

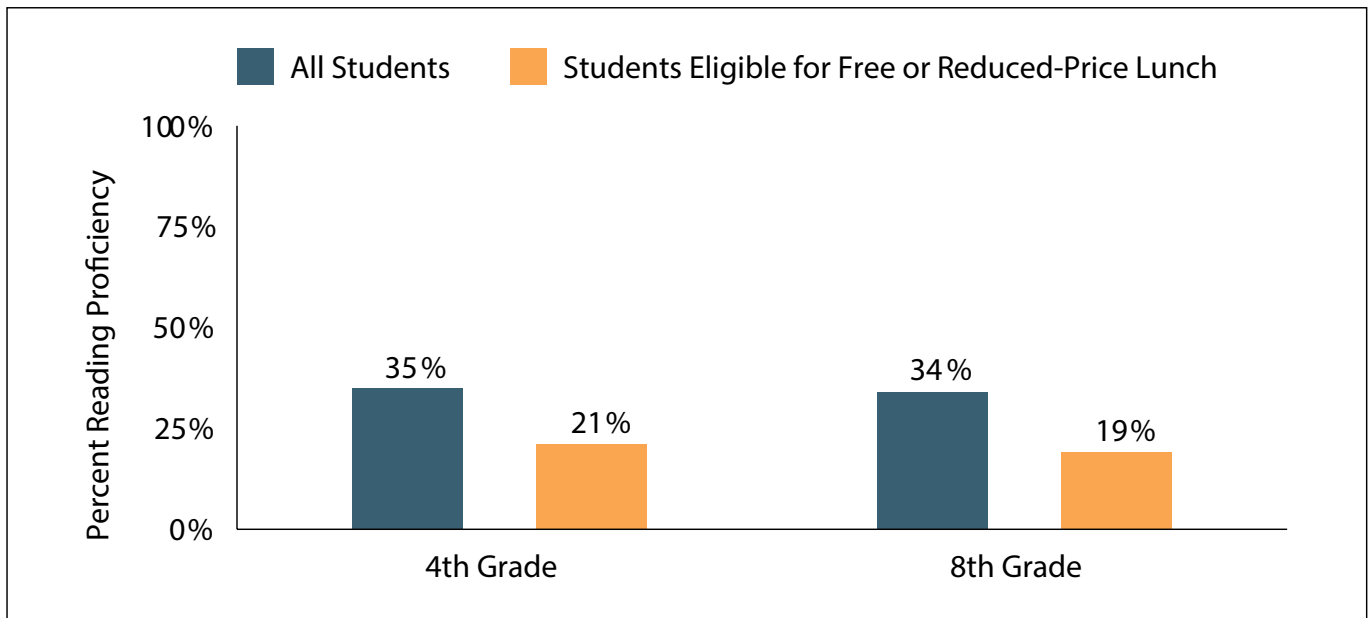
# How Social Studies Improves Elementary Literacy

Adam Tyner and Sarah Kabourek

Improving the reading ability of young students could hardly be a more urgent priority for our elementary schools. Two thirds of American fourth and eighth graders are not able to read proficiently—and the outcomes are far worse for students from disadvantaged backgrounds. The National Assessment of Educational Progress in 2019 showed that only 35% of fourth graders and 34% of eighth graders were proficient in reading, and among students eligible for free or reduced-price lunch, only 21% of fourth graders and 19% of eighth graders were proficient. (See Figure 1).<sup>1</sup>

**Figure 1. Reading Proficiency**

*Only a third of American students read proficiently*



Source: National Assessment for Educational Progress (NAEP) 2019.

The most common solution to America’s disappointing elementary reading outcomes has been to simply spend more time on literacy instruction. Schools have invested ever more time in reading instruction and often provide a “literacy block” that can stretch to two hours or more per day. By often mandating annual state testing in just reading and math—which many educators and commentators blame for narrowing the curriculum to the tested subjects—federal and state policies have contributed

to this focus and to the marginalization of subjects like social studies.<sup>2</sup>

How effective has the focus on reading comprehension skills been in improving student literacy? And to what extent does the use of classroom instructional time on different academic subjects, including social studies, correlate with jumps in reading ability?

To examine these questions, we analyzed nationally representative data from the federal Early Childhood Longitudinal Study,

Kindergarten Class of 2010–11, which samples over 18,000 students in their kindergarten year and follows them through fifth grade. This longitudinal, nationally representative study collects semiannual or annual measures on students, their parents, teachers, and schools, including annual assessments in reading and math. It enables us to assess reading progress associated with school experiences from kindergarten through fifth grade. In our analysis, we focus on students for whom there was information on all student-level measures, as well as information on teacher-reported classroom time spent on different subjects. Our analytic sample included 6,829 students.

