

Recommendations for Revision of

The Reading Framework for the National Assessment of Educational Progress

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The NAEP Reading Framework remains aligned to research and theory in reading comprehension in many respects but also needs a number of revisions to reflect current research and theory. Within the constraints given, I focus on three major areas of revision needed in the framework: (a) handling of background knowledge, (b) characterization of genre features, and (c) cognitive targets for multiple-text reading. I conclude with some comments on aspects of the framework that I recommend leaving largely intact.

Handling of Background Knowledge

Research has long established that background knowledge has a substantial impact on reading comprehension. In an often-cited illustration of this point, readers are asked to attempt to comprehend the following passage from Tierney and Pearson (1981):

The batsmen were merciless against the bowlers. The bowlers placed their men in slips and covers. But to no avail. The batsmen hit one four after another with an occasional six. Not once did a ball look like it would hit their stumps or be caught.

Many readers in the U.S. find this passage difficult to understand. However, if one is familiar with the game of cricket, the passage is fairly straightforward to comprehend. In other words, one's background knowledge relevant to the text has a profound effect on one's comprehension of that text. Specifically, research suggests that having relevant topical knowledge for a passage aids in, at a minimum, inference generation (e.g., Fincher-Kiefer, 1992), reading fluency (e.g.,

Priebe, Keenan, & Miller, 2012), processing vocabulary (e.g., Elleman, Lindo, Morphy, & Compton, 2009), the ability to manage unfamiliar vocabulary (e.g., Kaefer, Neuman, & Pinkham, 2015), and the capacity to establish a greater degree of coherence with a text (e.g., McNamara & Kintsch, 1996). In fact, research suggests that having strong background knowledge relevant to the topic of a text may even compensate for relatively low overall reading skills (Recht & Leslie, 1988).

Given these and other research findings, we can assume that the background knowledge assumed by NAEP passages, and the relationship of that assumed knowledge to students' actual background knowledge, will have considerable impact on students' reading comprehension. Yet students—including students who are otherwise comparable in their reading ability—will bring very different types and degrees of background knowledge to NAEP reading. The NAEP framework acknowledges this, stating, “The background knowledge that students bring to the NAEP Reading Assessment differs widely. To accommodate these differences, passages will span diverse areas and topics . . .” (pp. 3-4).

Unfortunately, including passages that span diverse areas and topics does not fully address the background knowledge problem. Some readers are likely to have less background knowledge across many different areas and topics and fewer opportunities in their home contexts to develop this breadth of knowledge. More importantly, the span of areas and topics currently employed in NAEP is not predictable in such a way that we could systematically equip students at school with the background knowledge that the passages or the questions¹ assume. Fortunately, since the last

¹ Questions may also require background knowledge beyond that we mean to test when we test “reading.” For example, in a released item from fourth-grade NAEP, students read an informational article about the blue crab and then are asked the following question: “The growth of a blue crab larva into a full-grown blue crab is most like the development of A) a human baby into a teenager B) an egg into a chicken C) a tadpole into a frog D) a seed into a tree. The answer to this question is not explicitly stated in the text. The correct answer to this question is not

major revision of the NAEP framework, a solution to this problem has emerged. It is increasingly the case that science and social studies standards are highly similar or the same across states. Specifically, most U.S. states now employ some variation of the Next Generation Science Standards (NGSS) and a growing number are aligning their social studies standards with the College, Career, and Civic Life (C3) Framework for Social Studies State Standards. Selecting and, as needed, constructing NAEP passages such that the knowledge they assume is largely captured in one of these two documents would have the benefit of helping to level the playing field for NAEP test takers by creating a situation in which background knowledge assumed by NAEP passages is specified and can be taught to all students in a school context, rather than hoping that students have developed that knowledge at home or incidentally. In addition, communicating widely to the field that knowledge assumed by NAEP reading passages is articulated in these national science and social studies standards documents may incentivize more attention to science and social studies in the primary grades, in which they are largely neglected (e.g., Dorph, Shields, Tiffany-Morales, Hartry, McCaffrey, 2011, Heafner & Fitchett, 2012).

