital</u> to plant productivity become tied up in this higher <u>trophic</u> level. This lack of <u>nutrients</u> causes reductions in plant productivity and quality, leading to <u>starvation</u> for the <u>herbivores</u>.

Other ideas <u>postulate</u> more of an <u>interaction</u> between the <u>predators</u> and <u>prey</u>. Keith et al. (1984) studied the <u>ecology</u> of <u>snowshoe</u> <u>hares</u> in northern Alberta to test a food supply-<u>predation</u> <u>hypothesis</u>. It suggested that food supply shortages <u>halt</u> populations of <u>herbivores</u> that are <u>subsequently</u> caught by <u>predators</u> until numbers fall enough to permit plant recovery. Keith et al. reported that <u>malnutrition</u> of <u>hares</u> was <u>evident</u> but that <u>predators</u> caused 80 to 90 percent of deaths, <u>thereby</u> supporting the <u>hypothesis</u>.

The final idea suggests that food supplies play a <u>negligible</u> role in population cycles and that these cycles would not occur in the <u>absence</u> of <u>predators</u> (Trostel et al., 1987). Scientists have found that sudden drops in <u>hare</u> populations occur despite <u>supplementary</u> feeding programs, a finding that would appear to support this <u>hypothesis</u> (Smith et al., 1988). (Dearden & Mitchell, 2012, p. 62)

Considerably more low frequency lexical items from beyond the 2,000 most frequent word families are underlined in the Dearden and Mitchell (2012) text above than in the "Exploring the Arctic" excerpt. While the analysis with the Web VP BNC-20 software (available at www.lextutor.ca) demonstrates that readers with knowledge of 2,000 frequent word families would have access to 96% of the "Exploring the Arctic" text, those same readers with that knowledge of 2,000 frequent word families would only have access to 76% of the Dearden and Mitchell (2012) excerpt. Seventy-six per cent is far below the 98% put forth by Nation (2006) as facilitating independent comprehension of a reading passage. In the Dearden and Mitchell excerpt, lexical choices from the 12,000 most frequent words in the BCN are required to almost reach the 96% coverage similarly covered by 2,000 word families in the "Exploring the Arctic" excerpt. It appears that once the 2,000 most frequent vocabulary words have been mastered by English language learners, those English language learners who are aiming for academic English language proficiency still have thousands of words left to acquire.

Vocabulary as an Underlying Variable to English Language Proficiency

Horst's (2013) identification of vocabulary knowledge as being essential for academic achievement is an important justification for acquiring 2,000 frequent word families. There is a strong relationship between vocabulary knowledge and reading comprehension at all levels of language proficiency (Nassaji, 2003; Stanovich, 1986, 2000; Verhoeven, 2000). Receptive vocabulary knowledge is key to reading comprehension. In turn, reading comprehension is key to academic success (Cobb & Horst, 2001; Corson, 1997; Coxhead & Nation, 2001; Nation, 2001). This is particularly true for university-bound English language learners who are going to be faced with heavy reading demands as they engage in their undergraduate studies. There is also an intimate relationship between vocabulary, writing, and academic success. An increasingly skilled use of vocabulary in writing leads to the better generation, development, and deployment of ideas (Engber, 1995; Grabe, 1985; McNamara, Crossley, & McCarthy, 2010; Raimes, 1983, 1985). Highly rated writing samples typically contain a rich use of vocabulary (Laufer & Nation, 1995), and lower rated writing samples are often marked by simpler vocabulary (Cobb, 2003; Hinkel, 2003). Assessment of writing quality is negatively impacted by a diminished use of vocabulary (Roessingh, 2008). Furthermore, just as undergraduate students are faced with a heavy reading load in their academic studies, there is also a heavy writing load. A skilled use of vocabulary in writing is necessary for students to demonstrate their content knowledge. As a result, writing and the ability to use vocabulary effectively contribute to academic success (Nation, 2008). All of these studies serve to strengthen Horst's assertions regarding the primacy of vocabulary in English language proficiency.

