

The Power of Academic Vocabulary

by Ignite! Learning

"Academic vocabulary is the vocabulary critical to understanding the concepts of the content taught in schools. It is vocabulary that supports student comprehension of instructional content." (Beck, McKeown and Kucan, 2002)

For more than 11 years, Ignite! Learning has pursued a multi-disciplinary instructional design approach to empowering teachers with accessible tools for building English Language Arts and Reading concepts in a whole class instruction routine and context. Ignite!'s Math, Science and Social Studies interactive materials feature in product visual, auditory and manipulative ELAR instructional techniques such as, but not limited to: close captioning of key word terms, embedded textual on-screen display of core concept vocabulary within subject matter specific concepts, accessible glossaries and definitions for respective key terms, etc.

Struggling and reluctant students walk into classrooms each day. Many of these students struggle largely due to limited vocabulary knowledge. This happens for a variety of reasons: they may come from a low-income background, or may not be native English speakers. Yet research is clear that students who lack strong academic vocabulary do not succeed in today's classroom (e.g., Cobo-Lewis, Pearson, et al, 2002; Hart & Risley, 1995) and fall further behind in vocabulary and reading as they move through school (Kieffer, 2008; Nakamoto, Lindsey, & Manis, 2007).

Ignite! recently implemented a market-leading instructional design feature integrating "chunked" comprehensive print activities, companion lessons and authentic assessments in a parallel digital dynamic display with all interactive on screen media. Through a unique digital presentation technology that synchronizes these files directly with the media, Ignite! now offers teachers a complete classroom resource where materials of different modalities are available together, within the same interface, each aligned to standards (common core, state and local) in a dynamic, adjustable format for instructional effectiveness, efficiency and flexibility.

Research is also clear that vocabulary instruction in specific content-area terms builds student's background knowledge in the discipline and strengthens concept development and transfer. For example, students who understand the concepts of data analysis and statistics (from state math standards) have understanding of terms such as mean, median, mode, range, standard deviation, and central tendency. (Marzano and Pickering, 2005). Further, academic vocabulary is one of the strongest indicators of how well students will learn subject area content when they come to school (Stahl & Nagy, 2006).



According to Isabel Beck, there are 3 distinct "Tiers" of words that require attention in every classroom:

"Tier 1 words typically do not need explicit instructional attention within the school setting. Words within the Tier 2 realm are typically high frequency words. These are words one would come across in a variety of domains. Tier 2 words are not exclusive to one event, one content, or one situation. Tier 2 words are tier two because of the enormous role they play in the language user's repertoire. They tend to cross over easily into a wide variety of settings and/or contents. Tier 3 words are those vocabulary words that are exclusive to a particular situation and or subject. Tier 3 words are limited in their use." (Bringing Words to Life: Robust Vocabulary Instruction by Isabel Beck, Margaret McKeown, and Linda Kucan.)

By basic definition, Tier 2 words are more complex than Tier 1 words. They may also be more abstract and nuanced by content and/or context. These include:

- 1. Words that are important and useful to understanding the text, such as: character, motion, percent, even numbers, and country.
- 2. Words that have connections to other words and concepts, such as: analyze, correlate, bank, base, and estimate.
- 3. Words, for which students understand the general concept, but need greater precision and specificity in describing a concept or a person, such as: sets, contract, tables (for math or science, or for a table of contents), competition, difference, and frequency.

Traditional instruction for Tier 2 words comes in the form of Tier 2 words appearing primarily in grade-level texts. While impactful for linear and linguistic learners, such a presentation and practice does not appeal to the range of learning modalities present in today's diverse classrooms where dynamic digital presentation is proving to better engage and motivate learners.

It is Ignite! Learning's belief that Tier 2 words can be emphasized in a variety of ways that are engaging and motivating so that General Education and ELL students build rich representations of them and connect them to other words and concepts. Different types of Tier 2 words require different teaching strategies:

- Some Tier 2 words will not require elaborate discussion, because they can be demonstrated. These include words with multiple meanings, such as trunk, which can be taught by using gestures to show that it is part of an elephant, part of a tree, part of our body, and the back of a car.
- In addition, many Tier 2 words are cognates. In this tier, they are high frequency words in Spanish and low frequency words in English. This means that Spanish-speaking ELL students will have a head start with these words (such as coincidence/coincidencia, industrious/industrioso, and fortunate/afortunado) because they will know both the concept and an approximation of the label in English.
- The Tier 2 words that should be targeted for pre-teaching include words that cannot be demonstrated and are not cognates.



While all students must master Tier 2 words in order to comprehend text and do well on text-dependent tests, the task of academic vocabulary development is especially complicated for ELL students who are in the process of learning English as a second language concurrently with instruction in academic content. Specific English learner strategies for academic vocabulary development can support and scaffold ELL student success.

Additional Research (Marzano and Pickering):

The more students understand academic vocabulary terms, the easier it is for them to understand information they may read or hear about the topic (Marzano and Pickering, 2005).

Students need assistance and practice with the academic words that help them think, write, and speak with precision in school even if those terms are not specific to the content area (Marzano and Pickering, 2005).

Ignite's! Academic Vocabulary Feature: Embedded Understanding!

Ignite! Learning enthusiastically believes that the incorporation of real-time, point-of-use academic vocabulary together with subject-matter specific concepts is a powerful teaching and learning resource for all classrooms and all learners. The synchronization and dynamic display of ELAR standards-based Tier 2 words along with representative context and definitions provides a rich environment for dramatically enhancing and supporting standards-based instruction. Technology makes possible the integration of vocabulary with academically scripted interactive media in ways that enable pre-teach, re-teach and review routines to be especially more effective for students* struggling with Math, Science and Social Studies concepts than otherwise through traditional materials. Ignite! Learning has embedded this new feature within all subject-matter specific materials. The instructional design and innovative display technology informed by research provide a foundation for passionately promoting students' critical thinking, supporting local classroom instruction, building teacher capacity, and integrating existing technology, instruction and curriculum decisions into our offerings.

Ignite! Learning believes that by providing engaging tools and resources in service of teachers, classrooms can be places of both high expectations and joy. The implementation of our program with accessible academic vocabulary throughout highly engaging Math, Science, and Social Studies content will result in elevated student expectations, improved achievement outcomes and academic progress for all learners*. Teachers' ability to easily interactively display both key terms as well as definitions at point-of-use within a cohesive, complete instructional concept during routine whole class instruction will motivate students toward enhanced success and mitigate classroom management challenges within today's diverse student populations. Finally, as education is dependent on sound practice in and out of the classroom, embedding academic vocabulary will enhance families and communities' relative capacity to better support student progress in line with school based objectives improving both individual student and overall school outcomes.

* Key vocabulary terms tied to topic and content-area instruction as prominently displayed with our media pieces and as made available in both ENGLISH and SPANISH with text and audio via our Spanish heritage ELL Edition will further advance academic vocabulary understanding for Spanish heritage speaking ELL students, as well.