The results of our analysis are striking. The Early Childhood Longitudinal Study shows that *social studies is the only subject with a clear, positive, and statistically significant effect on reading improvement. In contrast, extra time spent on English Language Arts (ELA) instruction has no significant relationship with reading improvement.*

These results confirm that growing students' knowledge of the world through subjects other than ELA may be more effective in developing literacy than additional reading instruction. There is little doubt that background knowledge is critical for a reader to make sense of a particular text. Knowledge that helps build a broad vocabulary forms the foundation of true literacy. A number of studies show that students comprehend more, perform better at immediate recall, and acquire more additional information when they already possess strong background knowledge of a topic.<sup>3</sup> Cognitive psychologist Daniel Willingham explains the connection in his book *The Reading Mind*. “[Writers] always omit a great deal of information needed to make sense of what they write,” Willingham explains, so “[the reader] must have the right information in memory to make the inferences that bridge the meaning of what he reads.”<sup>4</sup>

Scholars have run experiments on the effects of background knowledge in a variety of topic areas, from learning the rules of chess and bridge to learning computer programming and electronics.<sup>5</sup> The best-known study showed that baseball-savvy students strongly outperformed students with less knowledge of the sport in comprehending a written description of a half-inning. Importantly, students who knew a lot about baseball but were also generally *poorer* readers outsourced students who were better readers but knew less about baseball, which demonstrates the importance of specific background knowledge relative to general “reading comprehension skills.”<sup>6</sup> Knowledge can help build a broad vocabulary, which is also crucial to literacy.<sup>7</sup> The connection between knowledge and reading comprehension is well supported by the research, and it jibes with common sense. A third grader may be able to sound out “Cincinnati,” but if she hasn’t studied some geography, she likely won’t comprehend the word.

Social studies education can help improve stagnant literacy outcomes because social studies instruction can help build systematic knowledge and vocabulary in multiple domains that are broadly applicable and transferable to other topics. For example, since social studies explores history, current events, family and social relationships, and common narratives, students engaging in socially-relevant literature will acquire a deeper understanding if they already have a strong grasp of social studies. Learning about social studies systematically, topic-by-topic, presents students with repeated opportunities to discuss related themes, forge connections between concepts in their minds, and practice new vocabulary. Social studies instruction may also be particularly rich in so-called “Tier-2” words, the more sophisticated terminology used in more complex texts.<sup>8</sup>

## The Early Childhood Longitudinal Study

This article analyzes nationally representative data from the federal Early Childhood Longitudinal Study, Kindergarten Class of 2010–11 (ECLS-K: 2011), which sampled more than 18,000 students in their kindergarten year and followed them through fifth grade.

The data are publicly available on the website of the National Center of Educational Statistics (NCES), which is part of the United States Department of Education’s Institute of Education Sciences (<https://nces.ed.gov/ecls>, click on Data and Data Products).

To assess the extent to which the amount of instructional time spent on particular subjects generated greater or lesser reading progress, we conducted regression analyses with fifth grade reading as the outcome. The key independent variables were the time spent on different subjects in first through fifth grade. The control variables were measures of kindergarten reading and other academic performance, student family income, student race/ethnicity, gender, whether the student attends a public, private, or charter/magnet school, length of teacher tenure, and the total amount of instructional time per day.

From the survey of more than 18,000 students, we constructed an analytic sample, which included all students for whom there was data on all student-level measures and for whom we had all teacher-reported classroom time measures in at least three of the five years in which data were collected. We used the ECLS-K:2011 analytic survey weights throughout the analysis to account for the sampling design and to adjust for nonresponse. Our final analytic sample represents a weighted probability sample of 6,829 students. In some cases (fewer than 100), we had data on all the student measures and time measures just mentioned, but data were missing for one of the school or teacher control variables. These cases are excluded from some Figures in this article, for which the analytical sample is 6,731 students.