Some may argue that NAEP reading is a *reading* test and thus shouldn't rely on science and social studies content knowledge, but all written texts rely on background knowledge. The question is the degree to which that background knowledge is codified and systematically developed in students; our best chance for that lies in drawing heavily on national science and social studies documents.

explicitly stated in the text. In order to answer it correctly, readers need to understand not only the life cycle of the blue crab, which is explained in the article, but also the life cycles of humans, chickens, tadpoles, and trees. In a revised NAEP Framework, there would be a call to ensure that the science and social studies experts vet the items as well as passages to ensure alignment to what is likely to be taught in high-quality implementation of instruction aligned with the NGSS and C3 Framework.

Characterization of Genre Features

In contrast to the issue of background knowledge, which receives little attention in the current NAEP framework, genre and genre features are the focus of considerable discussion in the framework. However, the material cited in this discussion ranges in date from 1975 to 2002. Some research published since 2002 has focused specifically on texts that students would encounter on or before the fourth-grade level and identifies genre features not included in the framework. For example, through discourse analysis, Pappas (2006) has identified features of informational texts that are not included in the framework; Purcell-Gates, Duke, and Martineau (2007) have identified features of procedural, as well as informational, texts that are not included in the framework; and Ross and Rossen-Knill (2016) have identified features of argument that are not included in the framework. Updating the framework to reflect research to date should aid in the selection and, as needed, adaptation of appropriately featured texts for inclusion in the assessment.²

Cognitive Targets for Multiple-Text Reading

The current Reading Framework presents a detailed set of cognitive targets for items, summarized in the table in exhibit 8 on page 40 of the framework. Specifically, the primary targets of locate/recall, integrate/interpret, and critique/evaluate are articulated, along with how they would be applied in ways specific to literary text, specific to informational text, or common to both. These targets continue to be appropriate, in my view, but they do not fully capture skills necessary to read across

² Related to text selection for particular genres, the 2017 framework indicates that “NAEP will not assess argumentation and persuasive texts at grade 4 due to difficulty in locating high-quality texts appropriate for this grade level” (p. 26). Perhaps updating of the account of characteristics of argumentation and persuasive texts, combined with growing attention to this text type in the elementary grades in light of the influence of the Common Core State Standards, may make it possible to include this text type in NAEP grade 4. Given the significance of this genre and the emphasis placed on this genre both in the framework and in current literacy standards documents, it seems important to include it in the grade 4 assessment if at all possible.

multiple texts. The middle target—integrate/interpret—does specify “within and across texts,” but there are key skills entailed in multiple-text reading that are not included, such as the ability to determine the relative credibility and utility of texts and weigh information found within them accordingly; the ability to synthesize across texts; the ability to read across multiple textual modes (e.g., images, infographics, video clips, written text); and the ability to bring a disciplinary lens to bear in multiple-text reading. There is a considerable body of research and theory on multiple-text reading (e.g., Britt et al., 2018; Davis, Huang, & Yi, 2017; Hartman, 1995; List & Alexander, 2017) that could guide further specification in this area within the framework.

Conclusion

I have recommended revision of the NAEP framework in three major areas: (a) handling of background knowledge, (b) characterization of genre features, and (c) cognitive targets for multiple-text reading. I also acknowledge that others providing comment on the framework have identified additional important areas for revision. At the same time, there are many aspects of the framework that I hope will remain largely intact. The organization of items by reading purpose or genre should be maintained, in my view. The use of largely authentic texts should also be maintained, although I believe that the need to control the background knowledge assumed by texts and establish multiple-text reading scenarios should override a strict adherence to authenticity. Relatively recent developments in the framework, including a more systematic approach to vocabulary within the framework and the inclusion of poetry in grade 4 are applauded, although, as noted, the exclusion of argumentation or persuasive texts in grade 4 is problematic. Finally, although I have pointed to the need to develop cognitive targets that more deeply address multiple-text reading, including multimodal reading, the overall framework for the cognitive targets is sound.

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