

BYKI™: INFORMED BY RESEARCH

To speak a language, you have to know the words.

The long held assumption about learning a second language is that grammar is more important than vocabulary. Second language instruction has traditionally focused on teaching adult language learners grammatical knowledge: sentence construction, verb conjugations, singular and plural forms, noun-adjective agreements, verb tenses, etc. Linguistic research, however, has demonstrated that vocabulary is more fundamental than grammar (Lewis, 2002; Nation, 2001; Barcroft, 2004; Wilkins, 1972). Meaning is primarily conveyed through vocabulary. British linguist David Wilkins (1972) puts it this way: "While without grammar little can be conveyed, without vocabulary nothing can be conveyed" (p. 111).



Sometimes, just knowing a single word in a language can make all the difference. In his book *Vocabulary Myths*, Keith Folse (2004) tells a story about not knowing the right word. Having just moved to a rural town in Japan to teach English, Folse wanted to buy some flour. He'd learned the Japanese sentence pattern "*Sumimasen, ____ -wa doko desu ka?*" or "Excuse me, where is the ____?" and confidently set out on his mission to the local supermarket. Yet, even with this basic grammar, he was lacking the necessary knowledge: he did not know the word for flour. After wandering the store unable to locate any identifiable bags of flour, he spied one of his students outside. He ran outside and called out, "How do you say flour in Japanese?" Unfortunately his student replied "*Hana*" - the word for flower, instead of *komugi*-the word for flour. After being presented with chrysanthemums in the produce section, Folse left the store without purchasing flour. He reflects: "What I needed in that situation was one word: *komugi*. In this experience, I learned that vocabulary is actually more important than grammar" (pp. 19-22).

Declarative and Procedural Learning

Neuroscientists have found that the human brain has two memory systems: declarative and procedural. These two systems reside in different parts of the brain. The declarative system learns facts: words, phrases, history dates, capital cities, telephone numbers, etc.



The procedural system learns skills (Ullman, 2005; 2006). The classic example of a procedurally learned skill is riding a bicycle. Acquiring declarative knowledge generally requires conscious effort and repeated exposure. Procedural skills, on the other hand, tend to be learned through doing or practicing.

For language learning, the brain relies on both memory systems. Vocabulary - in the form of individual words, longer phrases, and even short sentences - is learned and stored in the brain through the declarative memory system. Grammar rules can also be learned as facts. The procedural memory system, on the other hand, internalizes the

skills of applying grammar rules without thinking about them (Ullman, 2005; 2006). We can think of language as consisting of declarative knowledge and procedural skills.

The larger your declarative reservoir, the better.

Sufficient, repeated, and meaningful exposure to a language creates a "declarative reservoir." Words, phrases, short sentences, and other small chunks of language are "*declarative items*" stored in our declarative memory. Declarative items are short enough to hold in your memory. The sum of all the declarative items you know in a language is your declarative reservoir.

A large declarative reservoir is an advantage when you are trying to communicate. Just like purchasing flour in Japan, if you don't know a certain word in a language, you will be unable to produce it when needed or understand it when you hear it. The more declarative items you have at your ready disposal, the more easily you will learn new items and function in that language.

Beyond knowing the right words, a large declarative reservoir also enables fluency. Research has found that language consists of frequently re-occurring "*chunks*" - stock phrases, idioms, and common expressions - and that, in addition to individual words, we all store a large number of these chunks in our declarative memory (Lee, 2004; Nation, 2001; Sinclair, 1991). These chunks are the building blocks of language, allowing us to reduce the processing time needed to produce fluent speech or writing. Rather than constantly referring to grammatical rules to express every idea anew, people tend to draw on pre-constructed chunks, stringing them together into longer sequences according to what chunks tend to go with what chunks (McCarthy, 1998; Nation, 2001; Pawley & Syder, 1983; Sinclair, 2004).



The tendency to rely on chunks explains the puzzle of why only a small portion of grammatically correct expressions sound "*native-like*" (Pawley & Syder, 1983; Nation, 2001). Both "Please pass the salt" and "I request that you hand me the salt shaker" are grammatically correct, but only the first expression sounds native-like because "*please pass the ___*" is a high-frequency chunk. One study of adult second language learners, before and after language immersion, found that memorization of these longer, frequently occurring sequences of words explained their increased fluency (Towell et al, 1996).

Less obviously, but just as important, for adult second language learners, research shows that initially acquiring a declarative reservoir complements and facilitates grammar instruction, saving time and effort (Nation, 2004, p. 336). The saving of time and effort occurs because the larger our declarative reservoir, the more grammatical patterns and exceptions to grammatical patterns we can readily recall.

In other words, a large declarative reservoir is absolutely crucial for effective language learning and fluent communication.

Why Byki Works

Based on all this research, the best starting strategy for any language learner would be to quickly memorize a large number of frequently-used words, stock phrases, and common expressions. That's exactly what Byki enables you to do. Byki is specially designed to help you quickly build a declarative reservoir in the language you are learning - with perfect recall.

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