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Michigan's Read by Grade Three Law: Year Two Report

FEBRUARY 2022

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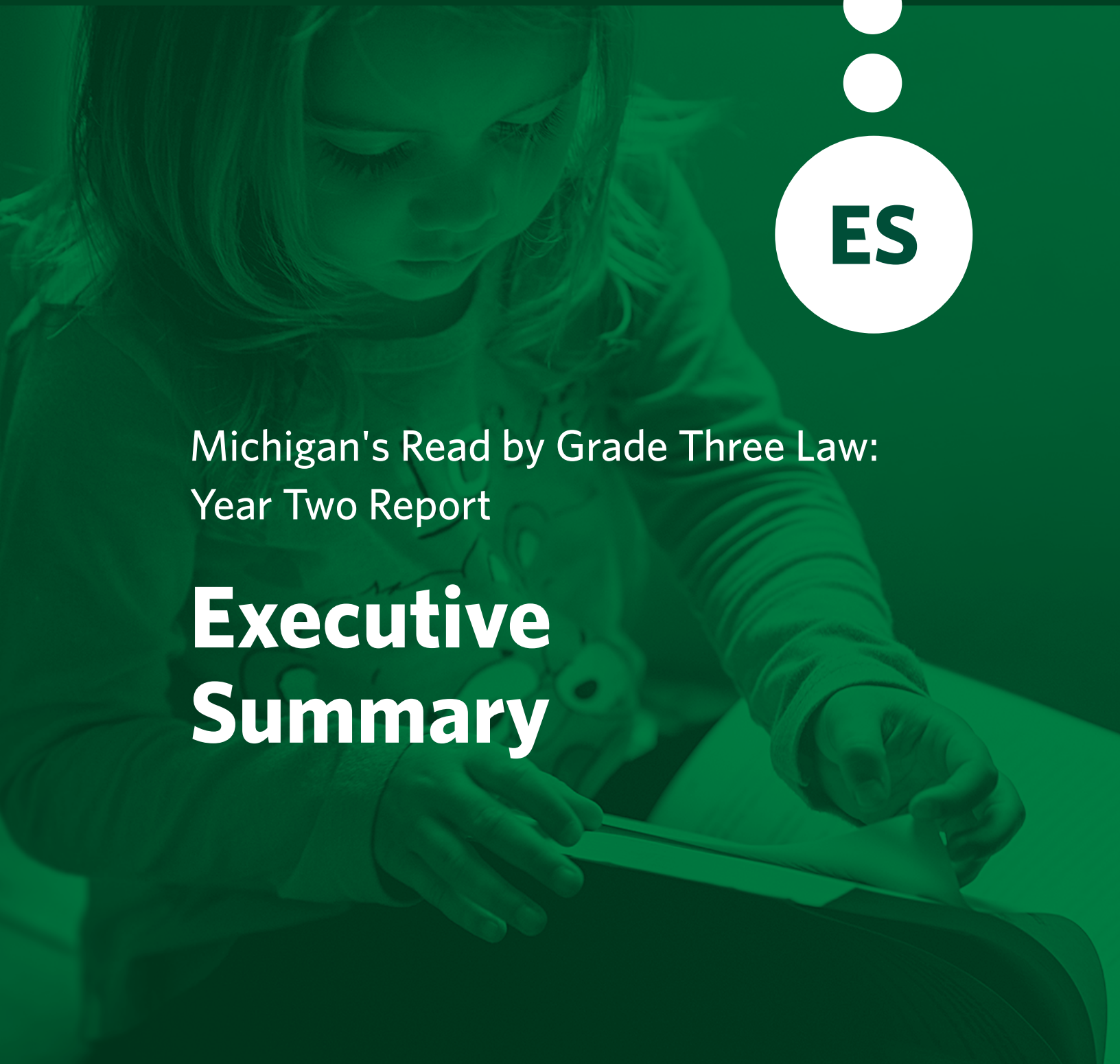

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Michigan's Read by Grade Three Law:
Year Two Report

Executive Summary

Education Policy
Innovation Collaborative
RESEARCH WITH CONSEQUENCE

February 2022

Year Two Report:
Executive Summary

Katharine O. Strunk, Tanya S. Wright, John Westall, Qiong Zhu, Tara Kilbride, Amy Cummings, Andrew Utter, and Madeline Mavrogodato

PURPOSE OF THE REPORT

The Michigan state legislature passed the Read by Grade Three Law in 2016 in response to concerns about the early literacy rates of Michigan's students. Legislators intended for the Law to improve students' early literacy skills through targeted, high-quality instructional supports combined with the threat of grade retention for students who do not meet the state's reading proficiency standard by the end of 3rd grade.

The Education Policy Innovation Collaborative (EPIC) at Michigan State University (MSU) and researchers at the University of Michigan began a four-year evaluation of the Read by Grade Three Law in 2019. While EPIC is the strategic research partner to the Michigan Department of Education (MDE), this evaluation and its results (and all EPIC research) are independent of MDE and represent the conclusions and recommendations of EPIC alone.

This is the second in a series of reports that the research team will release throughout the course of the study. The purpose of this interim report is to provide an update on the implementation of the Read by Grade Three Law and its effect on the early literacy outcomes of Michigan's students. We also examine how the COVID-19 pandemic has affected the Law's implementation.

RESEARCH QUESTIONS AND STUDY OVERVIEW

This report explores two key research questions about the Read by Grade Three Law's early implementation and effects:

1. How is the Read by Grade Three Law being implemented in Michigan? Does implementation vary across populations and places, and if so, why?
2. Is the Read by Grade Three Law meeting its goal to improve literacy achievement and attainment for Michigan students? For which students, if any, is the policy particularly successful?

We use a mixed-methods design that includes analyses of stakeholder interviews, educator surveys, and state administrative records (as we detail in Table 1). This approach allows us to address each question from multiple perspectives and in multiple contexts. Interviews with state-level stakeholders provide insight about the ongoing implementation of the Read by Grade Three Law and how COVID-19 has affected implementation. Surveys capture information about educators' experiences implementing the Law's literacy supports, their perceptions of the COVID-19 pandemic's effect on the Law's implementation, and the costs of implementing the Law. Administrative records from 2012-13 through 2020-21 allow us to track student and educator outcomes to assess the effects of the Law and potential disruptions due to COVID-19 pandemic using an interrupted time series (ITS) approach. In addition, Michigan collected novel student-level administrative data that we use in descriptive analyses to assess elements of the Law's implementation.

TABLE 1. Data Sources

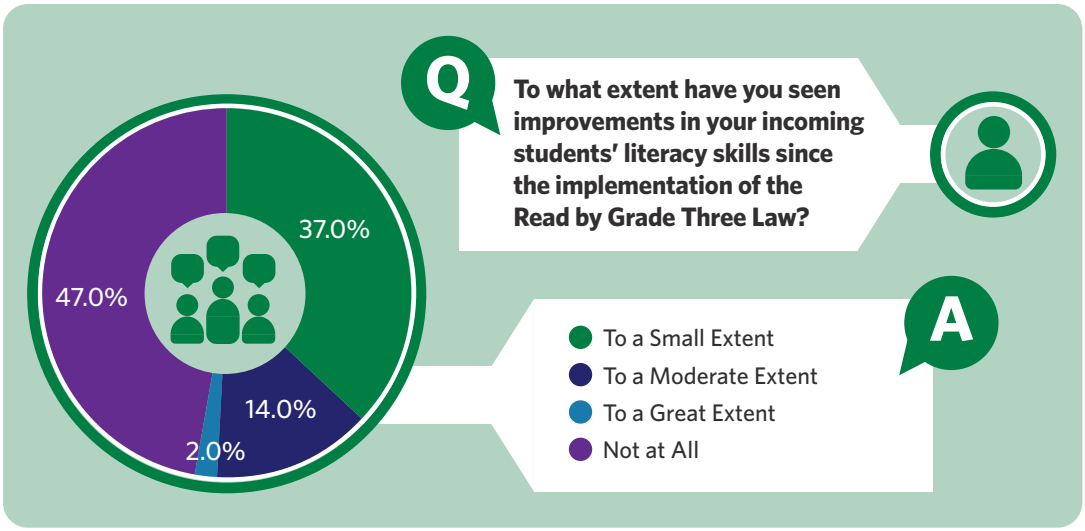
Data	Sample	Outcomes/Area of Interest
State-level stakeholder interviews	6 state-level stakeholders	Michigan's educational landscape during the COVID-19 pandemic Perceptions of the current and future implementation of the Law
Educator surveys	7,788 K-5 teachers, 417 K-5 principals, 162 district superintendents, 582 literacy coaches	Literacy instructional practice, professional learning, coaching, curricula, and interventions Understanding, perceptions, early implementation, and costs of the Law. Perceptions of COVID-19's impact on the Law's implementation
State administrative records	5.3 million student-year observations, 225,000 teacher-year observations from 2012-13 through 2020-21	Student achievement, grade retention, special education placement, English learner program participation, student and educator mobility

KEY FINDINGS

ELA M-STEP Scores and Subscores From Before the Pandemic Suggest Moderate Improvements in Students' ELA Achievement Relative to the Period Before the Law's Passage. However, Most Teachers Do Not Believe the Law Has Effectively Improved Students' Literacy Skills

While COVID-19-related disruptions in M-STEP administration resulted in the cancellation of summative year-end tests (M-STEPs) in spring 2020 and made the spring 2021 M-STEPs difficult to use because of low participation rates and wide differences in participation across student groups and districts, ELA M-STEP scores through 2018-19 suggest that 3rd-5th grade ELA performance improved after the Law's implementation. This was true for overall M-STEP scores and the four subscores (reading, listening, writing, and research). On the other hand, Figure 1 shows that the majority of teachers believed there had been little to no improvement in their incoming students' literacy skills since the Law's implementation.

FIGURE 1. K-3 Teacher Perceptions of Incoming Students' Literacy Skills



Source: EPIC survey of educators about the Read by Grade Three Law.

While Fiscal and Human Capital Constraints Continued to Encumber the Read by Grade Three Law's Implementation, Educators Continued to Have Positive Perceptions About Many of the Law's Supports

A large majority of K-3 teachers held positive beliefs about the literacy supports mandated by the Law. A notable exception was Individual Reading Improvement Plans (IRIPs), though principals and superintendents were more optimistic than teachers about their efficacy.

While educators find the Law's interventions useful, the vast majority of educators and state-level stakeholders believe that more resources are needed to implement them. Educators expressed a need for not only financial resources but also more literacy-focused personnel. This need was particularly prominent for teachers in traditionally underserved districts, furthering concerns about inequitable access to literacy resources across Michigan.

Although K-3 Teachers Thought Professional Development Helped Improve Their Practice, Teachers Received Less —and Desired More—Literacy Professional Development During the 2020-21 School Year

Teachers continued to report that professional development improved their instructional practice. Indeed, most teachers said they wanted more one-on-one coaching regardless of whether they had already received it. Despite these positive sentiments about efficacy, teachers reported receiving significantly less one-on-one literacy coaching and other literacy professional development in 2020-21 than in the prior year. Literacy coaches also reported significant challenges in providing professional development to teachers, generally due to pandemic-related disruptions.

More Than One-Half of 3rd-Grade Students in the 2020-21 School Year Were Identified As Having a "Reading Deficiency" at Some Point Between 1st and 3rd Grade

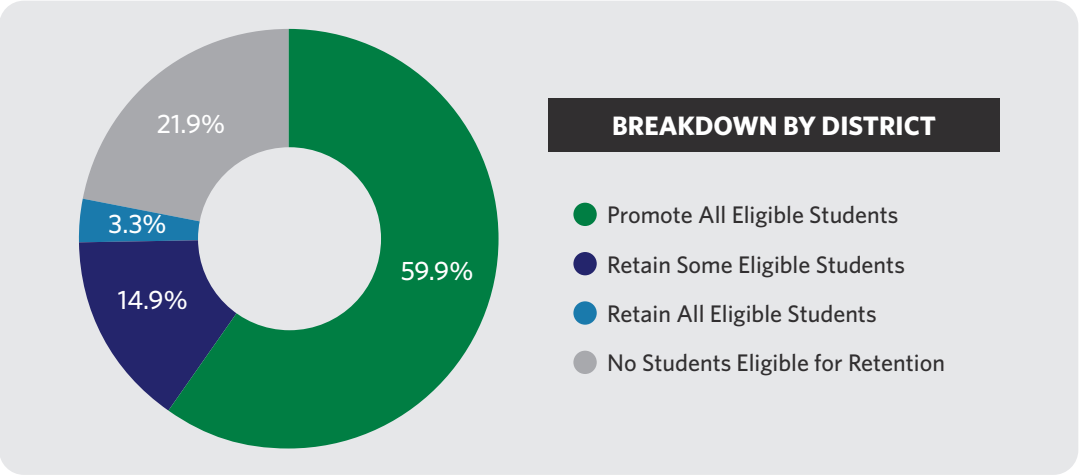
Districts use the "reading deficiency" designation to identify K-3 students who need substantial support and intervention to improve their literacy skills. A striking 52% of Michigan students who were in the 3rd grade in 2020-21 were identified as having a "reading deficiency" at some point in grades 1st-3rd, with approximately one-third identified in each year and 17% identified in all three grades 1st-3rd. "Reading deficiency" rates were significantly higher among historically marginalized student groups and the districts who tend to serve them.

Even with the large number/percentage of students identified with a "reading deficiency" during 1st-3rd grade, there is still some evidence of under-identification of students who need literacy intervention. In general, students who were identified as having a "reading deficiency" more recently or for longer periods of time were more likely to score lower on the 3rd-grade ELA M-STEP. However, in some districts there were systematically more students eligible for retention based on their 3rd-grade ELA M-STEP scores than predicted by students' "reading deficiency" rates and other relevant characteristics. This disparity was particularly evident in districts with higher proportions of economically disadvantaged students and lower prior ELA performance. This kind of systematic under-identification of students who need intervention indicates that too few students received necessary literacy supports, especially in historically low-performing districts.

While Relatively Few Students Were Eligible for Retention at the End of 2020-21, and Districts Planned to Retain Even Fewer, There Were Significant Disparities in Retention Outcomes Across Groups of Students

Fewer than 5% of tested students were eligible for retention based on their 3rd-grade ELA M-STEP score, and districts intended to retain just 0.3% of tested students, providing good cause exemptions to the others. As Figure 2 shows, nearly 80% of districts had students who were eligible for retention under the Read by Grade Three Law, but about 60% of districts (or 77% of districts with any retention-eligible students) indicated that they would promote all of their retention-eligible students to 4th grade through good cause exemptions. Economically disadvantaged, Black, and Hispanic or Latino/a/x students were significantly more likely to be retention-eligible than their White and wealthier peers. Similarly, districts intended to retain students from these groups at higher rates.

