

# Executive Summary

## Understanding the Relationship between Early Literacy Domains and Reading in Later Grades

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### Introduction

Strengthening students' foundational reading skills early in elementary school can help reverse the trend toward lower reading proficiency rates on national assessments (National Assessment of Educational Progress, 2022) and prevent unintended but related consequences such as low grades, high absences, and behavioral issues that research shows are related to low early literacy rates (Barnett, 1995). Well-designed classroom assessments with domain- or skill-level coverage in the early elementary grades can help educators promptly identify student proficiency and skills gaps at a critical age. Early identification coupled with high-quality instructional materials using an evidence-based reading approach can support equitable student learning. Without early identification of students' literacy skills, the likelihood of educators putting students on a path for developing long-term literacy skills diminishes. This report examines the relationship between domain-level reading performance in early elementary grades and grade-level reading two years later and discusses some classroom implications. It finds that student reading skills in elementary grades are a strong indicator of a student's future overall reading ability, pointing to the need to ensure educators are able to identify skills gaps early on and intervene to help solidify students' foundational reading skills before they fall further behind.

### Study Overview

Using linear regression, the report explores the extent to which students' domain placements as kindergarteners, first graders, and second graders predicted their overall Reading scores two years later as second, third and fourth graders. The domains reported in this analysis are the six domains assessed by the *i-Ready Diagnostic* for Reading: Phonics, Phonological Awareness, High-Frequency Words, Vocabulary, Comprehension: Literature, and Comprehension: Informational Text. In this summary, we use the term "foundational reading skills domains" to refer to Phonological Awareness, Phonics, and High-Frequency Words. We use the term "language domains" to refer to Vocabulary, Comprehension: Literature, and Comprehension: Informational Text. To better understand the relationship between Reading domains and overall Reading achievement, linear regression was used because it allowed for the inclusion of all six Reading domains simultaneously to predict a single outcome (i.e., overall Reading).

Students were included in the analysis if they completed the Diagnostic during the 2016–2017 school year while in Grades K–2 and another Diagnostic during the 2018–2019 school year when they were in Grades 2–4. The final sample included more than 425,000 students from 45 states.

### Findings

Overall, this analysis found that foundational reading skills domain placements in Grades K and 1 were more strongly related to overall Reading scores two years later (at the end of Grades 2 and 3, respectively) compared to language domains. Conversely, for students in Grade 2, language domain placements were more strongly related to overall Reading scores two years later (at the end of Grade 4).

The table below shows placement patterns for all three cohorts from the descriptive analysis comparing domain-level placements in Year 1 to overall Reading placements in Year 3. Phonics was selected for the table in this summary as it is one of the critical early Reading domains. Of the students in the Grade 1 cohort who were Two or More Grade Levels Below in the domain of Phonics in Year 1, only 8% placed in Grade Level in overall reading as third graders. For the students who were Approaching

Grade Level in Year 1, more than a quarter (i.e., 26%) of the students placed in Grade Level in third grade. Two-thirds (i.e., 66%) of students who started in Grade Level in Phonics also ended in Grade Level in overall Reading.

Although this descriptive analysis does not isolate the impact of Phonics skills, we do know that students below grade level in Phonics are likely to be below grade level in each of the other Reading domains and that students who are below grade level in Phonics and other Reading domains as first graders are less likely to be reading on grade level as third graders. With effective instruction, some students who are Two or More Grade Levels Below as first graders do reach Grade Level two years later. Meanwhile, students who are already on grade level in Phonics as first graders are very unlikely to place into Two or More Grade Levels Below and only somewhat likely to place into Approaching Grade Level in overall Reading.

### Placement by Domain in Year 1 and Overall Reading Placement in Year 3, by Cohort

Year 1 (Winter)				Year 3 (Spring) Overall Reading Placement Distribution		
Cohort	Domain	Domain Placement	Number of Students	Two or More Grade Levels Below	Approaching Grade Level	Grade Level
Grades K → 2	Phonics	Two or More Grade Levels Below	0	NA	NA	NA
		Approaching Grade Level	45,148	10%	61%	29%
		Grade Level	68,797	2%	34%	64%
Grades 1 → 3	Phonics	Two or More Grade Levels Below	4,490	53%	39%	8%
		Approaching Grade Level	66,959	16%	58%	26%
		Grade Level	81,169	2%	32%	66%
Grades 2 → 4	Phonics	Two or More Grade Levels Below	22,817	38%	56%	6%
		Approaching Grade Level	53,828	10%	69%	21%
		Grade Level	82,272	2%	42%	56%

*Note:* The full report includes data for all six Reading domains. Grade-level placements from the *i-Ready Diagnostic* are criterion referenced and relative to a student’s chronological grade level.

## Conclusion

The results from this study point to the value of assessing skills at the domain level early so educators can identify any skills gaps and use that information to deliver effective reading instruction. When educators can identify skills gaps early on with the aid of instructionally useful assessment information, they can intervene and help solidify students’ foundational reading skills, setting them up for success in reading and, ultimately, a love of learning. This suggests that:

- Identifying students’ reading skills, including both strengths and weaknesses, is critical to ensuring students are given the opportunity to master the foundational reading skills necessary to go on to read on grade level
- Empowering teachers with domain level data that can align with a Science of Reading backed curriculum is essential for delivering an equitable instructional response that can support all students in learning how to read on grade level; and
- Administering a single classroom assessment of early literacy skills can be efficient and sufficient.

For results for each cohort and all domains for both the descriptive and regression analysis as well as a more in-depth discussion of implications, the full report, *Understanding the Relationship between Early Literacy Domains and Reading in Later Grades*, by Deanne Crone, Molly Duncan, and Julia Febiger (2022) is [available here](#).

## References

- Barnett, W. S. (1995). Long-term effects of early childhood programs on cognitive and school outcomes. *The Future of Children*, 5(3), 25–50. <https://doi.org/10.2307/1602366>
- National Assessment of Educational Progress (2022). *NAEP report card: 2022 NAEP reading assessment*. <https://www.nationsreportcard.gov/highlights/reading/2022/>