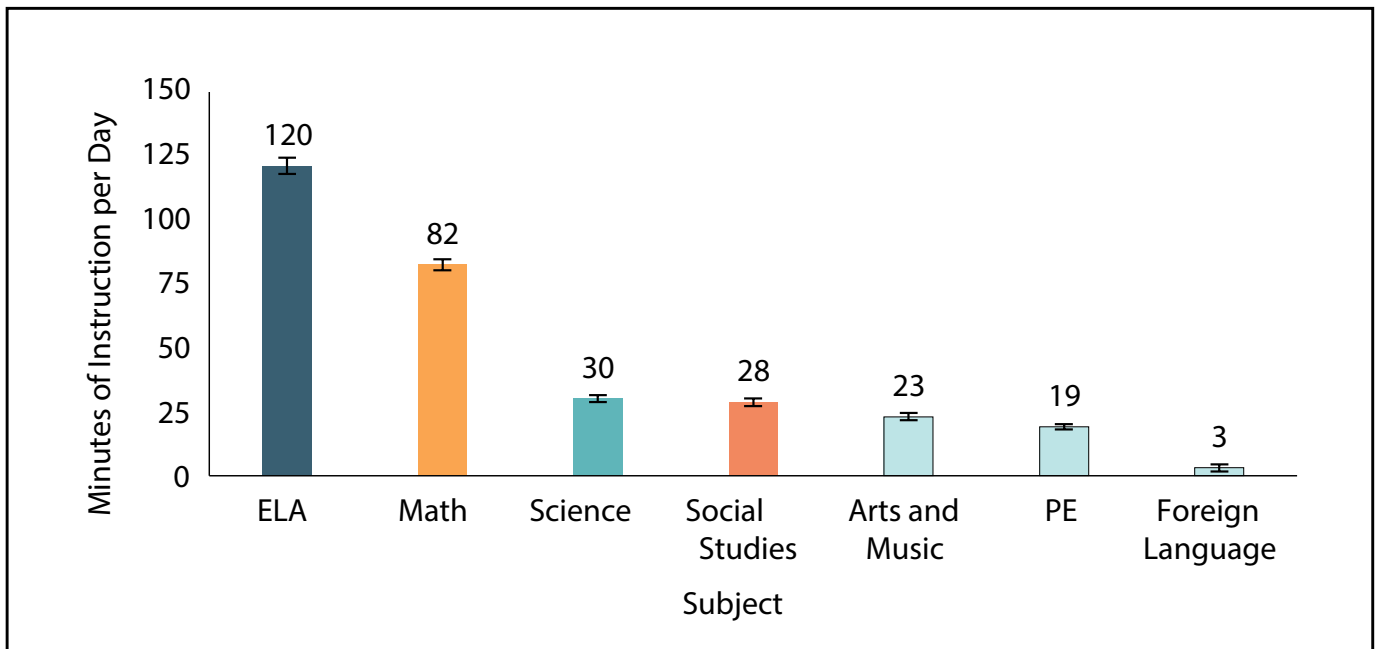
## Analysis of the Federal Early Childhood Longitudinal Study

The data from the federal Early Childhood Longitudinal Study mentioned above show that students in classrooms where more time was spent on social studies made more progress in reading over a five-year period. An additional 30 minutes of social studies instruction per day was associated with a 15 percent of a standard deviation increase in reading ability over other students, a modest but sustained effect over this period. Girls, students from less-affluent families, and students from families where English was not the main home language saw even greater effects of social studies instruction on reading ability.

We first look at how instructional time is spent in elementary school classrooms across different subjects, schools, teachers, students, and grade levels. Figure 2 presents average time usage for grades 1 through 5. Elementary teachers report that students spend more time on ELA than on any other subject, at two hours daily. Math is second, at nearly an hour and a half per day. Other subjects receive far less instructional time: Excluding math, students on average spend more time on literacy than on all other subjects combined, including science (30 minutes); social studies (28 minutes); arts and music (23 minutes); physical education (19 minutes), and foreign language (3 minutes).

**Figure 2. Hours of ELA Instruction per Day**

*Students spend an average of two hours per day on ELA instruction*



Note: The figure contains pooled averages of grades 1 through 5. The mean total instructional time is 302 minutes per day. The analytic sample includes 6,829 students. "Arts and music" includes art, music, dance, and theater. Error bars (I) represent 95 percent confidence intervals.

Said another way, ELA instruction accounts for 39 percent of instructional time in U.S. elementary schools (Figure 3), which average about five hours (302 minutes) of total instructional time per day. More than a quarter (27 percent) of that time is spent on math, while science and social studies each occupy about 10 percent. Thus, about two-thirds of elementary aca-

demical instruction is for just two subjects, ELA and math, with ELA alone taking up two hours of instructional time in the average elementary school. Meanwhile, social studies instruction comprises less than 10 percent of instructional time in the typical elementary school.

**Figure 3. Proportion of Instructional Time Spent on ELA Compared to Social Studies and Science**

*Of the total instructional time, 39 percent is spent on ELA, while less than 20 percent is spent on social studies and science combined.*