The Importance of Knowing 2,000+ Frequent Families

As identified by Horst (2013), automatizing the 2,000 most frequent word families is vitally important. However, it is the first step to passing the higher thresholds of lexical understanding needed for independent reading and writing in English. As mentioned by Horst, Coxhead (2000) created a corpus of 414 academic texts such as academic articles, book chapters, laboratory manuals, and university textbooks. From this, Coxhead was able to establish that 76.1% of the corpus was covered by 2,000 frequent word families, with a further 10% of the corpus covered by 570 word families which Coxhead identified as the Academic Word List (AWL). Thus, about 86% of a typical academic text that students may be expected to encounter is covered by 2,570 word families. While this is a great start, it does not yet unlock the independent reading of those texts. This inability to independently make meaning and engage with the texts may be due to the fact that 86% understanding of a text results in students encountering an unfamiliar word 1 in 7 times. The cognitive engagement with the text is constantly being interrupted to search for meaning. Furthermore, 86% knowledge of a text is not ideal for instruction either. Having to explain approximately 140 unknown vocabulary words in a 1,000 word text is unlikely to lead to much lexical retention or meaningful engagement with the author's intent.

Laufer and Ravenhorst-Kalovski (2010) pointed to 95% coverage as a better suited target for instructional purposes, and identified 4,000 to 5,000 word families as being needed to cover 95% of the average text that students might encounter during their studies. At this level of coverage, students are meeting unknown words 1 in 20 times in a text. Students are starting to have a fighting chance at making meaning of a text, and these texts

are more in line with an instructional level sitting between what students can do with scaffolding and instruction and what they can do on their own. Furthermore, with less unknown words, teachers can turn to the frequency principle to begin expanding students' lexicons further into what has been called mid-frequency vocabulary, with mid-frequency vocabulary being defined by Schmitt and Schmitt (2012) as those word families found in the 3,000 to 9,000 word family bands of decreasing frequency in the BNC.

Beyond the 95% mark, 98% coverage has been identified as being ideal for independent reading (Laufer & Ravenhorst-Kalovski, 2010; Nation, 2001, 2006; Schmitt, Jiang, & Grabe, 2011). At this point, students are only encountering unknown vocabulary 1 in 50 times as they read. However, to reach 98% coverage of an average text requires knowledge of 8,000 to 9,000 word families (Laufer & Ravenhorst-Kalovski, 2010; Nation, 2006; Schmitt, Jiang, & Grabe, 2011; Schmitt & Schmitt, 2012). The difference between 86% coverage and 98% coverage requires an increased knowledge of about 6,000 word families.

To summarize, students would struggle reading the texts they may encounter for academic purposes with knowledge of only 2,000 frequent word families. Knowledge of 2,000 frequent word families and the 570 word families of the AWL would gain them a bit better coverage (Coxhead, 2000), but they would face overwhelming challenges; 4,000 to 5,000 frequent word families would be better suited for instructional level texts (Laufer & Ravenhorst-Kalovski, 2010), and 8,000 to 9,000 word families would contribute to unlocking independent reading (Laufer & Ravenhorst-Kalovski, 2010; Nation, 2006; Schmitt, Jiang, & Grabe, 2011). Having knowledge of higher numbers of word families is beneficial because as a reader's vocabulary increases, that vocabulary contributes to an automatized comprehension of the words in a text. Thus, cognition can be used to critically and freely engage with a text's topic rather than be tied down with word level decoding of meaning.

As with reading, 2,000 frequent words of vocabulary are also a strong foundation to writing. However, the ability to only deploy 2,000 frequent words of vocabulary will restrict students' ability to provide evidence of their learning and convey precise meaning. The 2,000 most frequent word families in English only cover about 88% of a typical essay written by an undergraduate student with novice university level writing competency (Douglas, 2013). To reach an instructional level of 95% coverage, the ability to deploy word families that tap into about 3,000 of the most frequent word families in the BNC is needed. This would afford English language learners the capacity to produce 19 out of 20 of the word families to which their more proficient peers have access. To reach an independent writing level of 98% coverage, the ability to deploy word families that tap into about 5,000 of the most frequent word families in the BNC is needed in order to afford English language learners the capability to produce 49 out of 50 of the word families to which their more proficient peers have access (Douglas, 2013). Once again, the lexical demands of higher education outstrip the productive knowledge of 2,000 frequent word families. Thus, as with reading, automatic access to greater numbers of word families facilitates expression and frees up cognitive space to engage deeply with a topic. Table 1 summarizes the vocabulary thresholds for making meaning receptively and productively on entry to higher education.

