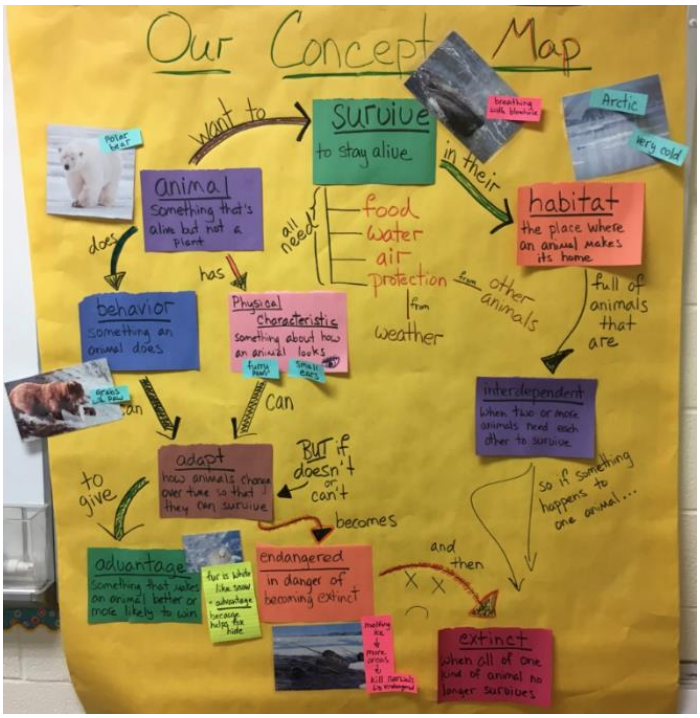
Evidence Brief: Benefits of the MORE Content Literacy Approach Extend Across Grades, Topics, and School Contexts

The Model of Reading Engagement (MORE) is an approach to content literacy developed by the Harvard READS Lab in collaboration with teachers in our partner districts**. Content literacy approaches** like MORE help students build "rich and connected ideas" about science, social studies, and other content areas, while also supporting students' development of the reading, writing, and speaking skills necessary to engage deeply with these ideas[1]. While there is not enough instructional time to cover all the words and ideas students will need to read and evaluate complex informational texts, content literacy approaches can help students build networks of related words and make meaningful connections between studied topics and related – but untaught – topics that they encounter in texts.



In 2018 we evaluated a MORE first-grade science unit in classrooms across 10 schools in one urban district. The unit included the following core components: (1) **whole-class lessons** to build students' knowledge of the topics like "Arctic animal survival"; (2) a **personalized literacy app** and texts to give students exposure to and opportunities to play with topic-related words, and (3) the **MORE formative assessment**, which indicates how well students are able to transfer their knowledge of the focus topic to new topics. We found that MORE improved first grade students' reading performance on a standardized reading test. We wanted to learn, however, if these findings could be replicated in other grades, topics, and school contexts.

First-grade MORE students used concept maps to illustrate relationships among topic-related words.

Our research question: Does the MORE content literacy approach improve reading comprehension across grades, schools, and topics?

In 2019, we launched a new MORE study that expanded upon our successful 10-school, first-grade study in the following three ways:

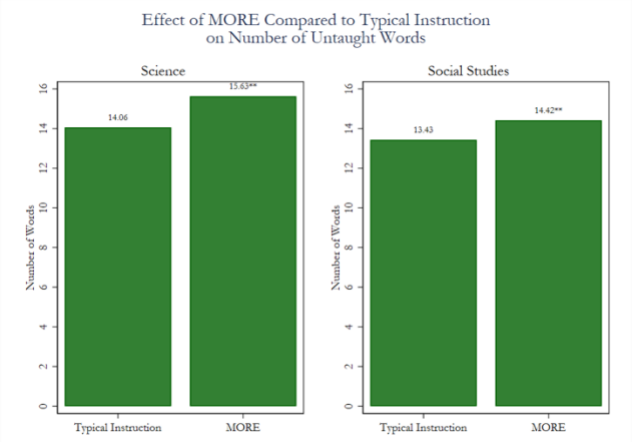
1. Increased the number of participating schools from 10 to 30 schools
2. Implemented MORE units in both first and second grade
3. Added social studies MORE units, in addition to the science units

We randomly assigned schools to teach either MORE lessons or continue with the district's usual science and social studies curriculum. First and second-grade MORE students received 10 science and 10 social studies lessons during the school year. The lessons were designed to build students' knowledge of a focus topic, including topic-related vocabulary words and relationships among those words. Students also read challenging,

[1] Catts, H. W. (2022). Rethinking How to Promote Reading Comprehension. *American Educator*, *45*(4), 26.

topic-related texts, and discussed and wrote about the ideas in these texts. The science topics were "Arctic animal survival" (G1) and "Dinosaurs" (G2); the social studies topics were "Polar exploration" (G1) and "Inventors" (G2).

What we found: MORE helps early elementary students in multiple grades read new words and write effectively across topics



Because we randomized schools to teach different curricula, we can be confident that there is a causal relationship between the type of lesson taught and the outcomes observed. We found that MORE had positive effects on both vocabulary knowledge depth and argumentative writing.

Effects of MORE on depth of vocabulary knowledge: MORE students performed better than typical content-instruction students on a researcher-designed test of vocabulary knowledge depth. Importantly, our test included both taught vocabulary words *and* words that – while not explicitly taught in the MORE lessons – were related to the focus topic and likely to appear in topic-related books (e.g., the word "unique" in the "animal survival" unit). The graph on the left shows that MORE students knew more *untaught* science and social studies words than typical content-instruction students.[2] We infer that MORE students picked up knowledge of these related but untaught words incidentally, as they engaged with topic-related texts.

Effects of MORE on writing: MORE students, on average, also scored higher than typical content-instruction students on an argumentative writing task related to an untaught topic. It could be that MORE students' rich and connected word networks and conceptual knowledge allowed them to more easily collect and communicate their thoughts.

Conclusion: MORE boosts student vocabulary, helps students write more effectively, and could be applied in multiple grades and content areas

Our findings suggest that the systematic teaching of science and social studies words and concepts can improve literacy outcomes. MORE improved students' vocabulary knowledge depth and argumentative writing. Equally important, our findings suggest that the principles underlying content literacy approaches such as MORE are effective for early elementary students across multiple subjects and grades.

This brief describes work done for READS Lab at the Harvard Graduate School of Education based upon Kim, J. S., Relyea, J. E., Burkhauser, M. A., Scherer, E., & Rich, P. (2021). Improving elementary grade students' science and social studies vocabulary knowledge depth, reading comprehension, and argumentative writing: A conceptual replication. *Educational Psychology Review*, *33*(4), 1935-1964. The research reported here was supported by the Chan Zuckerberg Initiative

[2] This equates to a standardized effect of 0.45 in science and 0.28 in social studies.