FIGURE 2. Breakdown of Districts by Intent to Promote All, Retain All, Promote / Retain Some Eligible Students, Overall



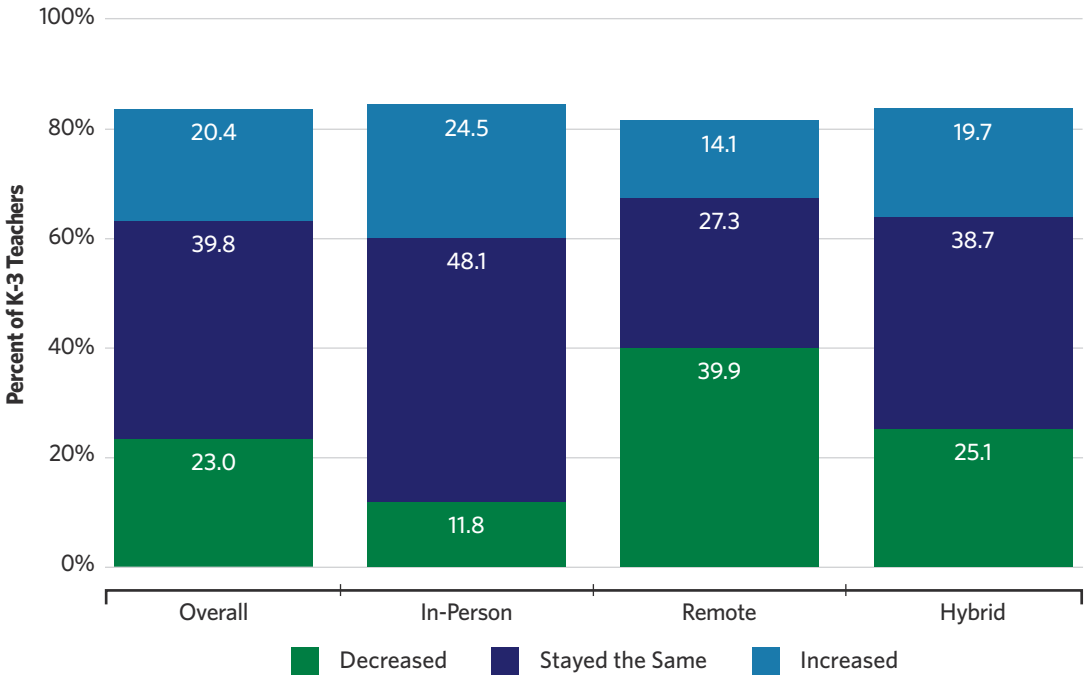
Note: These are percentages of all 766 school districts with 3rd-grade students enrolled during the spring of 2021. The percentages shown may not sum to exactly 100% due to rounding.

K-3 Teachers Reported Spending Less Time on Literacy Instruction During the 2020-21 School Year and Felt That the Pandemic Negatively Affected Their Ability to Provide Literacy Instruction and Interventions

On average, K-3 teachers reported spending two fewer hours per week on literacy instruction in 2020-21 than the previous year. Assuming 40 weeks of instruction per year, this implies 80 fewer hours of literacy instruction over the academic year. Given the importance of instructional time for student learning, this reduction in literacy instruction could severely negatively affect Michigan students' literacy skills.

Educators reported that the COVID-19 pandemic had a detrimental effect on their ability to provide the literacy instruction and interventions necessary to improve students' literacy skills. While all K-3 teachers reported pandemic-related challenges, they were particularly salient for teachers instructing remotely. As Figure 3 shows, teachers providing remote instruction were also far more likely than in-person teachers to report a decrease in the amount of time they spent on literacy instruction. These disparities raise concerns that students learning remotely due to the pandemic likely faced inequitable learning opportunities and outcomes during the 2020-21 school year.

FIGURE 3. Changes in Literacy Instruction Time by Modality



Note: Teachers were asked, "How has the amount of time you spend on instruction in this area changed since last year?" Source: EPIC survey of educators about the Read by Grade Three Law.

POLICY IMPLICATIONS

Continue to Improve Tier I Literacy Instruction So That Fewer Students Require Intervention

Given that over half of Michigan's 3rd-grade students were identified with a "reading deficiency" at some point in K-3, there is likely room for improvement in core Tier 1—general classroom—literacy instruction. The fact that historically marginalized groups are significantly more likely to be identified with a "reading deficiency" raises additional equity concerns, suggesting that the state should provide more resources to the classrooms, schools, and districts that serve these groups. Schools, districts, and the state should continue its focus on improving classroom educators' literacy instruction practice, particularly for educators serving these specific student populations.

Evaluate District Assessments and Procedures for Identifying Students in Need of Extra Literacy Supports and Help Districts Align Local and State Assessments and Achievement Expectations

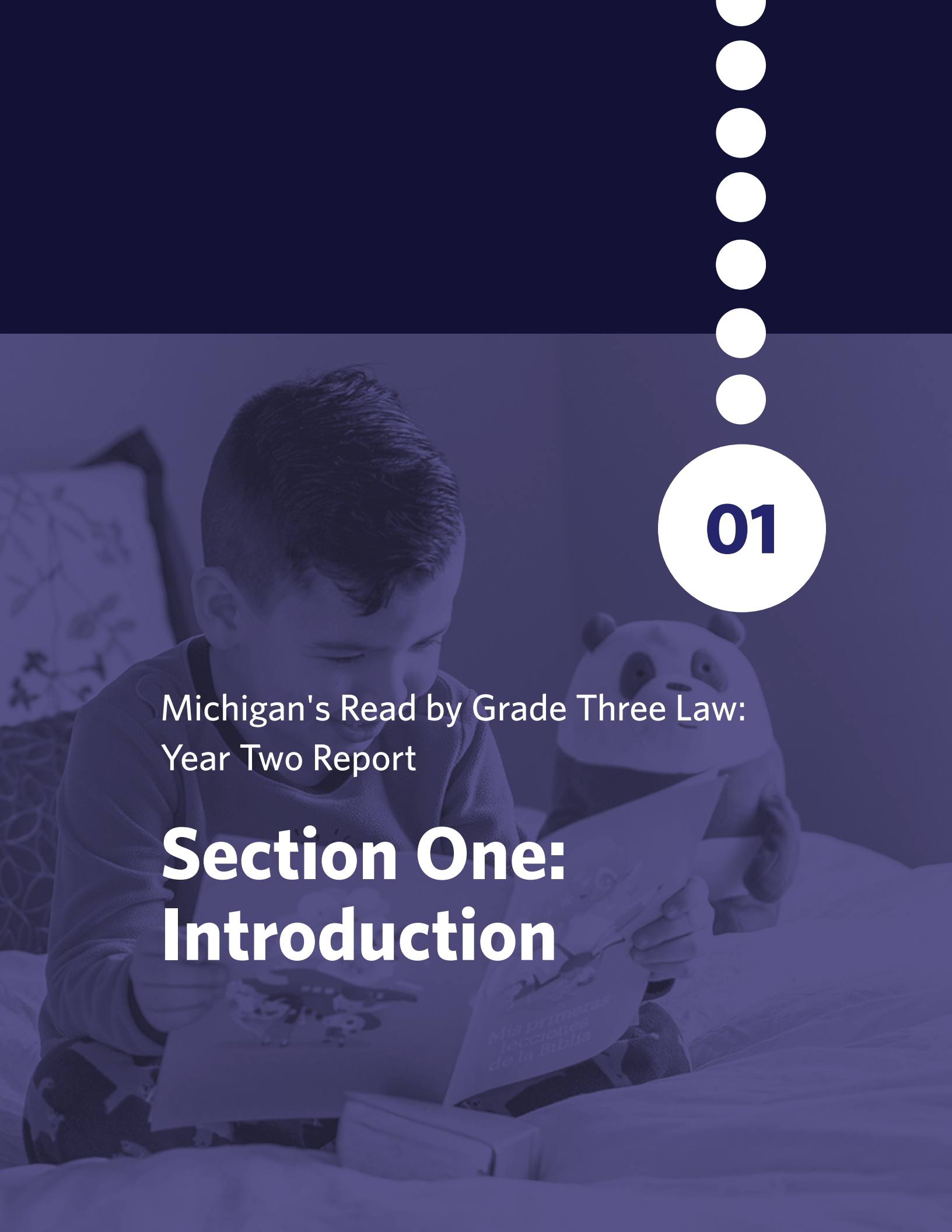
We find evidence that some districts under-identify students with "reading deficiencies," suggesting that students who were struggling with literacy and were eventually eligible for retention did not receive the intervention and supports necessary to succeed in K-3 literacy. The state and districts should work together to better align local literacy diagnostic assessments with the 3rd-grade ELA M-STEP and provide procedures to help students at risk of retention receive the interventions and support they require.

Provide Additional Funding for Literacy Professional Development and Other Literacy Resources

State policymakers should increase funding to strengthen current efforts to improve literacy across Michigan during the 2020-21 school year. Additional funding can support literacy coaches and other non-coaching literacy professional development in evidence-based literacy practices. Since it is challenging to find a sufficient number of qualified literacy coaches, the state should target additional funds to bolster pipelines for recruiting and training new literacy coaches. Additionally, since more than half of students are identified with a "reading deficiency" at some point by the end of 3rd grade, the state should allocate money to provide all students with improved literacy instruction and (if necessary) interventions. This need goes beyond professional development and includes funding for curricula, assessments, staff, and additional time during the school day and year. Policymakers should target these resources at districts serving historically marginalized populations.

Focus On Meeting Students' Literacy Needs to Address Students' Missed Learning Opportunities

Much of the policy debate surrounding the Read by Grade Three Law has been dedicated to the retention component's efficacy, and while 5% of tested students were eligible for retention based on their scores, districts intended to retain just 0.3% of tested students. While some of this disparity is likely because educators do not agree that retention is an effective intervention (see Year One Report, Strunk et al., 2021), it is also likely explained by pandemic-related disruptions to education in Michigan. Instead of focusing on the efficacy of retention to improve students' literacy, policymakers should focus on meeting each student's literacy needs and providing opportunities to accelerate student learning to address missed learning opportunities during the pandemic.



01

Michigan's Read by Grade Three Law: Year Two Report

Section One: Introduction

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MICHIGAN'S READ BY GRADE THREE LAW

In response to growing concerns over Michigan students' performance on state and national early literacy assessments, the state legislature passed the Read by Grade Three Law in 2016. The Law is based on an implied Theory of Change grounded in the idea that targeted and high-quality instructional support and early intervention—coupled with the threat of retention for students who score more than one year below grade level on the state's standardized 3rd-grade ELA assessment—will lead to more effective instruction and supports for students and improve student literacy by the end of 3rd grade.

The Law relies on a Multi-Tiered System of Supports (MTSS) to improve student literacy. "Tier 1" consists of universal supports intended to help *all* students with districts using early warning and identification systems to determine which students receive increasingly intensive "Tier II" and "Tier III" supports (see Figure 1.1). Tier I supports focus on improving literacy instruction for all students, including by providing literacy professional development and coaching to K-3 teachers. To identify students for Tiers II and III, districts must select diagnostic assessments from a Michigan Department of Education (MDE)-approved list and administer these assessments to all K-3 students at least three times each academic year. Districts develop their own guidelines for what constitutes a "reading deficiency" based on results from their selected assessments and provide Law-identified literacy supports to students who meet these locally determined criteria. Literacy supports for students identified as having a "reading deficiency"[1] include Individual Reading Improvement Plans (IRIPs), increased time on literacy instruction, one-on-one or small group instruction, summer support, and parental involvement.

FIGURE 1.1. MTSS Under the Read by Grade Three Law

MULTI-TIERED SYSTEM OF SUPPORTS (MTSS)

KEY COMPONENTS

Literacy Instructional Supports for Educators:

Provision of highly qualified literacy coaches

Teacher literacy professional development

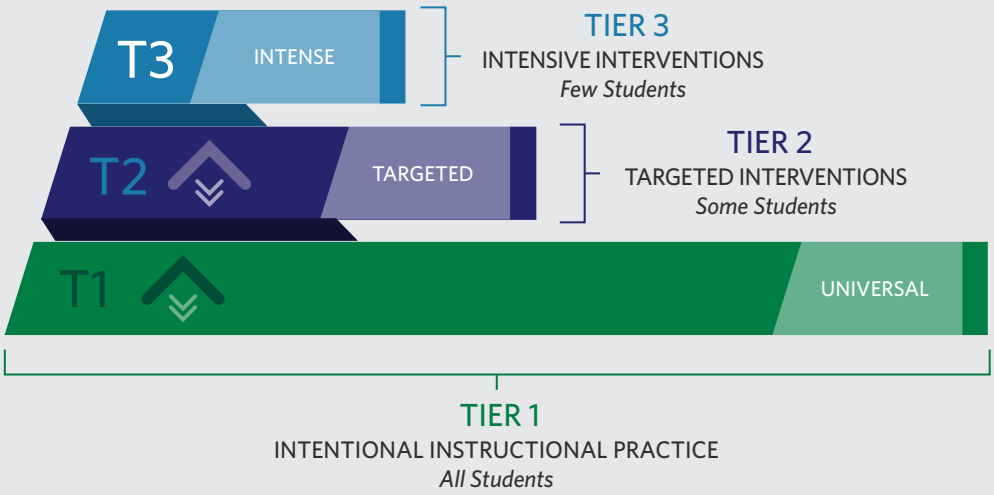
Adoption and dissemination of five "evidence-based" "major reading components"

Monitoring, Remediation, & Retention:

Selection and use of valid, reliable K-3 diagnostic assessments

Early warning and identification

Frequent monitoring of literacy proficiency



Core instructional practice continues alongside targeted or intensive interventions.

T1 This core program ensures all students receive high-quality evidence-based instruction. Instruction incorporates fundamental academic curriculum that is aligned with state standards. Tier 1 supports focus on instruction in **five "evidence-based" "major reading components"**: phonemic awareness, phonics, fluency, vocabulary, and comprehension. High-quality instruction is supported under the Read by Grade Three Law through the **provision of highly qualified literacy coaches** and **teacher literacy professional development.**

T2 Tier 2 consists of literacy supports provided to students who show a need for additional help above and beyond what they receive in Tier 1. These students may be identified by their district's K-3 diagnostic assessment as having a "reading deficiency." Tier 2 supports under the Read by Grade Three Law may include **Individual Reading Improvement Plans (IRIPs), increased time on literacy instruction, one-on-one or small group instruction, summer support,** and **parental involvement.** This tier is designed to meet the needs of students who require additional supports and is intended to provide short-term interventions focused on remediation.

T3 Tier 3 consists of literacy supports provided to students who need more intense and individualized help than is offered in Tier 2. These supports may include similar interventions as in Tier 2 but delivered in a more intensive and targeted fashion. Students still unable to meet the cut score in the third-grade M-STEP ELA despite these supports are identified for **retention.**

Sources: Data collected from EPIC's RBG3 Theory of Change (Figure 3.5), Michigan Department of Education (MDE) MiMTSS FAQ's https://www.michigan.gov/documents/mde/MiMTSS_FAQ_August_2020_-_lkd_1.27.21_714450_7.pdf and Wayne RESA MTSS Quick Guide https://resources.finalsite.net/images/v1568836530/resanet/drbszjpnchsgxle0u5cq/QuickguideforMTSSTheDistrictLevel.pdf

If, despite these supports, a 3rd-grade student's score on the M-STEP ELA assessment is below the state-determined threshold for "one grade level behind in reading," that student is identified for retention. The Law requires the Center for Educational Performance and Information (CEPI) to notify the parents or guardians of these students that they are eligible for retention. Districts must determine whether each of these students will be retained or granted a "good cause exemption" and promoted to 4th grade.