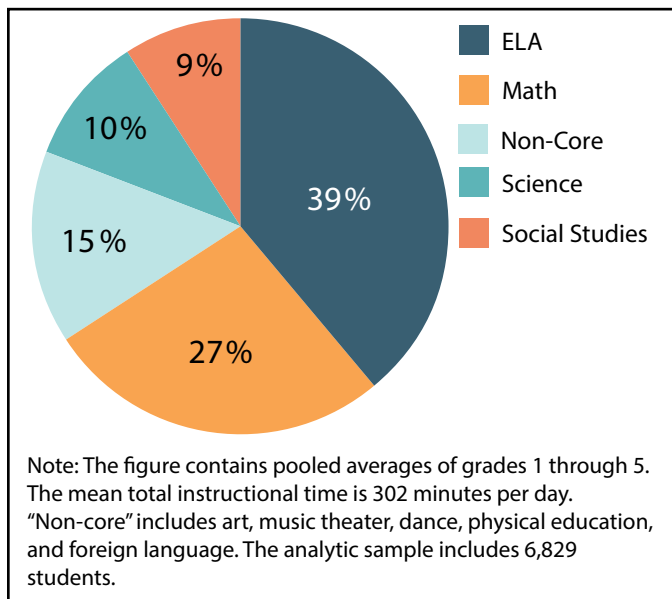
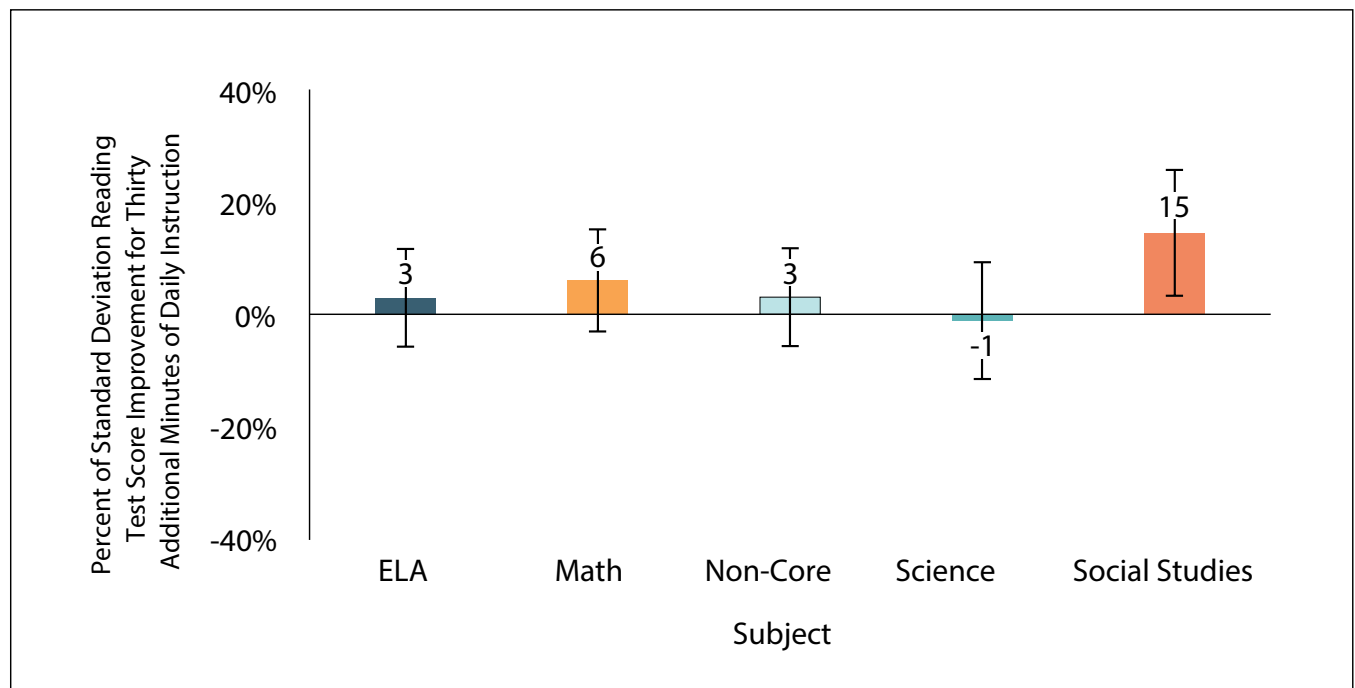


Figure 4 shows the effects of additional instructional time spent on each subject.<sup>9</sup> Contrary to the practices of many schools, time spent on ELA—the subject that would appear most relevant to the outcome we’re measuring—is not associated with reading improvement. Likewise, neither math instructional time nor time spent on non-core subjects (including art, music, and other non-core subjects) corresponds to gains or losses in reading. Although presumably also a content-rich subject, instructional time for science has no relationship with reading development either.

**Figure 4. Time Devoted to Social Studies and Greater Reading Growth**

*More instructional time devoted to social studies is correlated with greater reading growth from first through fifth grade.*

