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ASCD BLOG

The Language Basis of Knowledge



[Scientific Advisory Committee, Knowledge Matters Campaign](#)

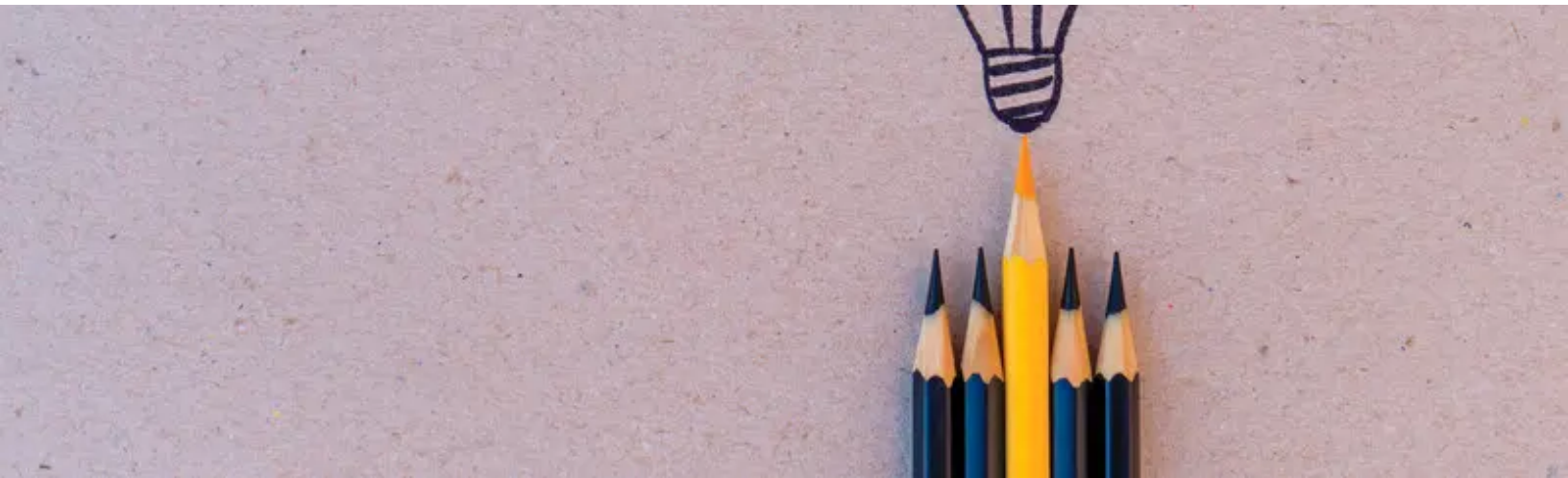


Three ways to build knowledge through language.

INSTRUCTIONAL STRATEGIES

CURRICULUM





Abstract

1. Build from Birth

2. Grow Vocabulary

3. Lead Discussions That Promote Student Talk and Comprehension

This is the second in a series of four articles on how educators can support literacy by bringing knowledge-building into their classrooms (read the [first](#), [third](#), and [fourth](#) posts). Our group of 14 scholars has distilled a rich body of research into 10 practical recommendations for educators. In this article, we detail the first three.

As children learn about the natural and social world, they encounter new information, expand their vocabulary and other aspects of language, and gain new understandings. They master new words and acquire knowledge of the world, both of which support reading comprehension. Such learning is rooted in *language*—which is not always words on a page. Speaking, listening, and engaging in dialogue are critical for building language and knowledge and, importantly, for connecting them.

The language and knowledge on which literacy depends starts developing at birth and continues throughout a child's lifetime. Educators can support this process by teaching students about the natural and social world, being intentional about efforts to grow vocabulary and other aspects of language, and providing ongoing opportunities for knowledge-building discussions.

1. Build from Birth

Children start developing language and acquiring knowledge as soon as they are born. In their daily interactions with caregivers, infants and babies soon begin to tie language to meaning. They communicate with gestures and sounds, but as their exchanges grow from words to phrases and sentences, toddlers build complex language skills.

[Children continue to learn new words and ideas](#) throughout their schooling years through explicit, age-appropriate explanations.

In early-childhood classrooms, they master and make meaning of this content through play. When young children apply the new knowledge they're learning into their play, they extend their learning in ways that are motivating and meaningful. For some children, these new words will be in a language that is different from the one they have learned at home, an added layer of complexity. Quality indicators for early-childhood classrooms include content-rich lessons, in which explicit instruction connects with texts and opportunities for young children to engage in both teacher-guided and free play. From their earliest learning moments, young children should be provided instruction and experiences that integrate content with language and literacy skills.



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Imagine an educator teaching young children about space, sharing a book about rockets, and giving children time to play during which they can build rockets from blocks or pretend to be astronauts together. These activities integrate content and knowledge-building with exposure to written language. And they provide opportunities to see how literacy is used in daily practice and the many purposes it serves.

The home and community are crucial for language learning as well.

When families read with their children, engage them in sports and play, or take them on outings, children encounter the language and literacy of daily life. As families share knowledge through language, children's knowledge, vocabulary, and other aspects of language develop. Given the importance of communicating easily and richly with their children, it is critically important that families use—and expect their children to use—their home language(s) and dialect(s) at home. Such practice anchors knowledge, and fosters the valuable ability to speak and understand multiple languages and dialects.

School, home, and community activities that are language-rich help young children develop a bountiful conceptual knowledge base alongside strong verbal reasoning abilities. Children create building blocks of cognition called “schemas” through which they classify incoming bits of information into similar groupings. Many schemas develop in children's cognition, **such as their expectations about ways stories can be told.** In turn, this knowledge enhances children's ability to understand, tell, and eventually write stories. With these

tools, knowledge becomes easier to access, producing schemas and rich connections among them. And those with a larger knowledge base find it easier to learn and remember.