The Tier I, II, and III supports were implemented starting in the 2017-18 school year, with the retention component of the Law intended to begin in the 2019-20 school year. MDE hired additional staff to oversee the implementation of the Law, and the state allocated resources to support the Law. These funds support the hiring and training of Intermediate School District (ISD) Early Literacy Coaches, literacy professional development for educators, and literacy interventions for students (*The State School Aid Act of 1979*, 2021).[2]

PURPOSE OF THIS REPORT

In the fall of 2019, the Education Policy Innovation Collaborative (EPIC) at Michigan State University, in collaboration with researchers from the University of Michigan, began a five-year evaluation of the implementation and efficacy of Michigan's Read by Grade Three Law (MCL 380.1280f). Last year, results from the first interim report showed that 3rd-grade student achievement improved following the passage of the Law relative to the pre-Law downward trend in ELA performance. Survey data showed that educators attributed gains to the literacy supports identified in the Law. However, fiscal and human capital constraints created barriers to implementation, and districts found it challenging to hire sufficient quantities of literacy coaches. There were also disparities in the perceived availability and quality of literacy resources, with educators in historically underserved districts exhibiting less favorable impressions of the resources available to them than their counterparts in more advantaged districts. Lastly, the retention component of the Law was particularly controversial, which likely drove negative perceptions about the Read by Grade Three Law overall (Strunk et al., 2021).

The COVID-19 pandemic disrupted learning during the final months of the 2019-20 school year, including widespread school-building closures and the cancellation of state assessments. Without state assessment results, the retention requirement of the Law was suspended, but all other components of the Law remained in place. Educators expressed concerns about literacy instruction and described how the pandemic disrupted the Law's implementation. As testing resumed in the spring of 2021, the Read by Grade Three Law—including the retention component—remained in effect.

This is the second in a series of reports that the research team will release as the evaluation continues through the 2023-24 school year. The purpose of this report is to provide an update on the continued implementation of the Read by Grade Three Law and its early efficacy in improving early literacy outcomes for Michigan students. As with our first interim report, we answer these questions by combining longitudinal administrative data on students and teachers

with results from surveys of educators, school- and district-level administrators, and literacy coaches, as well as with interviews with state-level stakeholders. In this year's report, we expand on each of these sources to include new data collected or obtained during the second year of the study. We use these data to examine how educators and administrators have continued to implement the Read by Grade Three Law through spring 2021 and how the COVID-19 pandemic has affected implementation. We also continue to assess whether the Law is meeting its goal of improving literacy achievement and attainment for Michigan students and how this varies across populations and locations. Lastly, we explore evidence as to whether the policy appears to be an effective use of education resources.

SECTION ONE NOTES

1. The legislation (MCL 380.1280f) that created the Read by Grade Three Law uses the term "reading deficiency" and associated terms such as "reading deficient" to refer to students who are identified as performing well below grade-level expectations. Because this is the terminology the Law uses, we use it throughout our report. This does not reflect the authors' or EPIC's beliefs about students who are struggling with literacy skills.

2. For 2020-21, in the State School Aid Act, section 31(a) provides funds to support instructional programs and direct noninstructional services (e.g., tutors) for at-risk students for the purpose of ensuring that students are proficient in ELA by the end of 3rd grade. Section 35(a)4 allocates $31.5 million for ISD Early Literacy Coaches, and section 35(a)5 allocates $19.9 million for additional instructional time for students in K-3 who have been identified as needing additional supports. For a more detailed overview of the Read by Grade Three Law, please refer to our Year One report, which can be found at https://epicedpolicy.org/wp-content/uploads/2021/03/Year_One_RBG3_Report.pdf.

02

Michigan's Read by Grade Three Law:
Year Two Report

Section Two: Data and Methods

Section Two:
Data and Methods

INTRODUCTION

To evaluate both the implementation and efficacy of the Read by Grade Three Law, we use a multi-stage mixed-methods triangulation design (Creswell & Plano Clark, 2017; Natasi et al., 2007). Our evaluation includes multiple types of data and multiple methods of analysis. As shown in Table 2.1, the second-year report uses seven sources of data:

- interviews with state-level stakeholders,
- surveys of teachers,
- surveys of principals,
- surveys of district superintendents,
- surveys of literacy coaches,
- student administrative records, and
- teacher administrative records.

In this second-year report, we focus on the continued implementation of the Read by Grade Three Law and the Law's early effects on relevant student and teacher outcomes through the 2020-21 school year. We also discuss how the COVID-19 pandemic affected educators' implementation of the Read by Grade Three Law during the 2019-20 and 2020-21 school years. As with our first-year report, we combine rich data from interviews, educator surveys, and state administrative records. Follow-up interviews with a subset of state-level stakeholders, conducted in the fall of 2020, centered on stakeholders' understanding of the current implementation of the Read by Grade Three Law and its intersection with the COVID-19 pandemic. Surveys administered to educators in the spring of 2021 asked about their experiences enacting literacy supports prescribed by the Law in the 2020-21 school year, their perceptions of the effects of the COVID-19 pandemic on the Law's implementation, and the costs of implementing the Law. In addition, administrative records enable us to track many student and teacher outcomes from the 2012-13 school year through the 2020-21 school year to assess changes in trends that may be attributable to the early effects of the Law or the disruptions by the COVID-19 pandemic.

TABLE 2.1. Data Descriptions

Data	Source	Outcomes / Areas of Interest	Year(s)	Sample Size	Subgroups
K-5 teacher surveys	EPIC-developed survey	Perceptions of experiences related to literacy instructional practice and literacy professional learning Perceptions of the COVID-19 pandemic's effects on the implementation of the Law Costs related to literacy and the Law (administered to 10% of participants)	Spring 2021	7,788 participants (25% response rate [RR])	**Sub-analyses by teacher characteristics:** ▪ grade span ▪ instructional modality **Sub-analyses by district characteristics:** ▪ sector, size ▪ 2019 ELA performance ▪ proportion of economically disadvantaged students ▪ proportion of non-White students ▪ proportion of students with disabilities ▪ proportion of English learners ▪ locale
K-5 principal surveys	EPIC-developed survey	Provision and responsibilities of literacy coaches, reading or literacy specialists/ interventionists Implementation of literacy professional development and interventions Perceptions of the COVID-19 pandemic's effects on the implementation of the Law Costs related to literacy and the Law (administered to 10% of participants)	Spring 2021	417 participants (21% RR)	**Sub-analyses by school characteristics:** ▪ instructional modality **Sub-analyses by district characteristics:** ▪ sector ▪ size ▪ 2019 ELA performance ▪ proportion of economically disadvantaged students ▪ proportion of non-White students ▪ proportion of students with disabilities ▪ proportion of English learners ▪ locale

TABLE 2.1. Data Descriptions (continued)

Data	Source	Outcomes / Areas of Interest	Year(s)	Sample Size	Subgroups
District superintendent surveys	EPIC-developed survey	Provision and responsibilities of literacy coaches, reading or literacy specialists/ interventionists Implementation of literacy interventions and curricula Perceptions of the COVID-19 pandemic's effects on the implementation of the Law Costs related to literacy and the Law (administered to all participants)	Spring 2021	162 participants (30% RR)	**Sub-analyses by district characteristics:** ▪ sector ▪ size ▪ 2019 ELA performance ▪ proportion of economically disadvantaged students ▪ proportion of non-White students ▪ proportion of students with disabilities ▪ proportion of English learners ▪ locale
State-level stakeholder interviews	Interviews conducted by EPIC researchers	Michigan's educational landscape during the COVID-19 pandemic Perceptions of the current and future implementation of the Law	Fall 2021	6 state-level stakeholders	2 policymakers 2 MDE policymakers/ program leads 2 external stakeholders from educational organizations
Literacy coach surveys	EPIC-developed survey	Qualifications Reported workload and time allocation Perceptions of support and training received Provision of professional development to teachers/other coaches	Spring 2021	582 participants (51% RR) ISD Early Literacy Coaches n=163, 42% RR Other literacy coaches n=419, 55% RR	**Sub-analyses by:** ▪ Coach type **Sub-analyses by ISD characteristics** (for ISD Literacy Coaches) **or district characteristics** (for other literacy coaches): ▪ sector ▪ size ▪ 2019 ELA performance ▪ proportion of economically disadvantaged students ▪ proportion of non-White students ▪ proportion of students with disabilities ▪ proportion of English learners ▪ locale

TABLE 2.1. Data Descriptions (continued)

Data	Source	Outcomes / Areas of Interest	Year(s)	Sample Size	Subgroups
K-5 teacher administrative records	MDE and CEPI	Mobility and exit from Michigan public schools Teacher demographics and credentials	2012-13 through 2020-21	225,000 teacher-year observations (49,000 unique teachers)	**Sub-analyses by teacher characteristics:** • race/ethnicity • gender • educational attainment • years of experience **Sub-analyses by school characteristics:** • sector • size • Partnership status **Sub-analyses by district characteristics:** • 2016 ELA performance • proportion of economically disadvantaged students • locale
K-5 student administrative records	MDE and CEPI	Student demographics	2012-13 through 2020-21	5.3 million student-year observations (1.5 million unique students)	**Sub-analyses by student characteristics:** • grade level • race/ethnicity • gender • economically disadvantaged status • students with disabilities • English learner status • non-resident status **Sub-analyses by school characteristics:** • sector • size • Partnership status **Sub-analyses by district characteristics:** • 2016 ELA performance • proportion of economically disadvantaged students • locale
		Math and ELA MEAP/ M-STEP scores and M-STEP subscores (grades 3-5)	2012-13 through 2018-19		
		"Reading deficiency" identification/ continuation indicators (grades K-3) Interventions received by students identified as having a "reading deficiency" (grades K-3)	2018-19 through 2020-21		
		Retention eligibility, intent to retain/ promote, & good cause exemption data (grade 3)	2020-21		
		Grade retention (grades K-5)	2012-13 through 2020-21		
		Mobility (grades K-5)	2012-13 through 2020-21		
		Students with disability classification, identification, and exit	2021-13 through 2020-21		
		English learner program participation (grades K-5)	2012-13 through 2020-21		

DESCRIPTION OF DATA AND METHODS

This report examines two main research questions about the early implementation and effects of the Read by Grade Three Law. Table 2.2 identifies each of the research questions and the report section in which we present our findings.

The larger five-year longitudinal study also asks about the cost-effectiveness of the Read by Grade Three Law; we provided early analyses to address this question in the Year One report and will provide additional evidence in later reports. The remainder of this section outlines each of the data sources we use to examine the research questions outlined in Table 2.2 and the methods we use to analyze each data source.

TABLE 2.2. Research Questions

	Research Questions	Report Sections
1	How is the Read by Grade Three Law being implemented in Michigan? Does implementation vary across populations and places, and if so, why?	**Section Three:** COVID-19 pandemic affected the implementation of the Read by Grade Three Law. **Section Four:** Despite the pandemic, the Law's interventions continue to be implemented. **Special Section A:** How do ISD Early Literacy Coaches compare to other types of literacy coaches? **Special Section B:** Charter school educators perceive and implement the Law differently.
2	Is the Read by Grade Three Law meeting its goal to improve literacy achievement and attainment for Michigan students? For which students, if any, is the policy particularly successful?	**Section Six:** The Law's effect on student achievement outcomes. **Sections Three and Six:** Teacher and student mobility remained stable.

State Administrative Records on Students and Teachers

Data Sources

To assess the early effects of the Read by Grade Three Law on various student and teacher outcomes, we use administrative records MDE and CEPI collected and maintained for the 2012-13 through 2020-21 school years. We compare trends in outcomes of interest before and after the Law was passed to trace deviations in the first four to five years of early implementation, during which time many of the literacy initiatives began, from trends in the years prior to the Law's passage. The Law was passed in October 2016, so we define "pre-Law" cohorts as students and teachers in Michigan public schools between the 2012-13 and 2015-16 school years, and "post-Law" cohorts as those in the 2016-17 (one year post), 2017-18 (two years post), 2018-19 (three years post), 2019-20 (four years post), and 2020-21 (five years post) school years.

Both student and teacher administrative datasets include general demographic information (e.g., race, ethnicity, gender) and school placement. Student data also include grade level, test scores on state standardized assessments, students with disabilities (i.e., students with an Individualized Education Program [IEP] or a Section 504 Plan), English learners (ELs), and economically disadvantaged students (defined in Michigan as students who are eligible for free or reduced-price lunch, are in households receiving food [SNAP] or cash [TANF] assistance, are homeless, are

migrant, or are in foster care). Teacher data include information about each educator's credentials, details of their assignment, and longevity in their current district. Research identification codes for each student and teacher allow us to track records for the same individuals longitudinally such that we can identify students who repeated a grade level, identify patterns of year-to-year mobility for both students and teachers, and estimate teachers' levels of experience.

Our analyses focus specifically on students and teachers in grades K-5. Although the Law only prescribes literacy supports for K-3 students, students in 4th-5th grade may also be affected by the Law. Later cohorts of 4th-5th-grade students likely received the Law's prescribed literacy supports in grades K-3. Furthermore, 4th-5th-grade students may benefit from system-wide efforts in their schools and districts to support literacy instruction. Alternatively, achievement outcomes for 4th-5th-grade students may be negatively affected if schools or districts redistributed personnel or financial resources to grades K-3 in response to the Law. Collectively, our sample includes approximately 5.3 million student-year observations over seven years (1.5 million unique students) and 225,000 teacher-year observations (49,000 unique teachers).

Student Data

M-STEP achievement. We examine trends in several student outcomes. Of primary interest is student achievement on statewide ELA assessments. Since K-2 students do not take the statewide summative assessment, we only include 3rd-5th-grade students in analyses of achievement outcomes. We also examine trends in math achievement because literacy skills are incorporated across content areas, and improvements in literacy skills may help students learn math and therefore increase achievement on math assessments (e.g., Greene & Winters, 2004; Jacob & Lefgren, 2004; Schwerdt, West, & Winters, 2017; Winters & Greene, 2012) and because, conversely, it is possible that a greater focus on ELA could detract from math instruction resulting in lower math scores.

Michigan transitioned to a new assessment system, M-STEP, beginning with the 2014-15 school year. Its predecessor, the Michigan Educational Assessment Program (MEAP), was constructed and scaled differently from the M-STEP; as a result, we can only assess trends in ELA and math achievement from 2014-15 to the present. Due to the COVID-19 pandemic, the M-STEP was not administered in the 2019-20 school year, so there is no test score data available from that year to add to our analysis as originally planned. Although M-STEP assessments were administered in the 2020-21 school year, we did not have access to the test scores in time to include in analysis for this report. In addition, the U.S. Department of Education waived the participation requirement for end-of-year standardized achievement tests taken in the spring of 2021, resulting in far lower participation rates (71.2% as opposed to 96.5% in spring 2019) among Michigan 3rd-grade students, and especially among certain sub-groups of students (i.e., Black students, economically disadvantaged students, students in fully-remote districts in May 2021). This will make spring 2021 M-STEP scores challenging to use in evaluations of student progress.