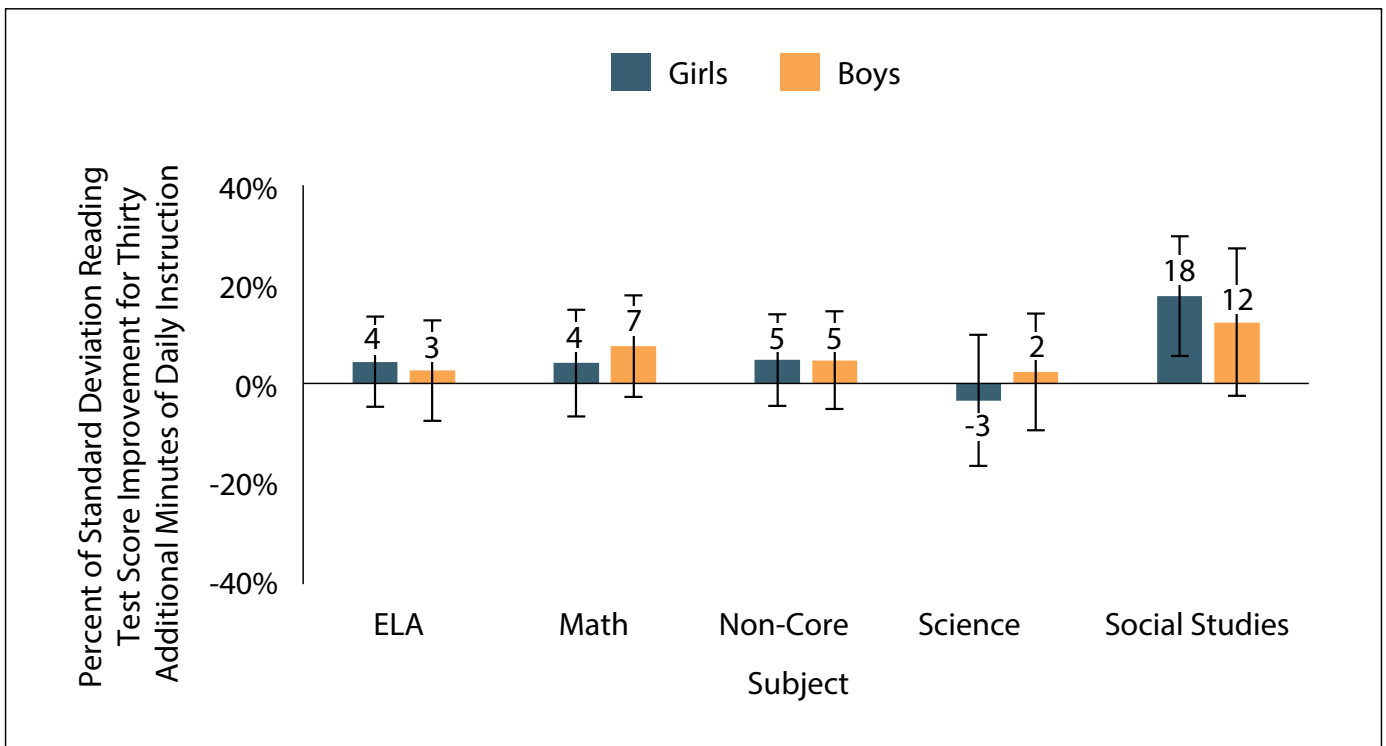


Note: The analytic sample includes 6,731 students. Effects are in standard deviations of fifth-grade assessment scores. For example, the first bar indicates that the effect of thirty minutes of additional ELA daily instruction is associated with a 3 percent standard deviation increase in student reading progress from kindergarten to fifth grade. However, because the error bars (I) overlap with the baseline (0 percent), this effect is not statistically significantly different from zero. Contrast that with the 15 percent effect for social studies, where the error bars do not overlap with the baseline, indicating that the result is statistically significantly different from zero. Error bars represent 95 percent confidence intervals.

In fact, social studies is the only subject with a clear, positive, and statistically significant effect on reading improvement. On average, students who receive an additional 30 minutes of social studies instruction per day (roughly equivalent to moving from the 10th to the 90th percentile of social studies instructional time) in grades 1–5 outperform students with less social studies time by 15 percent of a standard deviation on the fifth-grade reading assessment, even after controlling for multiple measures of kindergarten reading ability and a host of student, school, and teacher factors.<sup>10</sup>

Girls, students from less-affluent families, and students from families where English was not the main home language saw even greater effects of social studies instruction on reading ability. Figure 5 shows the effects of instructional time for students by gender. Additional social studies instruction for boys and girls provides similar benefit, but the effect for girls is a bit stronger. There are no statistically significant effects of instructional time in other subjects for students of either gender.

**Figure 5. Time Spent on Social Studies and Greater Progress in Reading by Girls and Boys**  
*For both boys and girls, additional social studies time is associated with greater progress in reading.*



Note: The analytic sample includes 6,731 students. Effects are in standard deviations of fifth-grade assessment scores. Error bars (I) represent 95 percent confidence intervals.

