

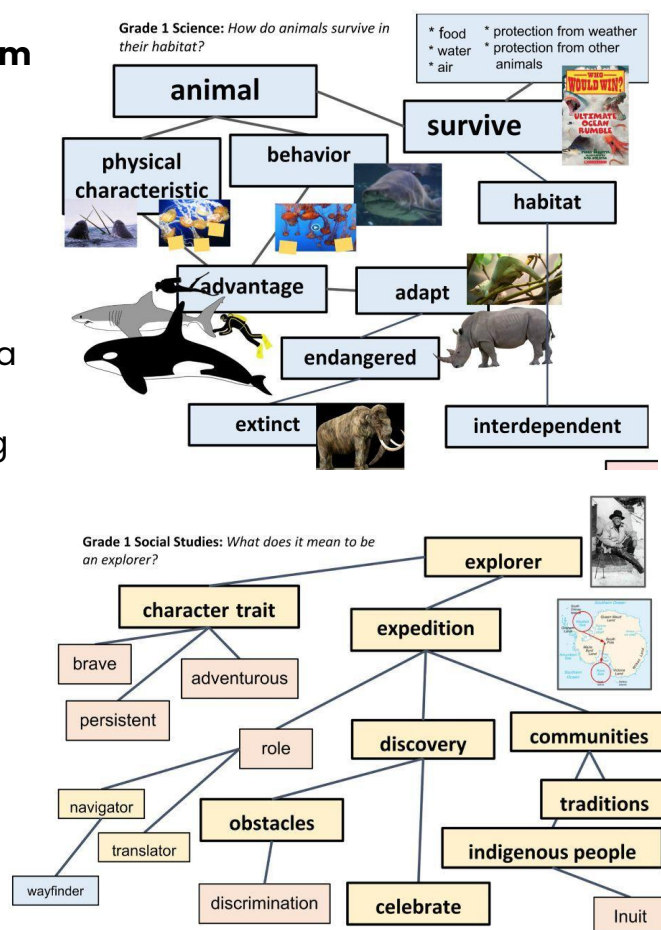
How does MORE improve reading comprehension? The key is in the vocabulary networks.

MORE (Model of Reading Engagement) is THE elementary science and social studies program that builds schemas and improves academic achievement – including literacy and math.

Across topics, MORE teaches **networks of vocabulary** rather than words in isolation.

As students build vocabulary networks around a given topic, they develop **schemas** that help them “hang” new words and ideas onto existing knowledge. As new words are introduced, they are connected to other words and concepts, helping students see connections between them. **Concept maps**, such as those on the right, make these connections visible.

Our study shows that this approach to vocabulary instruction may be a key factor in the MORE program’s ability to improve reading comprehension.



What is the role of vocabulary networks in improving reading comprehension?



Our study randomly assigned 30 1st and 2nd grade classrooms to either use the MORE units (the “treatment” group) or the school’s typical instruction (the “control” group).

At the end of the units, students were tested on their depth of vocabulary knowledge and reading comprehension skills. For the reading comprehension measure, we specifically developed passages and questions to assess how “far” students could transfer what they learned in class. Passages covered topics that were similar, somewhat different, to completely different to those covered in class. This allowed us to assess students ability to comprehend grade-level texts along a continuum of near to far.

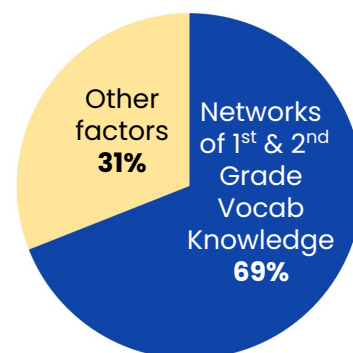
As much as 69% of MORE students' improvement in reading comprehension can be attributed to their vocabulary knowledge.

Our study found that students' knowledge of vocabulary networks – connecting words and concepts from the 1st and 2nd grade units – explained 69% of MORE's positive impact on their reading comprehension scores at the end of 2nd grade.

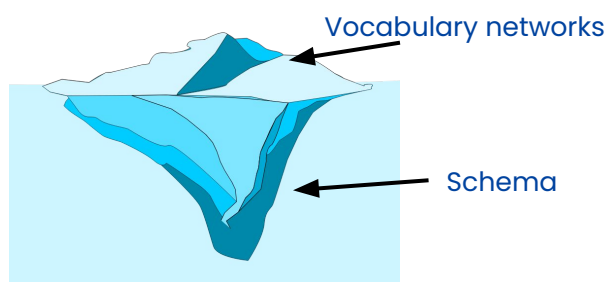
In other words, MORE students' knowledge of vocabulary networks helped them comprehend grade-level reading passages on both familiar *and unfamiliar* topics.

Importantly, students receiving MORE not only understood the meaning of key words in the unit topics, they also understood the larger concepts attached to them (i.e., schemas). Our results suggest that networks of vocabulary knowledge are likely a key mechanisms that helps explain how MORE improves students' reading comprehension.

Second-grade reading comprehension explained by



Helping students build robust vocabulary networks in important topics sets them up for long-term success in reading.



Word meanings are the exposed tip of the conceptual iceberg

(Anderson & Freebody, 1981, p. 82).

This study suggests that instead of teaching numerous individual words independently, teachers can build students' schemas around important topics by teaching words in networks. We can observe the kernels of knowledge that form a schema through networks of conceptually related vocabulary. Indeed, these networks are like the tip of an iceberg. They represent a part of something much larger below the surface – *the schema*.

By systematically developing students' understanding of *schemas* through networks of conceptually related vocabulary, students are better able to transfer and apply what they have learned when encountering new topics and texts.

Mosher, D.M., Burkhauser, M.A., Kim, J.S. (2024). Improving second-grade reading comprehension through a sustained content literacy intervention: A mixed-methods study examining the mediating role of domain-specific vocabulary. *Journal of Educational Psychology*. 116(4), 550–568.

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