Our first-year evaluation report examined trends in M-STEP achievement through the 2018-19 school year. This year's report expands on last year's analysis by examining subscores for different content domains within each subject area as additional outcomes for the 2014-15 through 2018-19 school years. Subscores for the ELA assessment capture performance in four domains: 1) reading, 2) listening[1], 3) writing, and 4) research. Subscores for the math assessment capture performance

in three domains: 1) concepts and procedures; 2) communicating and reasoning; and 3) problem solving, modeling, and data analysis.[2]

We present our findings for overall M-STEP scores and subscores using the M-STEP scale. The overall M-STEP scores in ELA and math are scaled such that the proficiency cut-points for the 3rd-, 4th-, and 5th-grade assessments are permanently fixed at 1300, 1400, and 1500, respectively. Although M-STEP subscores use the same scale as the overall score, these overall proficiency cut-points do not apply to subscores. This is because the overall proficiency cut-points are a holistic measure of students' performance in all subject areas covered by the assessment. Students can compensate for a low subscore in one subject area with a higher subscore in another.

Retention. Although we do not have M-STEP scale scores from 2020-21, we have indicators of the proficiency level at which 3rd-grade students performed on the 3rd-grade ELA M-STEP. Notably, we use indicators of whether a student scored at or below the 1252 scale score cut-off and are eligible for retention under the Law. We use these data to determine rates of retention eligibility by student subgroups, the characteristics of retention eligible students, and rates of test participation for the 3rd-grade ELA M-STEP.

In addition, MDE has collected information from school districts regarding their intention to retain or promote retention-eligible students. If a school district decides to promote a student, MDE also collected the reason for promotion, or the student's good cause exemption. We use these data to study rates of school districts' intention to retain students and the characteristics of the students that school districts intend to retain. We further combine retention eligibility, intent to retain, and "reading deficiency" data to understand the inter-relationship between the monitoring of student literacy skills, the interventions students receive, and their potential for retention under the Law.

MDE will also collect data documenting final retention outcomes. Districts may intend to retain students (or not), but decisions could change early in the school year or students could choose to exit their districts to avoid retention. Later data collection will provide final retention data, which we will include in next year's report.

"Reading deficiency." In 2018-19, to help implement the Read by Grade Three Law, CEPI began collecting new indicators for K-3 students identified as having a "reading deficiency." A "reading deficiency" is defined by the Law as "scoring below grade level or being determined to be at-risk of reading failure based on a screening assessment, diagnostic assessment, standardized summative assessment, or progress monitoring" (Michigan House Bill 5111, 2013). These data indicate whether a student had a "reading deficiency" at the beginning of the year, whether they were determined to still have a "continuing reading deficiency" at the end of the year, and the types of additional instruction they received. Although all districts identify students with a "reading deficiency" based on their performance on a literacy benchmark assessment, each district can choose which benchmark assessment to administer and sets local standards for performance that constitutes a "reading deficiency." We use these data to examine the rates at which districts flagged students as having a "reading deficiency" at the beginning of the year, students who later remediated their "reading deficiency," the characteristics of these students, the interventions these students receive, and the Read by Grade Three Law retention outcomes of these students following results from the 2020-21 3rd-grade ELA M-STEP assessment.

Additional student outcomes. We update our earlier analyses provided in the first-year report to include additional school years of data (2019-20 and 2020-21) for the following outcomes for K-5 students: student retention, student enrollment, student mobility, Section 504 Plan or IEP participation (students with disabilities), and English learner (EL) program participation. We define grade retention as a student's placement in the same grade level in two consecutive years. For kindergarten students, we distinguish between the retention of students in a traditional single-year kindergarten setting and the participation of students in planned two-year Developmental Kindergarten programs (also called "Young 5's" or "Begindergarten"). We identify students as participating in Developmental Kindergarten if they were flagged as enrolling in such a program when they first entered the student administrative records and then remained in the kindergarten for the following year. We limit the analytic sample for grade retention to students who were placed in a given grade level for the first time. We make this restriction because students who were previously retained in that grade are much less likely to be retained again.

When we examine student mobility, we define a student as mobile if they change schools or districts from year to year, excluding "structural mobility" that occurs when students reach the terminal grade offered in their school or move due to a school closure. We consider three types of student mobility: within-district mobility (defined as students moving across schools within the same district); out-of-district mobility (defined as students moving across districts); and exit from Michigan public schools (defined as students exiting from the state student administrative records).

We assess students receiving support as a student with a disability as whether a student was classified as having an IEP or Section 504 Plan in a given school year. To further investigate changes from year to year, we generate two indicators concerning changes in a student's disability status: student with disability identification and student with disability exit. Students with disabilities identification is defined as a student who was not already identified as having a disability in the previous school year being newly identified in the current year. Conversely, a student with disability exit is defined as a student who ceased to be identified as having a disability after a given school year; in other words, the student was identified for an IEP or a Section 504 Plan in that school year and was no longer identified in the following school year.

Similarly, we consider three outcomes for students' participation in English learner programs: English learner placement, English learner identification, and English learner exit. The identification indicators are missing for the 2012-13 school year (the first year of the student panel), and the exit indicators are missing for the 2020-21 school year (the last year of the student panel) because we need two consecutive years of data to determine these indicators.

Student characteristics. We include various student-level characteristics in all analyses of student outcomes. Student-level covariates include age, gender, and variables indicating whether a student is economically disadvantaged, an English learner, non-resident status (students who do not live within the district's geographic boundaries where they attend school), or classifies as a student with disabilities.[3] We also collapse student-level data to generate the characteristics of a student's school, including the size and demographic composition of the student body (i.e., the percentages of non-White students, economically disadvantaged students, students with disabilities, and English learners). As we have a relatively short panel of student achievement on the M-STEP, we also include school-level average performance on the MEAP in 2011-12 and

2013-14 to control for prior student achievement in our models predicting student achievement outcomes. We exclude students with very unusual grade progression patterns from all student-level analyses.[4]

Teacher Data

Our outcome of interest for teachers is year-to-year mobility. Specifically, we consider teacher transfers within the same district, between districts, and exits from the profession (which we capture when we no longer observe a teacher in a teaching position in the Michigan public school system in the subsequent school year). We focus on teachers of K-5 students.[5] In analyses for teacher mobility, we control for teacher race/ethnicity, gender, new teacher status (i.e., teachers within their first three years in the profession), educational attainment (i.e., whether they possess a master's degree or above), and the same set of school-level covariates included in models for student outcomes.

Analytic Strategy

Interrupted time series analyses. As with the first-year report, we conduct Interrupted Time Series analysis (ITS) to examine any shifts in student and teacher outcomes that occurred during the early implementation of the Law. Intuitively, the ITS approach uses observations in the pre-intervention period to establish an underlying trend, that is, the "expected" trend that would have continued into the post-intervention period in the absence of the intervention. By comparing the actual post-intervention trend with the "expected" trend, researchers can identify changes associated with the intervention. This technique allows us to isolate changes in student and teacher outcomes that predate the Law from changes that may be attributable to the Law's prescribed literacy interventions. Specifically, we estimate the following model:

$$y_{it} = \beta_0 + \beta_1 Trend + \mathrm{T}_{t\geq 0}\tau + \mathrm{X}_{it}\Omega + \lambda_d + \varepsilon_{it}$$

where, y_{it} represents the outcome of interest for a student or teacher, denoted *i*, in a school year *t*. *Trend* is the time elapsed since 2015-16, the school year before the passage of the Law. *Trend* is negative in the years before the Law and enumerates the number of years until 2015-16 (e.g., *Trend* equaled -2 in 2013-14). $\mathrm{T}_{t\geq 0}$ is a vector of indicators for each post-Law year (i.e., 2016-17, 2017-18, 2018-19, 2019-20, and in some cases 2020-21). This means that $\mathrm{T}_{t\geq 0}$ equals zero in all pre-Law years and equals one in the specific post-Law year. β_1 represents the change in outcome y_{it} associated with a year increase (representing the underlying trend in the absence of the Law). For each of the yearly indicators in $\mathrm{T}_{t\geq 0,}$ τ is the year-specific deviation in y_{it} from pre-Law trends, and the estimates of these parameters are our primary focus. X_{it} is a vector of control variables. λ_d represents district fixed effects, and ε_{it} is the error term. We cluster robust standard errors at the district level.

In addition to overall trends for K-5 students, we assess differences across subgroups of students, schools, and districts. We define student subgroups based on gender, race/ethnicity, economic disadvantage, English learner status, students with disabilities, and "non-resident" status. We consider differences across school-level subgroups, including by sector (traditional public school [TPS] and charter)[6] and Partnership status (treated by the Partnership Model intervention, which targets the state's persistently lowest-performing schools under the Every Students Succeeds Act [ESSA]).[7] In addition, we classify districts into "low," "average," and "high" categories based on their

district aggregate ELA achievement for all 3rd-5th-grade student standardized state assessments and proportions of K-5 students who are classified as economically disadvantaged, depending on whether they fall in the bottom quartile, middle two quartiles, or top quartile of districts on each measure.[8] Some of the variables we use to create district subgroups (e.g., 3rd-5th average ELA score) may have been affected by the Read by Grade Three Law in the post-Law period. In the ITS analyses, we generate district- and school-level subgroups using student demographic and assessment data from the 2015-16 school year, the last year before the Law's implementation. This ensures that the composition of each district and school subgroup is unaffected by the Law itself. In addition to these subgroups, we examine differences across districts located in urban, suburb or town, and rural areas.

"Reading deficiency" and retention outcomes analyses. To analyze the relationship between "reading deficiency" identification and M-STEP participation and retention outcomes of the cohort of 3rd-grade students in 2020-21, we estimate the following linear probability model (LPM)[9]:

$$Y_{is}=\alpha_0+\delta_{YNN}1(Y_{18}N_{19}N_{20})+\delta_{NYN}1(N_{18}Y_{19}N_{20})+\delta_{NNY}1(N_{18}N_{19}Y_{20})+\delta_{YYN}1(Y_{18}Y_{19}N_{20})$$
$$+\delta_{YNY}1(Y_{18}N_{19}Y_{20})+\delta_{NYY}1(N_{18}Y_{19}Y_{20})+\delta_{YYY}1(Y_{18}Y_{19}Y_{20})+\alpha_1 \mathrm{X}_{\mathrm{is}}+\psi_s+\zeta_{is}$$

Where Y_{is} is the binary M-STEP participation (student did or did not participate in the 2020-21 3rd-grade ELA M-STEP) or retention outcome (student was or was not identified for retention; student was or was not intended to be retained) of student *i* in school *s*. Each $1(X_{18}X_{19}X_{20})$ indicates a specific pattern of fall semester "reading deficiency" identification. For example, $1(N_{18}Y_{19}Y_{20})$ will equal one for students who are identified as "reading deficient" in fall 2019 and fall 2020, but not in fall 2018. Never-identified students are the reference group. Each δ_{XXX} estimates how many percentage points more (or less) likely a given outcome Y_{is} is to occur for students with a specific "reading deficiency" pattern (e.g., YNN or NYN) than never-identified students, all else equal. X_{is} is a vector of the individual student demographic covariates described above. ψ_s are indicators for each school (school fixed effects) that allow us to account for time-invariant school characteristics associated with M-STEP participation or retention outcomes and "reading deficiency" identification patterns. ζ_{is} represents idiosyncratic errors.

We continue our analyses of retention outcomes by examining whether district-level retention eligibility rates are systematically greater or lesser than we might expect based on student and school characteristics. We do this to identify whether districts are accurately identifying students who are struggling with literacy. If districts are under-identifying students with a "reading deficiency," struggling students may not receive the interventions required to avoid 3rd-grade retention. On the other hand, if districts are over-identifying students with "reading deficiencies," districts might be using resources ineffectively.

In this analysis, we construct a district-level measure called $PredictionError_d = ActualRetentionEligibilityRate_d - PredictedRetentionEligibilityRate_d$. The $ActualRetentionEligibilityRate_d$ is the actual proportion of tested students in school district *d* who are retention-eligible under the Law (i.e., scored 1252 or below on the 2020-21 3rd-grade ELA M-STEP.) We compute the $PredictedRetentionEligibilityRate_d$ using estimates from the model described above. We estimate

the coefficient of the LPM above with retention-eligibility as the dependent variable and predict retention-eligibility for tested students using the model estimates. This provides us with a continuous prediction of the probability that student *i* in district *d* will be retention-eligible under the Law based on their "reading deficiency" pattern, characteristics, and school. The $PredictedRetentionEligibilityRate_d$ is the average of these student-level predictions for each district *d*.[10]

Because the district-level prediction errors are coming from a regression model, we expect them to be normally distributed with mean zero and standard deviation one, with errors clustered close to zero. This is because of the nature of regressions, which minimize these errors at the student level. This means districts are about equally likely to have more or fewer retention eligible students than predicted. Our analysis will focus on districts with large prediction errors that skew the distribution to understand their characteristics and provide potential explanations for their large prediction errors.

A positive prediction error indicates that a district has more retention-eligible students than predicted, suggesting an under-estimate of retention eligibility. A negative prediction error indicates fewer retention eligible students than predicted, suggesting an over-estimate of retention eligibility rates. Systematic under or over-estimation of retention eligibility rates will manifest as a skewed distribution of prediction errors. The distribution of prediction errors with systematic over-estimation will exhibit a long negative tail, while systematic under-estimation will exhibit a long positive tail.

An asymmetric distribution of prediction errors can provide evidence of over or under-reporting of "reading deficiency" at the district level but does not provide causal evidence regarding *why* the over or under-reporting exists. We examine the relationship between prediction errors and school district characteristics using a regression framework to explore potential reasons for over or under-reporting of "reading deficiency." We use regression to estimate the relationship between prediction errors and the district-level characteristics we described above. We compare how prediction errors differ by district characteristics while controlling for other confounding factors to understand whether a specific district characteristic is associated with having a retention-eligibility rate that is lower or higher than we might expect.[11] These results provide some potential insight into why we detect over or under-reporting of "reading deficiency" in certain districts.

Educator Surveys

We administered surveys of K-5 teachers and principals, district superintendents, and literacy coaches in TPS and charter schools throughout Michigan in the spring of 2021.[12] As in the surveys administered in spring 2020, our second-year surveys included questions about literacy instruction and resources, literacy professional development and one-on-one literacy coaching, family engagement, and perspectives and beliefs about the Law. The second-year survey was substantially shorter than the first-year survey to account for the challenging teaching contexts resulting from the pandemic, and the 2021 survey also asked a set of questions about the ways the COVID-19 pandemic affected implementation of literacy instruction and the Read by

Grade Three Law. All district superintendents and a random sample of 10% of the teachers and principals surveyed received additional items regarding time and financial costs for implementing the Read by Grade Three Law.

There were two major shifts from the year-one surveys. First, whereas in our first year we administered surveys to all K-8 teachers and principals, in 2020-21 we limited our survey population to K-5 teachers and principals. We did so because the Law is far more pertinent to elementary school educators, and particularly to K-3 educators. Our year-one survey analysis clearly showed that 6th-8th grade teachers and principals are less familiar with the Law and have less ability to answer questions related to early literacy instruction. Second, we expanded our sample of literacy coaches to include not only ISD Early Literacy Coaches (as in year one) but also school- and district-based literacy coaches and literacy specialists/interventionists who provide literacy coaching as part of their role. We included all types of literacy coaches rather than just ISD Early Literacy Coaches because our year-one survey analysis indicated that schools and districts may rely both on ISD Early Literacy coaches and on other coaching providers to support their teachers' literacy instruction.