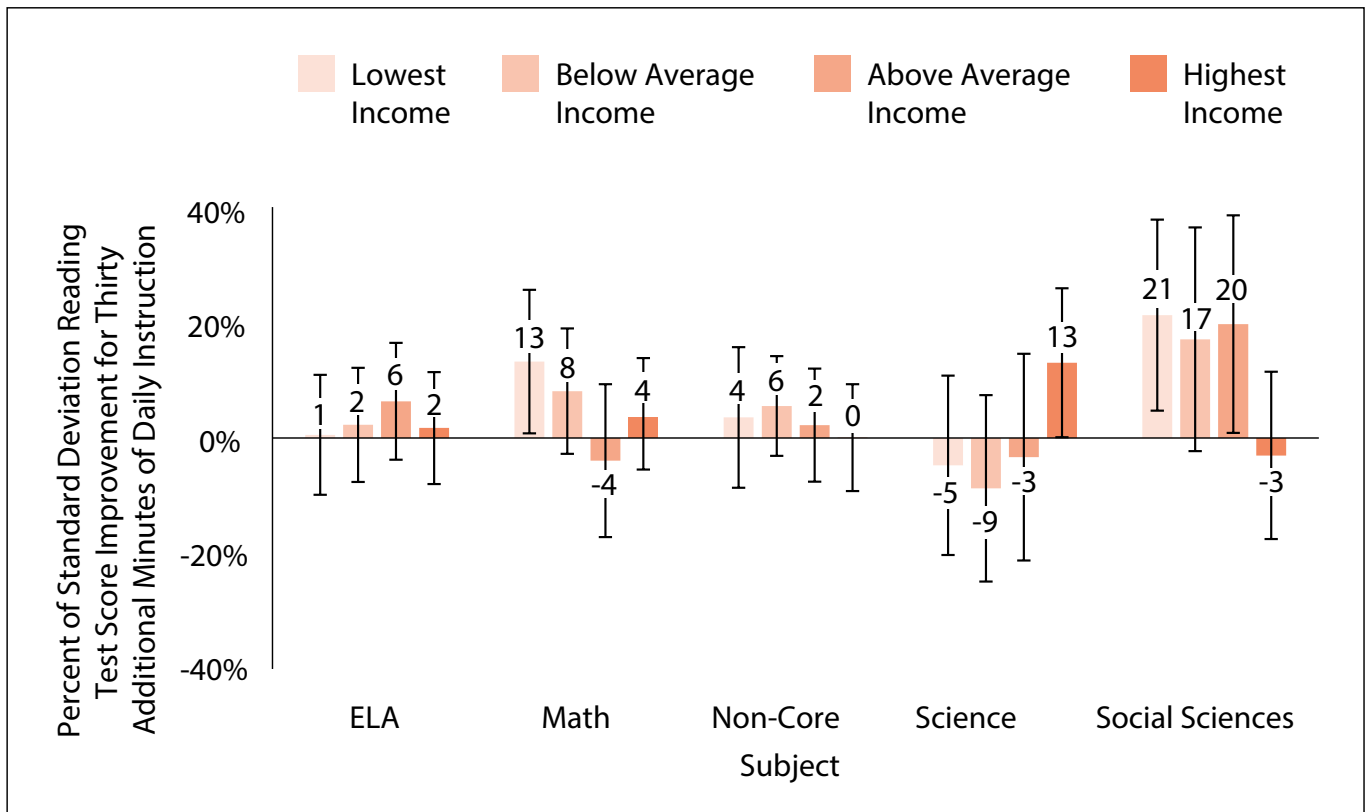
We also found that students from lower-income families who had an additional 30 minutes of daily instruction in social studies made greater progress in reading than students from lower-income families who spent less time on social studies (see Figure 6). This was the only significant difference by socioeconomic status (SES) and the effects are consistently positive for students in the lowest three SES quartiles. In these quartiles, an additional 30 minutes of daily social studies instruction during elementary school corresponds to greater reading develop-

ment of between 17 and 21 percent of a standard deviation. Interestingly, however, the effects are nearly zero and statistically insignificant for students in the wealthiest quartile.

There are generally no statistically significant differences for students based on the amount of ELA, math, non-core or science instructional time, regardless of SES. (The one exception is for students in the most affluent quartile, for whom additional science instruction is positive).

**Figure 6. Time Spent on Social Studies and Greater Progress in Reading for Students from Families with Different Income Levels**

*More instructional time in social studies is related to greater reading growth from first through fifth grade for all students except those whose families are in the top income quartile.*



