

TAPPING INTO THE POWER OF TECHNOLOGY TO UNLEASH THE READER WITHIN

By Joyce Whitby

Sometimes educators need to be pretty creative in order to pave the way for struggling readers. One day a student was confused by language used on a flash card to define a new word. Suddenly it became clear that this otherwise very bright student was struggling with the method not the motivation. The aha moment was that the teacher had been using language to teach students with language challenges about language.

A student was presented with a new word - PRUDENT. The definition provided on the flash card was "Prudent [prood-nt] adjective. Wise or judicious in practical affairs; sagacious; discreet or circumspect sober." When asked for the meaning of the word, the student guessed "not drunk".

The grim reality is that 65% of students in the United States struggle with vocabulary knowledge and reading comprehension (NAEP, 2017). Thus the salient question is, "How can a learner adopt new vocabulary while building strategies for deducing each new word they encounter?" The overriding school of thought is that a struggling reader will not learn new

vocabulary without direct instruction - which, to date, has been inherently language based. That is where the conundrum lies.

Typical Instruction



Words are building blocks of language and, by extension, all learning. If a student has a strong command of language, and a schema for learning new words, she has the keys to the kingdom! However, if a student has missed steps along the way, or if she has struggled in silence while time lapsed, she is highly likely to fall behind. This is especially true of students who have not encountered language-rich experiences in early childhood, and for those who do not have English as their primary language, but are learning all courses in English. Of course, it also pertains to any students who have language disorders, and/or specific learning disabilities (SLD) including dyslexia.

Obstacles



How do you build up the capacity for language acquisition of a student with depleted vocabulary assets? Many educators were taught to use flashcards with students, despite research pointing out their limited effectiveness. When reaching an impasse like this, new pathways are needed. Clearly, rote memorization is not the answer for the 65% of students who struggle with vocabulary and reading comprehension. There has to be a better way. Research is now shedding light on the power of developing semantic reasoning skills (Kennedy et al, 2019).

What Semantic Reasoning is NOT

Semantic reasoning is NOT something done to a student. Rather, it is a situation that is set up for learners to explore, infer and deduce the deep meaning of a word by using clues. To build the "muscles" needed for semantic reasoning, a student needs to engage in exercises specifically designed to let them practice. With enough practice students begin to automatically look for clues they can use to infer and deduce an answer, hopefully with every problem they encounter!

Using Semantic Reasoning



Introducing InferCabulary

What is really exciting is that semantic reasoning can be practiced! Thanks to the power of instructional technology and a new tool called InferCabulary, learners are presented with six

high-quality color photographs that reflect a vocabulary word in a variety of contexts, and inferences are made about the word's definition. In order to earn points and advance in the quiz mode, the student must analyze four pictures and select a single word from a choice that best represents the common thread among all the images. There are simple language supports to help students interpret each photograph, (after all if you have never been on a farm, it is likely you don't intuitively know what a silo is.)

InferCabulary is more than just a cool vocabulary app, it is a tool that helps students use critical thinking to learn nuanced meanings of vocabulary. Teachers, speech-language pathologists, and tutors can hand-select words based on grade-level, literature titles, or their own vocabulary lists. Educators can see a student's progress and the words learned, as well as the words with which students struggle. Teachers can even assign vocabulary aligned to their current reading list of popular novels like *If You Give a Mouse a Cookie* or *Romeo and Juliet*, and of course they can access data which gives insight to students' progress.

InferCabulary is not only research-based, it has promising research support. In a study of 75 fifth-grade students, students scored up to 19% higher than with conventional rote memorization, and students of all abilities outperformed themselves the weeks they learned with InferCabulary compared to "business as usual instruction" (Kennedy et al, 2019). Whether it is used in a typical classroom, or as part of a targeted intervention, students clamor for time 'to play' InferCabulary because of the fun gaming format. As students climb the mountain, they are exercising their semantic reasoning "muscles", building critical thinking skills, and self-confidence that will be a strong foundation for all future learning.