Survey Development and Refinement

In the first year of the study, EPIC designed and conducted a set of educator surveys for teachers, principals, district superintendents, and ISD Early Literacy Coaches in both TPS and charter schools in Michigan, asking about their perceptions and implementation of the Read by Grade Three Law. We developed original survey items based on Law's Theory of Change and adapted items from other surveys related to literacy instruction or similar literacy policies. These instruments included questions about literacy instruction and resources, one-on-one literacy coaching and other literacy professional development, family engagement, and perspectives and beliefs about the Read by Grade Three Law. We also worked with literacy experts and sought feedback from external stakeholders and policymakers, including from MDE and the Michigan Association of Intermediate School Administrators (MAISA) General Education Leadership Network (GELN) Early Literacy Task Force (ELTF) to refine the questions. Between two and four educators from each of the survey target populations piloted the survey and participated in a cognitive interview to help us refine the instruments.

In the project's second year, EPIC further refined the year-one surveys based on a qualitative and quantitative review of the items. Our qualitative review focused on which items were helpful for our year-one analysis and report. Our quantitative review assessed the objective properties of items (such as their response rates, discriminating power, and variability) and redundancies between items. We also refined the items based on feedback from our partners (e.g., MDE). Ultimately, many of the questions in the year-two survey remained the same as in the year-one survey to allow us to analyze changes over time as the Law is implemented. After finalizing the survey instruments, the research team programmed the surveys into Qualtrics and conducted internal testing with EPIC staff members.

Survey Administration

EPIC administered the surveys online from March 29, 2021, through June 18, 2021. We used multiple channels to contact eligible educators to invite them to participate in the survey, including direct emails to teachers,[13] school and district administrators, ISD Early Literacy Coaches,[14] school- and district-based coaches, and literacy specialists/interventionists. We also promoted the survey through the EPIC website, Twitter, and several Michigan education associations, including the ELTF; the Michigan Education Association (MEA); the American Federation of Teachers (AFT); the Michigan Association of Public School Academies (MAPSA); the Michigan Association of Superintendents and Administrators (MASA); and the Michigan Elementary and Middle School Principals Association (MEMSPA).

Estimated Target Population and Response Rates

We base our estimated populations of K-5 principals and district superintendents on contact lists from the Educational Entity Master (EEM), a state database containing directory information about schools, school districts, and other educational entities in Michigan. For some charter schools and small districts, the EEM lists the same person as both a school principal and a district superintendent; we instructed these individuals to take the principal survey and count them in the principal population only for response rate calculations. We include the "lead administrator" for schools without an entry with the title of "principal."[15] We base the estimated population of ISD Early Literacy Coaches on a contact list from the ELTF and the estimated population of other literacy coaches on personnel assignments in Michigan's administrative records.[16]

We estimate the total number of eligible teachers for the spring 2021 survey using state administrative records about the employment status, assignment, and credentials of school personnel from fall 2020. We include all actively employed personnel in a teaching role in a TPS or charter school who held a valid teaching license or long-term substitute teaching permit and were assigned to teach general education students in at least one grade between K-5 or non-general education students in a school that serves students within the K-5 range.

In total, 7,788 teachers, 417 principals, 162 district superintendents, and 582 literacy coaches responded to the survey. The survey sample represents approximately 23% of eligible K-5 teachers, 21% of eligible K-5 principals, 30% of eligible district superintendents, and 51% of eligible literacy coaches. Table 2.3 shows sample sizes and response rates for each target population. The response rate is higher for teachers who teach 3rd grade only than for other single-grade teachers. This might be expected, given that 3rd-grade teachers are the most directly affected by the Law in that they are the ones who teach students in the year of potential retention, and the Law's title specifically references "Grade Three." The response rates for multi-grade teachers and non-general education teachers are 14% and 27%, respectively. The response rate for other literacy coaches is substantially higher than for ISD Early Literacy Coaches. These response rates are lower than those for the year-one surveys, which we attribute to the challenges and time constraints educators were facing during the pandemic.[17]

TABLE 2.3. Sample Sizes and Response Rates				
	Year Two			Year One
	Survey Sample	Target Population	Response Rate	Response Rate
Teachers, K-5	7,788	33,446	23%	41%
General Education Teachers, Single Grade	5,751	22,806	25%	n/a
General education teachers, single grade, in K-3	4,083	16,174	25%	43%
General education teachers, single grade, in K-2	3,017	12,533	24%	41%
General education teachers, single grade, 3rd grade	1,066	3,641	29%	49%
General education teachers, single grade, in 4-5	1,668	6,632	25%	38%
General education teachers, more than one grade	919	6,511	14%	n/a
Non-general education teachers	1,102	4,129	27%	n/a
Principals, K-5	417	1,959	21%	47%
District superintendents	162	545	30%	35%
Literacy Coaches	582	1,152	51%	n/a
ISD Early Literacy Coaches	163	386	42%	88%
Other literacy coaches	419	766	55%	n/a

Note: Non-general education teachers are teachers who work primarily with special populations of students (e.g., students with disabilities, English learners). We show separate response rates for general education teachers and non-general education teachers because districts only report grade level information to the state for general education teachers. Thus, response rates by grade level are not available for non-general education teachers. The survey sample sizes of single-grade teachers, multi-grade teachers, and non-general education teachers do not sum to the total of K-5 teachers because 16 general education teachers did not report their grade level in the survey. In 2020's survey, we only asked teachers to choose a single grade they primarily work with. We were not able to identify multi-grade teachers from the survey sample, and thus there was no response rate reported for them.

Generalizability of the Survey Data and Survey Weights

We compare the characteristics of the survey samples to their target populations to evaluate the generalizability of the survey responses. As shown in Table 2.4, the following groups are slightly overrepresented in the survey sample: female administrators, educators who have five or fewer years of experience in their current district, and principals with an endorsement in an ELA field.[18] Educators who are Black are slightly underrepresented in the survey sample. There are no large differences between the ISD Early Literacy Coach survey sample and the target population except that new ISD Early Literacy Coaches were more likely to respond to the survey. The sample of other literacy coaches has higher proportions of women than the overall population but lower proportions of Black coaches and coaches who have ELA endorsements or were hired within the past five years.

TABLE 2.4. Comparisons Between Survey Samples and Target Populations (Individual-Level Characteristics)			
	Sample	**Population**	**Difference**
Teachers			
Percent female	92.4%	91.1%	1.3%
Percent hired within past 5 years	40.5%	36.0%	4.5%
Percent Black	5.1%	6.4%	-1.3%
Percent Hispanic or Latino/a/x	1.4%	1.4%	0.0%
Percent Asian	0.9%	0.9%	0.0%
Percent other non-White ethnicity	1.4%	1.3%	0.1%
Percent with ELA/literacy/reading endorsement	37.2%	37.0%	0.2%
Principals			
Percent female	68.8%	61.1%	7.7%
Percent hired within past 5 years	33.8%	29.7%	4.1%
Percent Black	10.4%	13.7%	-3.3%
Percent Hispanic or Latino/a/x	1.0%	1.4%	-0.4%
Percent Asian	0.0%	0.4%	-0.4%
Percent other non-White ethnicity	0.3%	1.1%	-0.8%
Percent with ELA/literacy/reading endorsement	39.9%	33.5%	6.4%
District Superintendents			
Percent female	34.5%	28.3%	6.2%
Percent hired within past 5 years	38.8%	37.0%	1.8%
Percent Black	4.3%	7.0%	-2.7%
Percent Hispanic or Latino/a/x	2.6%	0.7%	1.9%
Percent Asian	0.0%	0.3%	-0.3%
Percent other non-White ethnicity	0.9%	0.9%	0.0%
Percent with ELA/literacy/reading endorsement	26.7%	22.3%	4.4%
ISD Early Literacy Coaches			
Percent female	100.0%	99.6%	0.4%
Percent hired within past 5 years	57.1%	48.6%	8.5%
Percent Black	7.1%	5.4%	1.7%
Percent Hispanic or Latino/a/x	1.3%	1.1%	0.2%
Percent Asian	0.6%	0.4%	0.2%
Percent other non-White ethnicity	2.6%	2.5%	0.1%
Percent with ELA/literacy/reading endorsement	59.6%	60.6%	-1.0%
Other Literacy Coaches			
Percent female	98.2%	92.6%	5.6%
Percent hired within past 5 years	28.7%	34.1%	-5.4%
Percent Black	7.4%	11.7%	-4.3%
Percent Hispanic or Latino/a/x	1.5%	1.6%	-0.1%
Percent Asian	0.3%	0.4%	-0.1%
Percent other non-White ethnicity	1.5%	1.3%	0.2%
Percent with ELA/literacy/reading endorsement	62.1%	71.4%	-9.3%

Note: "Sample" and "Population" indicate the characteristics of survey samples and target populations, respectively. "Difference" indicates the difference between survey samples and target populations. The "hired within past five years" group includes individuals whose hire dates within their current districts are on or after June 30, 2016. The "ELA/Literacy/Reading Endorsement" category contains all endorsements classified under "English Language Arts" by MDE (communication arts, English, journalism, language arts, reading, reading specialist, and speech), as well as the English as a Second Language endorsement.

Table 2.5 compares district- or ISD-level characteristics between survey samples and target populations. Administrators from charter districts, ISD Early Literacy Coaches from districts with high proportions of economically disadvantaged students, and educators from rural districts are overrepresented in the survey sample. In contrast, teachers and administrators in districts with high ELA achievement and low proportions of economically disadvantaged students are slightly underrepresented. The pattern differs for other literacy coaches in that those in districts with high proportions of economically disadvantaged students and non-White students are somewhat underrepresented in the survey sample.

TABLE 2.5. Comparisons Between Survey Samples and Target Populations (District- or ISD-Level Characteristics)

	Sample	Population	Difference
Teachers			
Percent charter	11.8%	11.6%	0.2%
Percent urban	22.1%	25.4%	-3.3%
Percent suburb/town	51.9%	53.6%	-1.7%
Percent rural	26.0%	21.0%	5.0%
Percent low M-STEP ELA score	21.7%	19.9%	1.8%
Percent high M-STEP ELA score	34.5%	39.4%	-4.9%
Percent high economically disadvantaged	34.6%	40.4%	-5.8%
Percent low economically disadvantaged	22.1%	20.0%	2.1%
Percent low proportion of non-White	18.1%	15.1%	3.0%
Percent high proportion of non-White	24.6%	24.2%	0.4%
Principals			
Percent charter	10.5%	8.4%	2.1%
Percent urban	19.5%	25.4%	-5.9%
Percent suburb/town	55.0%	52.5%	2.5%
Percent rural	25.4%	22.1%	3.3%
Percent low M-STEP ELA score	22.6%	21.9%	0.7%
Percent high M-STEP ELA score	32.1%	36.9%	-4.8%
Percent high economically disadvantaged	33.3%	37.6%	-4.3%
Percent low economically disadvantaged	20.6%	20.4%	0.2%
Percent low proportion of non-White	19.3%	16.1%	3.2%
Percent high proportion of non-White	21.2%	23.8%	-2.6%
District Superintendents			
Percent charter	16.4%	13.9%	2.5%
Percent urban	12.1%	11.6%	0.5%
Percent suburb/town	42.2%	47.0%	-4.8%
Percent rural	45.7%	41.3%	4.4%
Percent low M-STEP ELA score	19.8%	16.9%	2.9%
Percent high M-STEP ELA score	18.1%	27.2%	-9.1%
Percent high economically disadvantaged	19.0%	27.9%	-8.9%
Percent low economically disadvantaged	19.8%	16.2%	3.6%
Percent low proportion of non-White	27.6%	27.7%	-0.1%
Percent high proportion of non-White	15.5%	15.9%	-0.4%

TABLE 2.5. Comparisons Between Survey Samples and Target Populations (District- or ISD-Level Characteristics) (continued)

	Sample	Population	Difference
ISD Early Literacy Coaches			
Percent low M-STEP ELA score	42.4%	41.0%	1.4%
Percent high M-STEP ELA score	35.6%	36.0%	-0.4%
Percent high economically disadvantaged	32.2%	36.0%	-3.8%
Percent low economically disadvantaged	50.8%	38.8%	12.0%
Percent low proportion of non-White	16.9%	11.5%	5.4%
Percent high proportion of non-White	62.7%	69.8%	-7.1%
Other Literacy Coaches			
Percent charter	11.3%	12.1%	-0.8%
Percent urban	25.7%	32.4%	-6.7%
Percent suburb/town	54.9%	50.7%	4.2%
Percent rural	19.4%	16.9%	2.5%
Percent low M-STEP ELA score	28.7%	32.2%	-3.5%
Percent high M-STEP ELA score	36.3%	33.8%	2.5%
Percent high economically disadvantaged	34.1%	32.8%	1.3%
Percent low economically disadvantaged	25.3%	30.4%	-5.1%
Percent low proportion of non-White	11.6%	10.1%	1.5%
Percent high proportion of non-White	30.2%	34.7%	-4.5%

Note: "Sample" and "Population" indicate the characteristics of survey samples and target populations, respectively. "Difference" indicates the difference between survey samples and target populations.

Given these differences between the survey samples and the general populations, we weight the survey responses to allow the results from our survey analysis to be representative of K-5 teachers and principals, district superintendents, ISD Early Literacy Coaches, and other literacy coaches in Michigan public schools across the state. We derive the analytical weights based on educators' age, gender, race/ethnicity, employment duration within their current districts (i.e., whether they were hired within the past five years), certifications and endorsements (i.e., elementary certified, secondary certified, or holding an ELA/literacy/reading endorsement), and the sector of schools or districts (i.e., TPS or charter).

To assess the year-to-year change in educators' responses, we compare the characteristics of the survey samples from these two years. Overall, 4,590 teachers, 235 principals, 76 district superintendents, and 91 ISD Early Literacy Coaches who responded to the year-one survey also completed the year-two survey in the same role. Table 2.6 summarizes the differences between survey samples in these two years. The K-5 teacher samples are generally comparable between two years with no considerable differences in individual or district characteristics. K-5 principals who responded to the 2021 survey were more likely to be from TPS districts, suburban districts, and endorsed in ELA than principals who responded to the 2020 survey. District superintendents who responded to our survey in 2021 were more likely than those who responded in 2020 to be hired within the past five years and less likely to be in urban and suburban districts and districts with low proportions of economically disadvantaged students or non-White students. The first- and second-year samples of ISD Early Literacy Coaches differ substantially on most ISD characteristics. This

difference is likely related to the increase in the number of ISD Early Literacy Coaches employed in the 2020-21 school year and the decrease in the number of ISD Early Literacy Coaches who responded to our survey in 2021. Considering the non-negligible differences in the samples of principals, district superintendents, and ISD Early Literacy Coaches between the two years, we are cautious when comparing results across the two surveys for these groups. We instead focus on the year-to-year comparison for teacher responses.