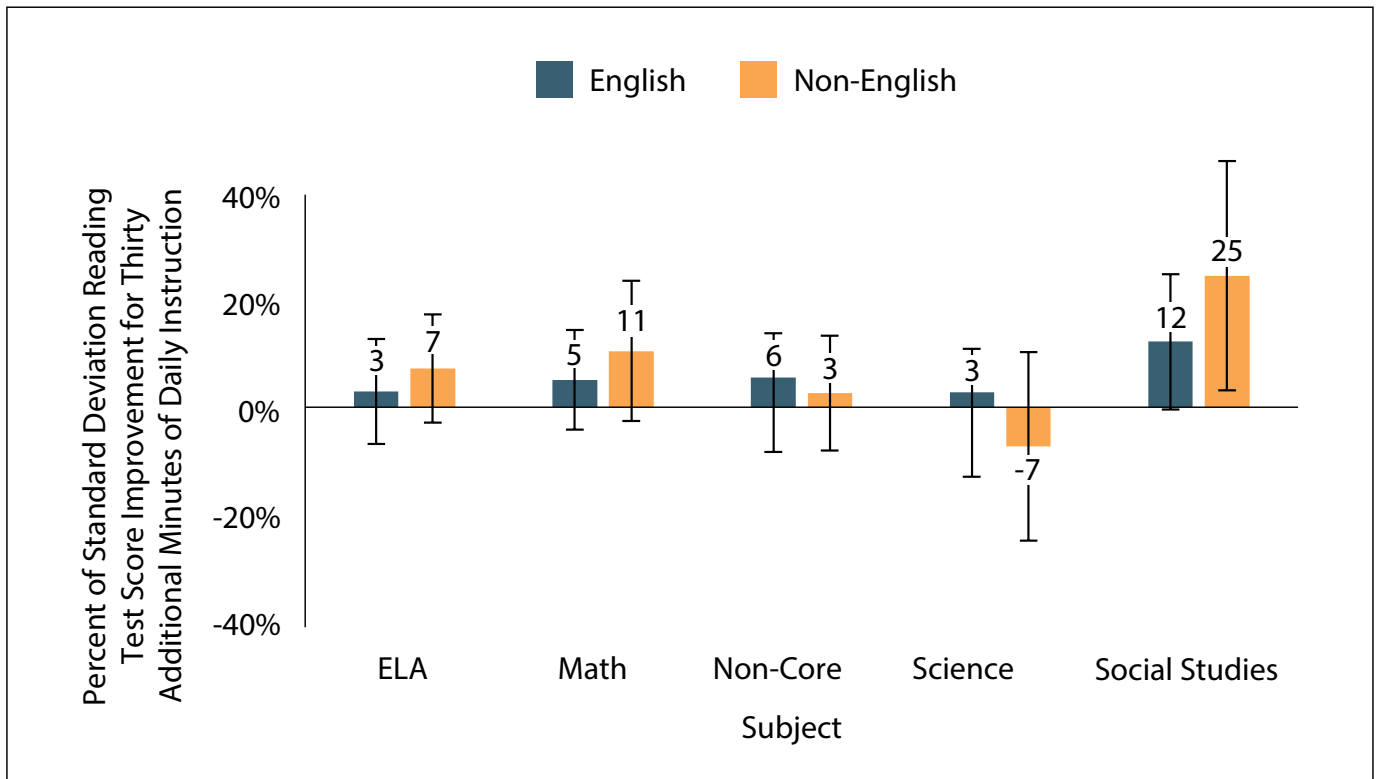
Note: The analytic sample includes 6,731 students. Indicators of socioeconomic status (for example, “affluent”) reflect quartiles of the family income distribution. Effects are in standard deviations of fifth-grade assessment scores. Note that the 17 percent of a standard deviation effect for students in the “below average income” quartile is only statistically significant at the 90 percent confidence level. Error bars (I) represent 95 percent confidence intervals.

Finally, we examine the effects of instructional time by home language. Students from homes in which English is not the primary language see larger effects from social studies instructional time than do students from homes where English is the primary language (Figure 7, on page 38). For students from homes in which English is not the primary language, an additional 30 minutes of social studies time per day during elementary school corresponds to about a quarter of a standard deviation increase in reading ability. For students from primarily English-speaking

families, that same 30 additional minutes corresponds to an improvement in reading of about 12 percent of a standard deviation (statistically significant only at the 90 percent confidence level). Interestingly, the effects of additional ELA instructional time are small and statistically insignificant for both groups, although the estimated effect on students from non-English-speaking homes is about double that for other students (7 versus 3 percent of a standard deviation).

**Figure 7. Time Spent on Social Studies and Greater Reading Growth for Students in English-speaking and non-English-speaking Homes**

*Additional social studies time is tied to greater progress in reading regardless of students' home language, although the effect is stronger for students in non-English-speaking homes.*



Note: The analytic sample includes 6,731 students. Effects are in standard deviations of fifth-grade assessment scores. Error bars (I) represent 95 percent confidence intervals.

This all has consequences for students. Not only does the marginalization of social studies likely harm young learners' literacy, but it probably also contributes to longstanding gaps in reading achievement. Since the effects of social studies instruction are strongest for students at lower family income levels, more social studies instructional time may contribute to more equitable student outcomes.

### A Proper Role for Social Studies in the Elementary Classroom

Increased and improved social studies education is crucial to ameliorating America's longstanding literacy crisis.<sup>11</sup> Emphasizing social studies is likely to not only improve literacy overall but to narrow persistent achievement gaps between student groups. To improve student reading outcomes, we offer two main recommendations.