Table 1

Lexical Thresholds for Comprehension and Production (Coxhead, 2000; Douglas, 2013; Laufer & Ravenhorst-Kalovski, 2010; Nation, 2006; Schmitt, Jiang, & Grabe, 2011)

Word Families	Receptive Coverage	Productive Coverage
2,000	76%	88%
2,570	86%	94%
3,000	---	95%
4,000-5,000	95%	---
5,000	---	98%
8,000-9,000	98%	---

Lexical Opportunity and Intention

Horst (2013) provided a thorough overview of the vocabulary learning opportunities, or lack of opportunities, that are found in classroom input. As a result of this overview, she advocated a planned approach to teaching vocabulary that is both intentional and based on the frequency principle. Horst maintained that in order for lexical acquisition to take place, target vocabulary must occur in the input, and it must occur repeatedly. Furthermore, Horst reviewed Hulstijn and Laufer's (2001) assertion that cognitively demanding encounters with vocabulary are the most powerful, and Webb's (2007) proposal that 10 lexical exposures contributes to the retention of new vocabulary. Unfortunately, it seems that most vocabulary instruction is neither intentional nor organized according to the frequency principle. While much classroom time is devoted to vocabulary instruction, Horst has described what could be called an itinerant or a picaresque approach to teaching vocabulary. In one study described by Horst, Collins, White, and Cardoso (2010), teachers jump from lexical item to lexical item as they arise in class without prioritizing them according to frequency nor taking advantage of opportunities to recycle them. Furthermore, Horst (2013) pointed out that few textbooks support the acquisition of high frequency vocabulary in an intentional and principled manner, with a lack of recycling being evident. As a result, Horst highlighted the idea that while much effort is put into vocabulary learning, it is unlikely that those words will be retained because of the lack of intentionality and repetition.

In response to this conundrum of high lexical effort with little pay off, Horst (2013) proposed a frequency-informed vocabulary pedagogy as a solution. A frequency-informed lexical pedagogy can contribute to the recycling of large amounts of high frequency vocabulary as well as indicate what vocabulary to target. As Horst maintained, it can provide the core vocabulary of a language, thus covering 85% of words learners may encounter. This is a solid start for BICS level vocabulary. These high frequency words will facilitate English language learners' ability to describe their here and now as well as recount their lived experience. However, as English language learners find themselves using English for increasingly decontextualized and cognitively challenging tasks, the vocabulary demand will intensify and an increased number of automatized word families will need to be at hand.

Horst (2013) pointed to course books as a source of vocabulary and the need for them to subscribe to the frequency principle and commit to the recycling of key lexical

items. In particular, Horst reviewed the *Touchstone* series (McCarthy, McCarten, & Sandiford, 2005) as adhering to this approach. Other series as well have begun to be informed by the frequency principle and the conscious need to recycle vocabulary to encourage retention. For example, the *Q: Skills for Success* series from Oxford University Press (Scanlon et al., 2011) runs a vocabulary strand through both the reading and writing and the listening and speaking books. Both the Oxford 3,000 and the AWL are used to choose vocabulary items for instruction. The Oxford 3,000 is made up of high frequency words from across a range of different types of texts in the BNC and the Oxford Corpus Collection. In addition, words were chosen based on their usefulness as judged by a panel of experts (Oxford University Press, 2013). Another textbook with vocabulary also presented according to the frequency principle is *Academic Inquiry: Writing for Post-secondary Success* (Douglas, 2013). This textbook is designed for advanced learners of English, and focuses on vocabulary from beyond the 2,000 most frequent word families, namely the AWL and mid-frequency vocabulary (Schmitt & Schmitt, 2012). However, as Horst pointed out, a course book is only part of the solution for vocabulary learning in the English language classroom. It is incumbent on teachers to interweave vocabulary learning into the classroom experience. Furthermore, teachers have to create a demand for textbooks informed by the frequency principle for teaching vocabulary if publishers are to see the value in producing them.

Conclusion

Horst's (2013) informed argument for implementing the frequency principle for vocabulary instruction is solidly anchored in vocabulary acquisition research, and her advocacy for a thorough knowledge of the 2,000 most frequent word families in English is well grounded. An automatized knowledge of 2,000 frequent word families is the basis for BICS. While BICS language is an admirable goal for many language learners, and will serve their needs well, for other students with different language goals, 2,000 frequent word families is just the beginning. For students who are academically bound for higher education, a solid command of BICS is the necessary foundation for CALP. As Horst (2013) has maintained, the 2,000 most frequent word families are "an important entryway into a new language" (p. 175). These are the word families that form the necessary basis for understanding and communicating in an additional language. Once the 2,000 most frequent words in English are learned, the frequency principle can continue to inform vocabulary acquisition up through mid-frequency vocabulary until students reach the thresholds for academic reading and writing competency.

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