TABLE 2.6. Comparisons Between Survey Samples in 2020 and 2021

	2021 Sample	2020 Sample	Difference
K-5 Teachers			
Individual Characteristics			
Percent female	92.4%	91.8%	0.6%
Percent hired within past 5 years	40.5%	39.7%	0.8%
Percent Black	5.1%	7.3%	-2.2%
Percent Hispanic or Latino/a/x	1.4%	1.2%	0.2%
Percent Asian	0.9%	0.7%	0.2%
Percent other non-White ethnicity	1.4%	1.5%	-0.1%
Percent with ELA/literacy/reading endorsement	37.2%	37.3%	-0.1%
District Characteristics			
Percent charter	11.8%	11.2%	0.6%
Percent urban	22.1%	25.1%	-3.0%
Percent suburb/town	51.9%	52.2%	-0.3%
Percent rural	26.0%	22.7%	3.3%
Percent low M-STEP ELA score	21.7%	22.9%	-1.2%
Percent high M-STEP ELA score	34.5%	33.8%	0.7%
Percent high economically disadvantaged	34.6%	36.1%	-1.5%
Percent low economically disadvantaged	22.1%	22.1%	0%
Percent low proportion of non-White	18.1%	16.5%	1.6%
Percent high proportion of non-White	24.6%	24.4%	0.2%
K-5 Principals			
Individual Characteristics			
Percent female	68.8%	65.9%	2.9%
Percent hired within past 5 years	33.8%	35.2%	-1.4%
Percent Black	10.4%	11.4%	-1.0%
Percent Hispanic or Latino/a/x	1.0%	1.2%	-0.2%
Percent Asian	0.0%	0.4%	-0.4%
Percent other non-White ethnicity	0.3%	1.8%	-1.5%
Percent with ELA/literacy/reading endorsement	39.9%	35.8%	4.1%
District Characteristics			
Percent charter	10.5%	14.1%	-3.6%
Percent urban	19.5%	23.4%	-3.9%
Percent suburb/town	55.0%	49.8%	5.2%
Percent rural	25.4%	26.8%	-1.4%
Percent low M-STEP ELA score	22.6%	21.5%	1.1%
Percent high M-STEP ELA score	32.1%	31.1%	1.0%
Percent high economically disadvantaged	33.3%	35.1%	-1.8%
Percent low economically disadvantaged	20.6%	20.4%	0.2%
Percent low proportion of non-White	19.3%	19.0%	0.3%
Percent high proportion of non-White	21.2%	23.9%	-2.7%

TABLE 2.6. Comparisons Between Survey Samples in 2020 and 2021 (continued)			
	2021 Sample	**2020 Sample**	**Difference**
District Superintendents			
Individual Characteristics			
Percent female	34.5%	33.9%	0.6%
Percent hired within past 5 years	38.8%	34.8%	4.0%
Percent Black	4.3%	8.0%	-3.7%
Percent Hispanic or Latino/a/x	2.6%	0.0%	2.6%
Percent Asian	0.0%	0.9%	-0.9%
Percent other non-White ethnicity	0.9%	0.9%	0.0%
Percent with ELA/literacy/reading endorsement	26.7%	28.8%	-2.1%
District Characteristics			
Percent charter	19.8%	16.8%	3.0%
Percent urban	18.1%	29.0%	-10.9%
Percent suburb/town	19.0%	31.8%	-12.8%
Percent rural	19.8%	15.9%	3.9%
Percent low M-STEP ELA score	27.6%	29.9%	-2.3%
Percent high M-STEP ELA score	15.5%	14.0%	1.5%
Percent high economically disadvantaged	19.8%	16.8%	3.0%
Percent low economically disadvantaged	18.1%	29.0%	-10.9%
Percent low proportion of non-White	19.0%	31.8%	-12.8%
Percent high proportion of non-White	19.8%	15.9%	3.9%
ISD Early Literacy Coaches			
Individual Characteristics			
Percent female	100.0%	100.0%	0.0%
Percent hired within past 5 years	57.1%	72.5%	-15.4%
Percent Black	7.1%	2.4%	4.7%
Percent Hispanic or Latino/a/x	1.3%	2.4%	-1.1%
Percent Asian	0.6%	4.9%	-4.3%
Percent other non-White ethnicity	2.6%	2.4%	0.2%
Percent with ELA/literacy/reading endorsement	59.6%	60.0%	-0.4%
District Characteristics			
Percent low M-STEP ELA score	42.4%	50.0%	-7.6%
Percent high M-STEP ELA score	35.6%	10.0%	25.6%
Percent high economically disadvantaged	32.2%	20.0%	12.2%
Percent low economically disadvantaged	50.8%	60.0%	-9.2%
Percent low proportion of non-White	16.9%	30.0%	-13.1%
Percent high proportion of non-White	62.7%	40.0%	22.7%

Note: The "2021 Sample" and "2020 Sample" columns indicate the survey samples in the indicated school year. "Difference" indicates the difference between the sample years.

Analytic Strategy

We assess overall patterns in weighted survey responses as well as differences in responses across subgroups. To examine overall patterns across responses by survey respondent type (i.e., teachers, principals, district superintendents, and literacy coaches), we calculate weighted relative frequencies for each possible response to each survey item, including missing responses as a separate category. For most teacher survey questions, we focus on responses from K-3 teachers because they are most directly affected by the Law. When relevant, we also analyze responses

from teachers in 4th-5th grade as a comparison group and when there may be interesting spillover effects occurring for educators in later grade levels. We also link survey response data to district-level measures of the above-mentioned characteristics to examine how responses vary across districts with different resources and student needs. We also analyze responses broken down by districts' proportions of students with disabilities or English learners for questions related to these populations of students. The district subgroups are generated based on student assessment results from the spring of 2019 and student enrollment data from the 2019-20 school year.

For Likert-scaled survey items, we combine relative frequencies for the highest two categories (e.g., combine "agree" with "strongly agree," "concerned" with "extremely concerned," etc.), and compare these combined proportions across district subgroups and surveys (2020 and 2021). We use independent sample t-tests to determine the statistical significance of differences in relative frequencies of the top two Likert scale values for each item across populations or time periods and adjust p-values for multiple statistical tests using the Bonferroni correction. Differences we report in the text are statistically significant at a 0.1 significance level unless otherwise noted. These statistical tests allow us to infer whether the differences we observe in survey responses across educator subgroups are larger than we would expect given random chance.

We also conducted a qualitative analysis of respondents' open-ended responses to the final question on the survey, which invited them to share any additional comments. Twenty-five percent of the survey sample (2,238 respondents in total) provided written responses to this question, and the characteristics of those who did provide responses are similar to the overall population of survey respondents. This response rate is in line with prior research showing that 24% of respondents reply to open-ended questions when the question is near the end of the survey (Miller & Lambert, 2014). To develop a coding scheme, we first identified emerging themes in a random sample of these responses (10% of all responses received) using an inductive content analysis approach. Then, we grouped common themes into nine categories, which served as "parent codes." We identified 44 "child codes" and 31 "grandchild codes" (i.e., subcategories) for a total of 84 codes. The parent codes captured the general themes respondents discussed, including the COVID-19 pandemic, family engagement, literacy instruction, literacy resources, Read by Grade Three Law interventions, sentiments about the Read by Grade Three Law, support from administration/district, the teaching profession, and other. Within each of these categories, child codes captured additional detail about the responses. For example, under the COVID-19 parent code, child codes included in-person and remote instruction, implications of the pandemic on attendance and engagement, and how the pandemic affected the implementation of the Read by Grade Three Law. We list the full coding scheme in Appendix A. We applied this coding scheme to all 2,238 responses.

Of the 2,238 responses, 161 (7%) provided clarification about their survey response, 40 (2%) provided feedback about the survey, 164 (7%) provided a general thanks for the survey, 147 (7%) said "N/A" or "No comment," 34 (2%) said they were not familiar with the Law, and 71 (3%) said the Law did not affect them. This left 1,621 substantive responses for analysis. We use these responses to add detail throughout the report and triangulate other findings from the survey, stakeholder interviews, and administrative data. However, since these open-ended responses are from a self-selected subset of survey participants, they are not representative of the full survey sample or the target populations.

Interviews With State-Level Stakeholders

To inform last year's first interim report, we interviewed 24 state-level stakeholders in the fall of 2019 to understand their role in forming the Read by Grade Three Law and their perceptions of the Law. In year two, we conducted follow-up interviews with six of these stakeholders, including two state-level policymakers and other state personnel, two MDE personnel, and two external stakeholders. We selected these individuals based on their continued involvement with or role in implementing the Read by Grade Three Law.

We analyzed the new interview data in four phases. First, because the semi-structured interview protocol was different in year two, two members of the research team added 10 new a priori codes to the year-one coding scheme for a total of 53 codes. Many of these new codes were related to the COVID-19 pandemic. The other codes were to better understand the current landscape of the Law, possible areas of focus by policymakers concerning early literacy, and assessments. Second, to maintain coding accuracy, both research team members performed Interrater Reliability (IRR) testing using Dedoose software's training function. We conducted three rounds of double-coding using transcript copies to achieve a 0.8 Cohen's kappa (the recommended threshold for substantial agreement; see Cohen, 1960). One of the team members then individually coded all six follow-up interviews for a total of 144 excerpts. Finally, the lead qualitative researcher produced a memo that tracked emergent themes. The research team then re-examined the memo to gain insights into what factors played a role in each theme and documented how many supported that particular theme.

Interviews With ISD Early Literacy Coaches

At the conclusion of the school year, a member of the research team interviewed the four coaches who participated in a part of the overall study that is examining the ways in which teachers' practices changed after working with an ISD Early Literacy Coach. Coaches worked in four separate TPS districts across the state and served diverse populations of students. Two of the districts where coaches worked were rural, one was a suburban district, and one was an urban district. Free- and reduced-lunch ranged from 50-76% across these districts, with one district serving a large population of English learners (approximately 90%). While observational data from these coaches are currently being analyzed, we include the coach interviews in the Year Two report.

Participants ranged in years of coaching experience from five years (two coaches) to 16 years (one coach). The goal of the interviews was to inform coaching-related data collected throughout the year, including how the COVID-19 pandemic affected literacy coaches' work with teachers. Specifically, we were interested in how the pandemic affected their coaching time, the focus of their coaching practices, and the coaching modality (in-person, virtual, or hybrid). For this report, we use these interviews to triangulate other findings about literacy coaches from the survey and stakeholder interviews.

Integrated Qualitative and Quantitative Data

As with the first-year report, we continue to use a multi-stage mixed-methods framework to evaluate the implementation and early effects of the Read by Grade Three Law, especially within the context of the COVID-19 pandemic. The longitudinal design allows us to adjust research questions, the population of interest, and survey instruments in response to the analyses from the

previous year. Our second-year analyses also benefit from various data sources that triangulate findings and provide comprehensive insights into the research questions. First, we use follow-up interviews of state-level stakeholders to understand how the state policy context has changed regarding the Read by Grade Three Law's implementation during the COVID-19 pandemic. Second, we trace the Theory of Change and examine how each of its components was affected by the COVID-19 pandemic. Third, we triangulate stakeholder interviews with survey data to determine how the literacy interventions (including the 3rd-grade retention) the Law prescribed have been implemented across populations and places and what challenges educators face to implement the Law with fidelity. Finally, we analyze educators' perceptions about the extent to which the Law has improved student learning and supplement this with analyses of administrative data to understand how student outcomes have shifted since the Law's implementation.

We employ an iterative approach to our work, relying on findings from our separate and combined data sources to inform ongoing data collection and analysis in later years of the study. This kind of multi-stage mixed-methods framework is appropriate for longitudinal studies that evaluate a policy's design, implementation, and near- and longer-term outcomes (Nastasi et al., 2007).

Caveats

Although the research design of this report suits the research questions under study, there are nevertheless caveats to our data and methods that merit discussion. This section organizes these caveats into the following areas: policy changes, data evaluation, and scope. We will briefly review each caveat and its implications for the interpretation of this report.

First, we do not interpret the ITS approach we use to analyze student outcomes as the causal effect of the intervention. The ITS method estimates shifts in the outcome of interest in the post-Law period relative to its underlying trend in the pre-Law period. While this method implies a causal shift, suppose that a significant policy and/or contextual shift coincided with the Law's passage and implementation. In that case, we cannot solely attribute the observed changes in the outcomes to the causal effect of the Read by Grade Three Law. This problem is particularly salient when interpreting changes in the 2019-20 school year. The effect of the COVID-19 pandemic and the Law are intertwined. In this case, we sought administrative data from fall 2019 to determine whether the outcome had changed before the pandemic to distinguish COVID-19's effect from the Law's effect.

Second, as discussed above, response rates for this year's surveys are relatively low. These low response rates reduce our statistical power to detect differences across subgroups. Thus, our subgroup analyses mostly focus on the teacher survey, which has over 7,000 responses. Although there may be interesting subgroup differences among responses of administrators and literacy coaches, the sample size limits our ability to detect or interpret these differences. Furthermore, the characteristics of our survey sample changed relative to last year. We population weight our survey statistics to provide generalizable results to be compared to the population-weighted statistics from last year's survey.

Lastly, there is an inconsistency in teachers' self-reported grade assignments from the educator surveys. In the second-year survey, we asked teachers to select all grades they were teaching, as opposed to the single grade with which they spend most of their time—which we asked in the first-year survey. We did so because the feedback we received from the first-year survey suggests

that a notable proportion of teachers (e.g., non-general education teachers) worked with multiple grades and could not select a primary grade they teach. Although this change better reflects the grade assignments in real settings, the result is that we do not have a consistent definition of K-3 teachers for comparison across years. In this report, we define K-3 teachers as teachers who reported they teach at least one grade from kindergarten through 3rd grade.

SUMMARY

In this second year of the study, we employ a convergent mixed-methods design to integrate and triangulate analyses from interviews of state-level stakeholders, responses to statewide educator surveys, and longitudinal state administrative data. In particular, we expand state longitudinal student and teacher datasets with additional data from the 2019-20 and 2020-21 school years to assess changes in various student and educator outcomes as the implementation of the Read by Grade Three Law continues. We analyze data collected from surveys of teachers, principals, district superintendents, and literacy coaches to evaluate the implementation of the Law and respondents' perceptions of its efficacy and usefulness. We join these data with interviews of six state-level policymakers and stakeholders, which provide high-level perceptions of the general educational landscape in Michigan during the COVID-19 pandemic and how that affects the Law's implementation. Using results from the analyses of these data, we can gain a deeper understanding of the multi-level implementation of the Read by Grade Three Law and near-term student and teacher outcomes.

SECTION TWO NOTES

1. "Listening" is referred as "speaking and listening" in the M-STEP. However, only listening has been assessed since the beginning of the M-STEP; we use "listening" as the label of this domain area to better reflect the content assessed. A detailed introduction of ELA domain areas and subscores can be found at https://www.michigan.gov/documents/mde/Spring_2019_M-STEP_Technical_Report_Main_report_690596_7.pdf.

2. "Problem solving" and "modeling and data analysis" are separate claims in the M-STEP. However, only one subscore is reported for these two areas because they are so intertwined. A detailed introduction of math domain areas and subscores can be found at https://www.michigan.gov/documents/mde/Spring_2019_M-STEP_Technical_Report_Main_report_690596_7.pdf.

3. Sections 105 and 105c of Michigan's State School Aid Act establish Schools of Choice programs allowing TPS districts to offer enrollment to non-resident students. In the 2018-19 school year, 99% of districts had at least one non-resident student enrolled and 15% of students attended traditional public schools outside their resident districts.

4. Irregular grade progression is flagged if the student administrative records indicate the following enrollment patterns: 1) a student enrolled in a higher grade prior to a given grade, 2) a student skipped more than one grade level or skipped one grade more than once, and 3) a student enrolled in the same grade more than twice. In total, 369 students were dropped because of irregular grade progression for student outcomes (not counting Developmental Kindergarten enrollment). We dropped 53 students who enrolled in higher grades prior to kindergarten for models of Developmental Kindergarten enrollment.