2. Grow Vocabulary

Vocabulary goes hand in glove with reading comprehension and should be addressed from early childhood through postsecondary education. When readers know more of the vocabulary in a text, they are much more likely to understand that text. Students learn some vocabulary through explicit instruction, but most vocabulary growth comes from incidental exposure to new words as students encounter unfamiliar words in texts or conversation and use knowledge and context to infer meaning. Word and world knowledge are reciprocal and mutually reinforcing, and both relate to gains in conceptual development and comprehension.

Learning environments that are language-rich and rooted in building student knowledge are most likely to help grow vocabulary. How can adults provide these kinds of environments?

- **Rethink “story time” to include age-appropriate information books as well as storybooks.** Research has shown that text genre affects the types of conversations adults and children have during read-alouds. For example, teachers who read informational texts aloud interject more often with more

cognitively demanding comments and questions compared to when they read storybooks. Genre also affects the type of words encountered during reading. Narrative texts tend to include more words about mental states and temporal connections (such as “think” and “before”), whereas informational texts tend to include words that are more academic and conceptually dense (such as “predict” and “investigation”).

- **Revisit words and concepts in multiple contexts.** We typically don’t learn a word or concept with just one exposure. Revisiting words and concepts is key for vocabulary development. For example, in addition to providing a brief explanation of key words as they are encountered in a text, we can revisit the words after reading—for instance, for *slither*, showing a video of a snake slithering and giving children an opportunity to try slithering themselves, or for *perspective*, engaging students in comparing different perspectives on the same historical event.
- **Develop vocabulary within science and social studies.** Well-designed instruction can help students learn new content knowledge and practices as well as vocabulary. For example, in one preschool science curriculum, children engage in core science practices such as observing, asking questions, and reflecting as they experience content-related learning centers in the classroom, read-alouds, and other experiences. A study of Head Start students found that after 10 weeks of this curriculum, students had learned

the target science concepts and showed significant gains in receptive language. Similar findings have come from studies that have included social studies.

- **Teach words in categories.** Because we organize words and concepts in our minds into schemas and networks among them, it is effective to teach words that are conceptually or contextually related. Techniques such as semantic or concept mapping help children relate words and concepts to one another and to what they already know, and to the experiences they are having in and outside of the classroom.

These and other strategies help to grow both knowledge and vocabulary. They can also spark conversations that encourage students to reflect on and share their learning—conversations that themselves provide opportunities to build more knowledge and acquire more vocabulary. Through such experiences, students engage in learning about academic language that goes beyond vocabulary and includes morphology, complex syntax, and text-structure. These aspects of language are different from the language experienced via day-to-day conversations and are acquired from explicit instruction and experience with academic texts.

3. Lead Discussions That Promote Student Talk and Comprehension

All classrooms involve talk, but not all talk is created equal. At all ages, classroom discussions are a prime opportunity for students to build and strengthen their knowledge, and those discussions can be a feature of a deep and coherent unit of study. When instruction connects texts, content, and classroom discussion, students build and reinforce knowledge and comprehension in a virtuous circle.



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We draw from a deep bench of research in making this recommendation: the impact of classroom discussions on student learning and comprehension has been studied for more than half a century. [A comprehensive analysis](#) of several decades of research

findings identified several high-quality discussion approaches with positive impacts on student learning. Effective approaches typically involve students and teachers in questioning the meaning of a text and mining evidence from that text to support their interpretation.

Teachers don't offer answers; instead, they pose discussion questions and engage students with follow-up questions like "Where does it say that?" or "How do you know?" Students are encouraged to ask questions of one another and to agree or disagree with interpretations, building stronger textual understanding through their discussion.

Two such approaches that are well-suited to building knowledge include:

- **Instructional Conversations**: In some ways, Instructional Conversations resemble the sorts of high-quality conversations that children have with peers and adults outside of school. Students talk with one another, with the teacher facilitating. They co-create knowledge, rather than listening as the teacher transmits whatever information is the day's instructional goal. In Instructional Conversations, teachers incorporate a thematic focus, prompt students to draw on their knowledge, and support learning with direct teaching when needed. They prompt students to use complex language and expression and provide evidence for their position. The conversation is steered by questions that have more than one correct answer and connected by utterances that build on one another. This approach is effective for a wide range of learners, including multilingual learners, and is particularly

powerful when paired with students keeping logs of what they are reading and discussing.

- **Questioning the Author:** This strategy empowers students to discuss and build understanding while they are reading a text. It conveys a powerful idea: that texts are “just someone’s ideas written down” and that authors are fallible human beings, just like students. This notion lets students share ownership of a text’s meaning, which they create through discussion. Teachers pose queries focused on the author, such as “What is the author trying to say here?” and “Does the author tell us why?” The teacher and students operate on the assumption that the author does not always convey meaning as effectively as one might like, and together the class works to understand the author’s message and integrate that with their existing knowledge. This approach supports informational and narrative comprehension development.

Both Instructional Conversations and Questioning the Author are likely to be most supportive of learning when they occur in the context of a deep and coherent unit of study, a characteristic of knowledge-building curricula that we discuss later in this series.

This article has examined how knowledge is built through language—a key factor in literacy development. In two subsequent articles, we will explore how knowledge is built through encounters and instruction

with rich informational and narrative text, and the conditions that support building knowledge in the classroom.



The Knowledge Matters Campaign promotes excellent instructional practices in schools and raises awareness of the importance of content knowledge to reading comprehension and critical thinking. The Campaign receives guidance from a...

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