First, with social studies getting less than 30 minutes of instructional time per day, there is clearly room to increase the volume of elementary social studies instruction. The Council of Chief State School Officers (CCSSO) recommends that

elementary classrooms dedicate at least 45 minutes to social studies each day, which would be more than a 50 percent increase from current levels. Not only does research support the idea that expanding social studies time would improve student literacy, but additional time devoted to social studies would also help students develop the strong knowledge base needed for a successful transition to middle school.<sup>12</sup>

Second, elementary school teachers can infuse their ELA instructional time with systematic instruction based on content-rich curricula. As long as elementary classrooms are spending a large share of the school day on ELA, teachers should be asking what it is that the students should be reading *about*. Rather than being a grab bag of readings or something put together by already overworked teachers, ELA curricula can be structured around systematically building student knowledge in social studies and other content-rich subjects. Schools should consider adopting such curricula to get the most out of their literacy blocks. For example, Louisiana is taking a step in this direction by pioneering a set of reading assessments that align with the state's social studies curricula. For now, it is limited

to a few districts and charter networks in the Bayou state—but, if fruitful, such an approach could have much broader impacts for literacy across the nation.<sup>13</sup> If states align ELA assessments with specific content areas, as Louisiana is currently piloting, teachers and students will have a clear stake in increasing the amount of instruction in social studies and other knowledge-rich subjects.

We are not the first to find that the expansive time devoted to language arts instruction does not improve student reading.<sup>14</sup> But we *are* the first to find that literacy gains are more apt to materialize when students spend more time in social studies. Diminishing or transforming the ELA block, then, should move to the top of the literacy agenda. ELA instruction in the elementary grades needs to be complemented by a diet rich in social studies content that grabs the hearts and imaginations of our youngest learners. 🌍

#### Notes

1. See the Reading Assessment of the National Assessment of Educational Progress, 2019, at <https://nces.ed.gov/nationsreportcard/reading/>.
2. Paul G. Fitchett, Tina L. Heafner, and Richard G. Lambert, “Examining Elementary Social Studies Marginalization: A Multilevel Model,” *Educational Policy* 28, no. 1 (2014): 40–68.
3. For a review of these studies, see Donna R. Recht and Lauren Leslie, “Effect of Prior Knowledge on Good and Poor Readers’ Memory of Text,” *Journal of Educational Psychology* 80, no.1 (1988): 16–20, doi:10.1037/0022-0663.80.1.16.
4. Daniel T. Willingham, *The Reading Mind: A Cognitive Approach to Understanding How the Mind Reads* (Wiley 2017), 116.
5. Katherine A. Rawson and Walter Kintsch, “Exploring Encoding and Retrieval Effects of Background Information on Text Memory,” *Discourse Processes* 38, no. 3 (2004): 323–44, doi:10.1207/s15326950dp3803\_3.
6. Recht and Leslie, “Effect of Prior Knowledge,” 16–20.
7. Lowry Hemphill and Terrance Tivnan, “The Importance of Early Vocabulary for Literacy Achievement in High-Poverty Schools,” *Journal of Education for Students Placed at Risk* 13, no.4 (2008): 426–51, doi:10.1080/10824660802427710.
8. Ying Zhang, “Supporting English Language Learners in Social Studies: Language-focused Strategies,” *The Social Studies* 108, no. 5 (2017): 204–209.
9. Because there may be increasing or diminishing returns to additional instructional time for a given subject, we also examined nonlinear relationships between instructional time use and reading development by including quadratic transformation of each subject variable, but none of those terms were statistically significant.

10. A discerning reader may wonder whether this correlation over five years is driven by better readers needing—and receiving—less ELA instruction, resulting in more time for instruction in social studies and other subjects. We investigated this possibility and found no statistically significant correlation between the reading growth of students in early grades and the amount of time that they spent on social studies in class in later grades.
11. For our complete study of the Early Childhood Longitudinal Study, see Adam Tyner and Sarah Kabourek, *Social Studies Instruction and Reading Comprehension: Evidence from the Early Childhood Longitudinal Study* (Washington, D.C.: Thomas B. Fordham Institute, September 2020), <https://fordhaminstitute.org/national/resources/social-studies-instruction-and-reading-comprehension>.
12. See the presentation by Nell Duke to the CCSSO Social Studies Collaborative in 2019 ([www.youtube.com/watch?v=LAWO2lvAnj8&feature=youtu.be](http://www.youtube.com/watch?v=LAWO2lvAnj8&feature=youtu.be)). Duke, who is a literacy scholar from University of Michigan, has extensively studied the importance of informational texts in the elementary grades and promotes a focus on social studies instruction.
13. John C. White, “States Don’t Measure What Kids Actually Know. That Needs to Change,” *The Hill*, April 3, 2018, <https://thehill.com/opinion/education/381285-states-dont-measure-what-kids-actually-know-that-needs-to-change>.
14. Katherine A. Magnuson, Christopher Ruhm, and Jane Waldfogel, “The Persistence of Preschool Effects: Do Subsequent Classroom Experiences Matter?” *Early Childhood Research Quarterly* 22, no. 1 (2007): 18–38.



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