SECTION TWO NOTES *(continued)*

5. We ascertain teacher grade assignment based on an indicator provided in the state administrative records. However, some teachers with an assignment in K-5 appear to be employed in schools that do not primarily serve those grades (i.e., less than five percent of enrollment is in K-5th grade). As these schools (e.g., middle schools) likely face a different level of pressure from the Law, we excluded teachers from these schools regardless of their grade assignment.

6. In Michigan, public school academies are publicly funded schools that operate independent of a traditional school district, often referred to as charter schools. We refer to these schools as "charter schools" as that is the more commonly used term.

7. Under Michigan's Partnership Model, the state's lowest-performing schools are identified for school turnaround interventions and the districts that operate these schools ("Partnership districts") enter into a Partnership Agreement to improve student outcomes in the identified schools ("Partnership schools").

8. In survey analyses, we use a district's ELA performance in the 2018-19 school year, the most recently available year at the time of analyses, to generate district subgroups. However, in ITS analyses, as ELA scores in 2018-19 may be affected by the Read by Grade Three Law, we use ELA scores in 2015-16, the last year prior to the Law's implementation, to generate district subgroups.

9. We estimate this model using a linear probability model (LPM). This enables us to include school fixed effects. Including school fixed effects in a nonlinear, limited dependent variable model, like a probit or logit, can cause inconsistent estimates of the marginal effects of the δ_{XXX} terms, leading to misleading conclusions. A downside to using an LPM is that the predicted probability of the outcome, Y_{is}, can be less than zero or greater than one. However, the estimates of δ_{XXX} from the LPM remain unbiased and valid.

10. Another, equivalent method for computing the $PredictionError_d$ is to average the student-level estimates of ζ_{is} for each district *d*.

11. For each subgroup, we divided the districts into quartiles so we can estimate a flexible relationship between prediction errors and district characteristics. We estimate a separate regression for each set of district subgroup quartiles. In these regressions, district-level prediction errors are the dependent variable, and the independent variables of interest are the full set of subgroup quartile dummy variables. We also include all of the other district characteristics described in this section as linear controls (not including the characteristic of interest) in the model. We estimate these models without an intercept so that we can include the full set of quartile indicators for the district characteristic of interest. Since we do not include an intercept, the coefficient estimates on the quartile dummies represent the regression-adjusted average of the prediction for a given subgroup quartile. The estimated standard errors for the quartile dummy coefficients let us test whether the regression adjusted prediction errors are statistically significantly different from zero. We also perform t-tests to determine whether the quartile dummy coefficients are statistically different from the reference group (which we define as the 3rd quartile). These t-tests allow us to determine whether prediction errors vary significantly within district subgroup quartiles.

12. For charter schools, we surveyed the listed superintendent or director of a charter school district, educational services provider (ESP), charter management organization (CMO), or educational management organization (EMO).

SECTION TWO NOTES *(continued)*

13. Although there is no database of district-provided e-mail addresses for all teachers in the state, MDE provided the e-mail addresses associated with teachers' accounts in the Michigan Online Educator Certification System (MOECS). About 50 percent of educators who were actively employed in fall 2020 had an e-mail address listed in their MOECS account. The remaining educators are those whose teaching licenses do not require renewal through the MOECS system (i.e., these types of licenses are no longer issued but are still valid for educators who hold them). Although MOECS contains email addresses for the vast majority of educators, the usefulness of these email addresses is unclear as they may be out-of-date and/or personal emails that educators do not check on a regular basis. Additionally, some districts authorized us to access their staff e-mail rosters from the Michigan Data Hub and we incorporated them into a survey outreach effort to bolster response rates. We identified additional email addresses through the Michigan Data Hub for 5,781 K-5 teachers (18% of the target population) and 117 literacy coaches (13% of the target population).

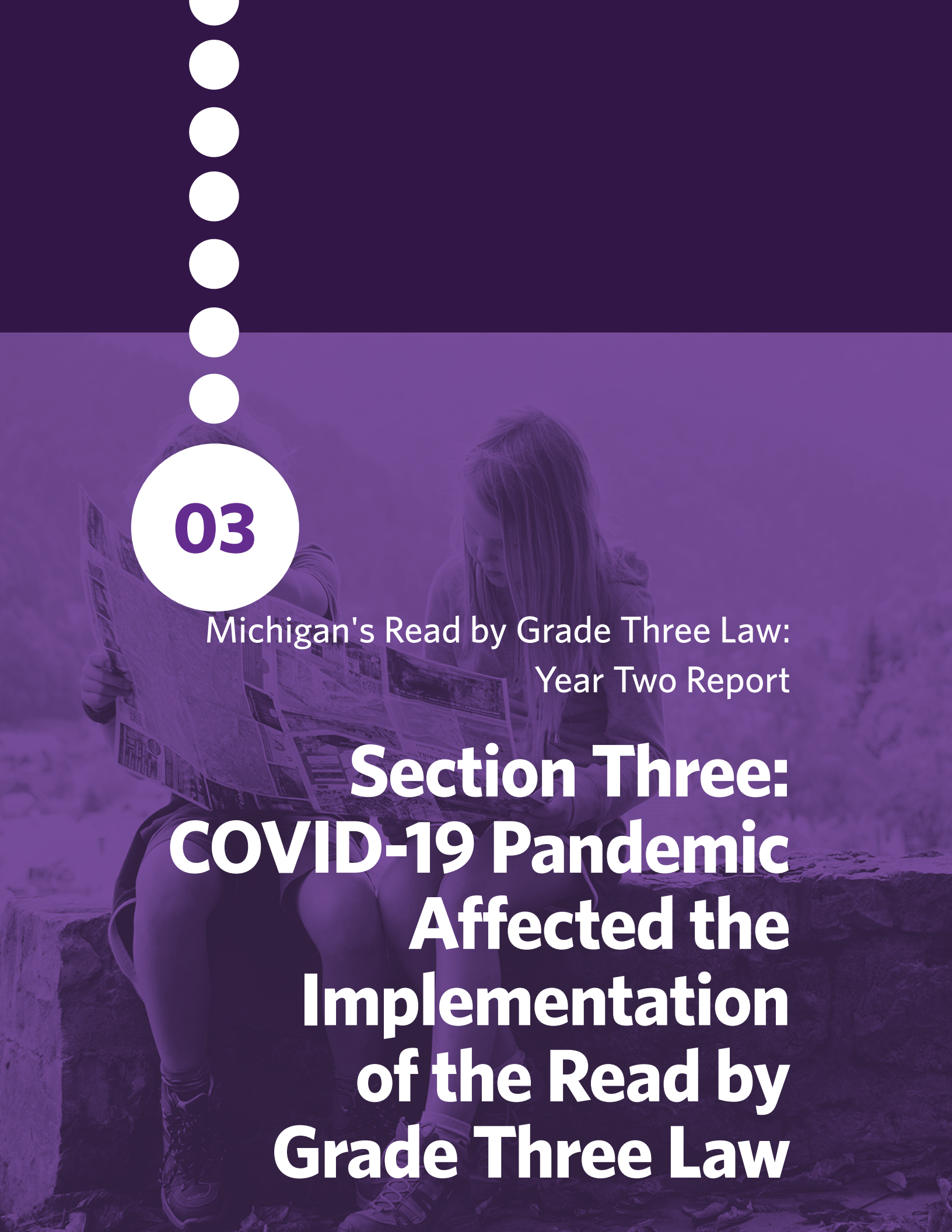
14. We worked with the ELTF to obtain contact information for all coaches funded at least in part through the 35a(4) ISD Early Literacy Coach Grant. This group was difficult to identify because there is no centralized database or reporting of individuals working in this role. Further, staffing transitions from hiring or resignations made it challenging to capture the group as a whole and contact them. As such, we relied on ISD leadership self-reports of which members of their staff should be surveyed and to provide their contact information, as well as requesting that they remove those that were no longer in the role from our contact list.

15. Each entity is required to designate a "lead administrator" whose title and contact information appears in the EEM; the lead administrator of a district is typically the superintendent and the lead administrator of a school is typically the principal. Entities have the option to include contact information for other key personnel in addition to the lead administrator but are not required to do so.

16. For school- and district-based literacy coaches and literacy specialists/interventionists who serve in a coaching role, we included school or district employees who were coded as "literacy coach" in their work assignment based on Michigan's staff administrative records. However, our previous analysis on ISD Early Literacy Coaches suggests that coaches were not necessarily labeled as "literacy coach" in the administrative data. Thus, we also included school or district employees who were coded as "curriculum specialists" or administrators in "curriculum and instruction" with an ELA-related teaching endorsement and who were funded to serve roles in "improvement of instruction" into the contact list of district- or school-level literacy coaches.

17. In the second-year survey, we asked teachers to select all grades they were teaching, as opposed to the single grade with which they spend most of their time—which we asked in the first-year survey. Therefore, the separate response rates for single and multi-grade teachers are not applicable for the first-year survey.

18. "English Language Arts" is not an endorsement awarded in Michigan, but rather a category of endorsements in related areas. We include all endorsements from the "English/Language Arts" category in MDE's list of all current and historical teacher endorsements (Communication Arts, English, Journalism, Language Arts, Reading, Reading Specialist, and Speech), in addition to the English as a Second Language endorsement. MDE's list of current and historical endorsements can be found at https://www.michigan.gov/documents/mde/Historical_Endorsements_626007_7.pdf



03

Michigan's Read by Grade Three Law:
Year Two Report

Section Three: COVID-19 Pandemic Affected the Implementation of the Read by Grade Three Law

Section Three:
COVID-19 Pandemic Affected the Implementation of the Read by Grade Three Law

INTRODUCTION

The COVID-19 pandemic disrupted schooling in Michigan and across the country, both in the ways and structures that learning has occurred since March 2020 and more broadly, as the virus took its toll on the mental, physical, and fiscal health of students and their families, educators, and communities. It is no surprise, then, that the COVID-19 pandemic also affected educators' implementation of the Read by Grade Three Law.

In this section, we rely on data from educator surveys, administrative records, and stakeholder interviews to first highlight how the COVID-19 pandemic affected instruction overall and literacy instruction in particular, as educators shifted to remote and hybrid modalities of instruction throughout the 2020-21 school year and simultaneously altered instructional schedules and the time spent on various instructional activities. Then, we trace each component of the Read by Grade Three Law's policy-implied Theory of Change, using survey and interview data to examine the ways and extent to which the pandemic affected implementation of the Law. Table 3.1 summarizes our main findings in each of these areas.

TABLE 3.1. Summary of Findings About the COVID-19 Pandemic's Effect on Literacy Instruction and Implementation of the Read by Grade Three Law	
Instructional modality and time spent on literacy instruction	Most students learned remotely for at least part of the 2020-21 school year, especially those in historically underserved districts. Teachers spent less time on literacy instruction than they did in 2019-20, especially those teaching remotely.
Literacy instructional supports for educators	Teachers received less one-on-one literacy coaching and other literacy professional development than they did in 2019-20, but remote teachers received more support than those teaching in person. Literacy coaches reported several pandemic-related challenges to providing professional development.
Improved literacy instruction and practice	Over half of educators reported that their district changed or adopted curricula to support remote instruction. Teacher mobility remained stable despite the pandemic.
Monitoring	The pandemic did not significantly change participation rates on diagnostic assessments mandated by the Law.
Early intervention and support	The COVID-19 pandemic made administering the Law's interventions challenging, but special populations of students received additional accommodations. Family engagement was particularly important, and challenging, during the pandemic.
Retention requirement	The Law's retention requirement went into effect for the first time in 2020-21. M-STEP participation rates were lower than in previous years and many districts planned to grant exemptions to any student whose family requested one.

THE COVID-19 PANDEMIC ALTERED THE WAYS EDUCATORS PROVIDED INSTRUCTION DURING THE 2020-21 SCHOOL YEAR

The pandemic necessarily affected many aspects of instruction during the 2020-21 school year. Here we highlight how changes to schooling during the 2020-21 school year affected instruction, particularly literacy instruction, independent of the specific elements of the Read by Grade Three Law.

Most Students, Especially Those in Historically Underserved Districts, Learned Remotely For at Least Part of the 2020-21 School Year

The pandemic changed how districts offered instruction to K-12 students in Michigan. Approximately 60% of districts reported that they started the 2020-21 school year offering students the ability to learn fully in-person, which decreased to just over 40% in the winter

and then increased to 74% by May of 2021. Although students in most districts could enroll in in-person instruction, many students chose not to return to their school buildings. In September, districts estimated that between 25% and 38% of students were learning fully in-person, which remained consistent through January before growing to between 40% and 57% by May of 2021 (Hopkins et al., 2021).

Most Educators Reported Delivering Instruction Remotely at Least Part of the Time in 2020-21

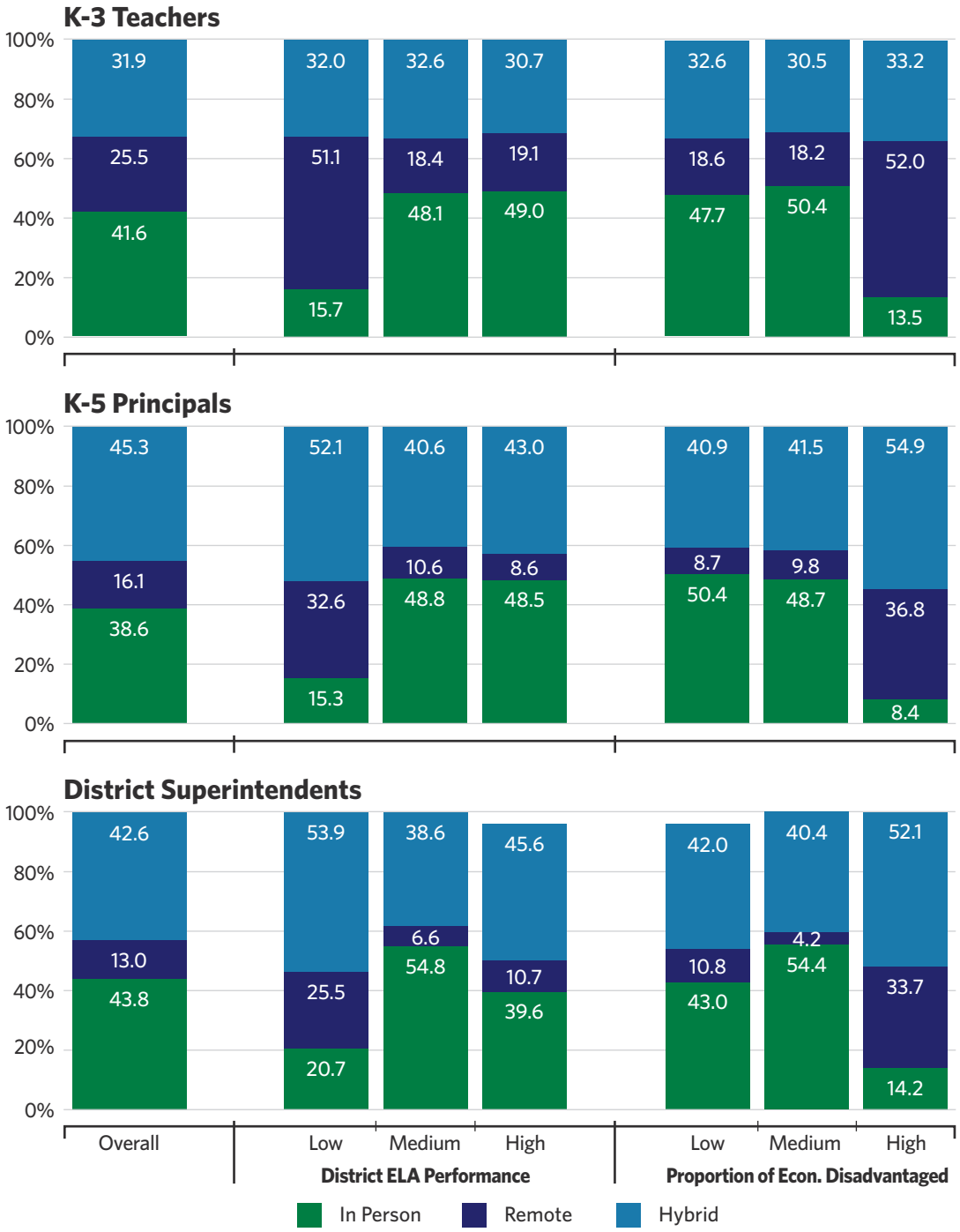
Although district-level reports provide high-level information about how instruction—at least in terms of instructional modalities—took place over the 2020-21 school year, they may not capture educators' lived experiences with teaching. This disconnect is because districts, for the most part, offered some version of in-person instruction (fully in-person or at least hybrid instruction where learning occurred in-person for part of the week), and teachers' experiences even within the same school or district could have differed substantially. Indeed, as shown in Figure 3.1, most educators reported that they primarily provided instruction in either a remote or hybrid format. Approximately 40% of teachers, principals, and superintendents reported that they were entirely in-person.

Educators in Traditionally Underserved Districts Were Mostly Likely to Teach Remotely, Raising Concerns About Equitable Opportunities to Learn

Research has shown that remote learning negatively affected students' academic achievement during the pandemic (e.g., Kogan & Lavertu, 2021; Malkus, 2020). In Michigan, previous district-level reports surfaced concerns about inequitable learning opportunities due to differences in instructional modalities across districts (Hopkins et al., 2020), and educator survey data confirm disparities in access to in-person instruction. Figure 3.1 shows that teachers working in districts in the bottom 25% of ELA performance were more than twice as likely to be primarily remote in the 2020-21 school year than teachers working in districts in the top 25% of ELA performance. Educators working in districts with higher pre-pandemic ELA M-STEP performance and lower proportions of economically disadvantaged students were more likely to report being in-person the majority of the school year than were their colleagues in districts with lower ELA performance and higher proportions of economically disadvantaged students. Given the evidence confirming the benefits of school-based instruction on student learning, these disparities in instructional modality could exacerbate existing ELA performance gaps between more and less advantaged districts.

Teachers working in districts in the bottom 25% of ELA performance were more than twice as likely to be primarily remote in the 2020-21 school year than teachers working in districts in the top 25% of ELA performance.

FIGURE 3.1. Educators' Reported Primary Instruction Modality 2020-21

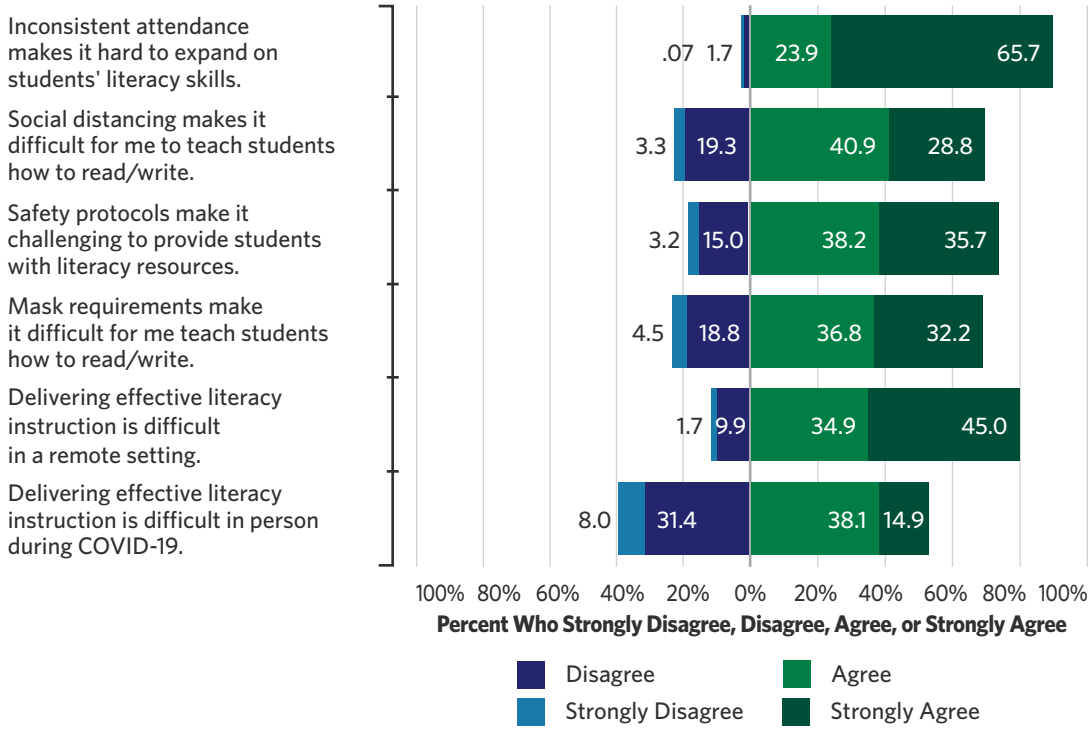


Note: In our survey, "Hybrid" is defined as "…both in person and remote, including livestreaming." Teachers were asked, "In what format have you primarily delivered instruction for the majority of the 2020-21 school year?" Principals were asked, "In what format has your school delivered instruction for the majority of the 2020-21 school year? Please mark the option that best represents the modality in which the majority of your teachers have been delivering instruction for this school year." Superintendents were asked, "In what format has your district delivered instruction for the majority of the 2020-21 school year? Please mark the option that best represents the modality in which the majority of your teachers have been delivering instruction for this school year." Source: EPIC survey of educators about the Read by Grade Three Law.

Educators Struggled With Both Remote and In-Person Pandemic Instruction

Teachers reported that it was difficult to deliver effective literacy instruction and interventions during the pandemic, both in-person and in a remote setting (see Figure 3.2). Teachers were particularly likely to report that students' inconsistent attendance, social distancing, safety protocols, and mask requirements made literacy instruction difficult. Although not shown, principals were similarly likely to report difficulties with elements of literacy instruction because of COVID-19 safety protocols; nearly three-quarters of principals agreed or strongly agreed that safety protocols made it challenging to provide students with literacy resources.

FIGURE 3.2. The Effect of the COVID-19 Pandemic on Literacy Instruction and the Implementation of the Read by Grade Three Law (K-3 Teachers)



Note: Teachers were asked, "We want to better understand how COVID-19 may have affected your or your school's ability to deliver literacy instruction and implement the Read by Grade Three Law. To what extent do you agree with the following statements?" Questions specifically about the challenges of remote settings were only asked to teachers who reported primarily remote or hybrid instruction. Questions specifically about in-person settings were only asked to teachers who reported primarily in-person or hybrid instruction. Source: EPIC survey of educators about the Read by Grade Three Law.

Although not shown here, teachers in remote settings were significantly more likely to report difficulties than were those teaching in person. Educators' responses to the survey's open-ended question corroborated this finding, as nearly 350 educators, or over a fifth of those who provided substantive responses to the survey's open-ended question, addressed remote instruction. For instance, one teacher wrote:

> *This year was very different trying to teach literacy to students while online. I don't feel as though I was able to teach literacy to the fullest of my ability.*

Another teacher wrote:

> *As a classroom teacher, it was extremely difficult to teach literacy instruction, particularly in the area of writing, while remote. No amount of one-on-one instruction, videos to families (to help with instruction or the curriculum content) or small group instruction virtually can take the place of face-to-face instruction.*

While most understood that operating remotely was at times necessary for the health and safety of the community, many cited difficulties maintaining consistent student attendance and engagement in remote settings:

> *This year was very difficult because our students are at risk and learning remotely posed many challenges: technology, routines, childcare, attention, remediation issues, extra help and support from staff that they normally would've received at school was limited. I was happy to be remote for the health and safety of our students and staff, but it put our students who already struggle that much further behind and it's going to be very, very difficult to close the gap if it can be closed at all. Most of our students have very poor attendance both hybrid—which we've been since March [2021]—and online, which just makes the problem even more serious.*

Some educators attributed these engagement issues to limited technology access, while others faced difficulty engaging parents and families in their students' learning.

A third of teachers' open-ended responses about the COVID-19 pandemic discussed in-person pandemic instruction. Echoing results from Figure 3.2, these responses centered around challenges navigating instruction amid safety protocols like masking and social distancing. One teacher discussed how safety protocols affected both the mechanics of teaching reading and the instructional practices teachers often rely on in their literacy instruction:

> *Due to the pandemic, these situations created gaps in literacy instruction…Now that we are in person, we cannot partner read or partner write in workshop time due to spacing, and this has a profound negative effect. With masks on, students have a hard time with sounds/phonics since they cannot see my lips in sound formation. With social distancing, it makes conferences at reading and writing workshops challenging and not as useful as they normally are. Since our day has been shortened due to COVID-19 issues, we lost time and cannot teach as long for workshops and literacy per day. Normally, kids privately read and write for 30 minutes. This year we are only doing 15 minutes for both.*

Some teachers were responsible for simultaneously teaching in-person and remote learners, which led to reduced instructional time for all students, a point we will return to later in this section:

> *Our district has both face-to-face learners and those that are virtual. The two groups are following separate programs, yet staff are expected to teach in person and coach/monitor the students in the virtual program. It has been extremely stressful*

> *and challenging. Since staff is responsible for overseeing the virtual students, the district shortened the face-to-face day by 75 minutes. Missing 75 minutes of instructional time each day with face-to-face learners has meant condensing material. Essentially, we are losing a full day of instruction each week.*

As noted above, many districts—and as a result, many educators—shifted instructional modalities throughout the 2020-21 school year. One teacher noted:

> *We are remote one day, [face-to-face] the next, and then hybrid the following week. Our schedules—including, lunch, specials, and daily start and end times—have changed 10 times since September.*

Educators discussed the unique challenges that came with this kind of instructional instability. They explained the costs of transitioning between in-person, remote, and hybrid modalities and how this created difficulties for teachers, students, and their families:

> *Because of the switches between in-person learning, remote learning, and hybrid learning, a lot of plans made for this school year had to be adapted or completely redone. The best laid plans for professional learning and family engagement events mostly had to be abandoned.*

Another teacher described how the changing schedule might also cause difficulties for parents trying to support their children's learning:

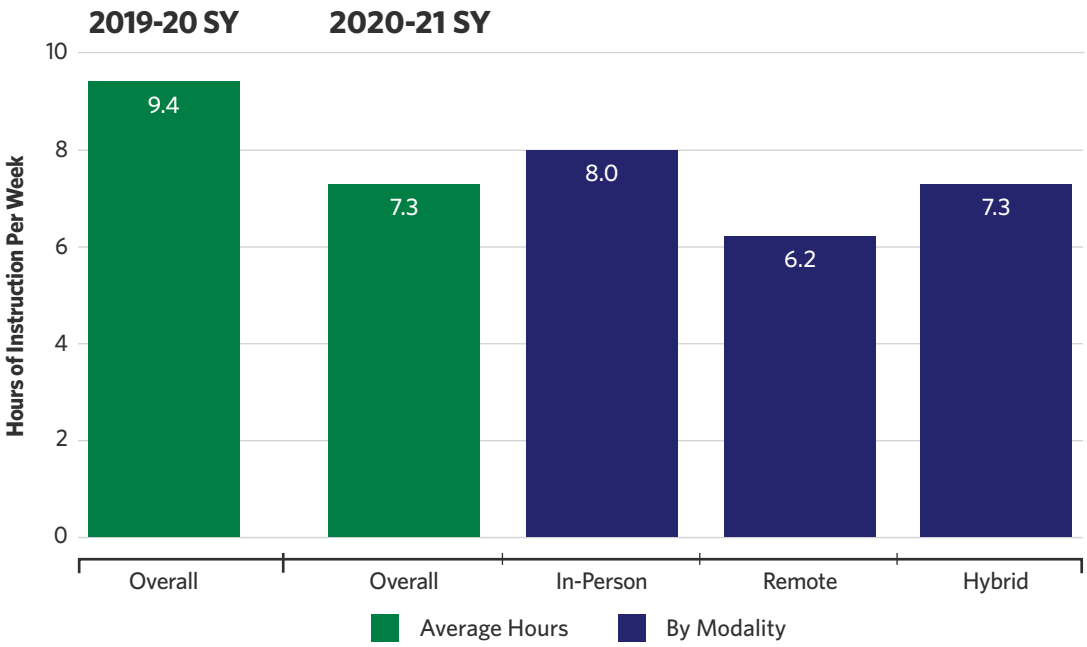
> *Imagine the parent who needs daycare and is trying to work...or the parent with three kids at home who have three different lunch schedules. This doesn't even scratch the surface.*

Together, these results reinforce how difficult it was for teachers to instruct students during the 2020-21 school year. Many of these challenges were in some ways hidden from the public conversation that erupted around the provision of instruction during the pandemic. Routine aspects of schooling like instructional time, schedules, and pedagogy were interrupted due to modality choices and instability across the school year; these invariably affected teachers' ability to teach and students' ability to learn.

Teachers, and Especially Remote Teachers, Spent Less Time on Literacy Instruction During the 2020-21 School Year

The pandemic did more than cause changes to instructional modality during the 2020-21 school year. In addition, instructional schedules changed to accommodate different and often shifting modalities, the need to implement COVID-19 mitigation strategies, and other realities of trying to operate schools during a global pandemic. Survey data clarify that the amount of time educators spent on literacy instruction decreased relative to the 2019-20 school year. Figure 3.3 shows that K-3 teachers reported spending about two fewer hours per week on literacy instruction in the 2020-21 school year relative to the 2019-20 year.

FIGURE 3.3. Hours of Literacy Instruction



Note: In the 2020-21 survey, teachers were asked, "How much time do you currently spend on instruction in each of the following content areas in a typical week? How has the amount of time you spend on instruction in each of these areas changed since last year? If you do not know the exact number, please use your best estimate. If you do not teach a given content area, please enter a zero (0)." In the 2019-20 survey, teachers were asked, "How much time do you spend on literacy instruction (i.e., reading and writing) in a typical week? Please round to the nearest half-hour interval." Source: EPIC survey of educators about the Read by Grade Three Law.

If teachers' reports are accurate, and students received two hours less of literacy instruction per week in 2020-21 relative to the year prior, this would constitute approximately 80 fewer hours of literacy instruction in the 2020-21 school year than in a typical pre-pandemic school year (assuming 40 weeks of instruction per year). Given that research shows that instructional time is imperative for student learning (Baker et al., 2004; Brown & Saks, 1986; Cattaneo et al., 2017; Clark & Linn, 2003), this reduced time spent on literacy instruction could have substantial negative implications for K-5 student literacy in Michigan.

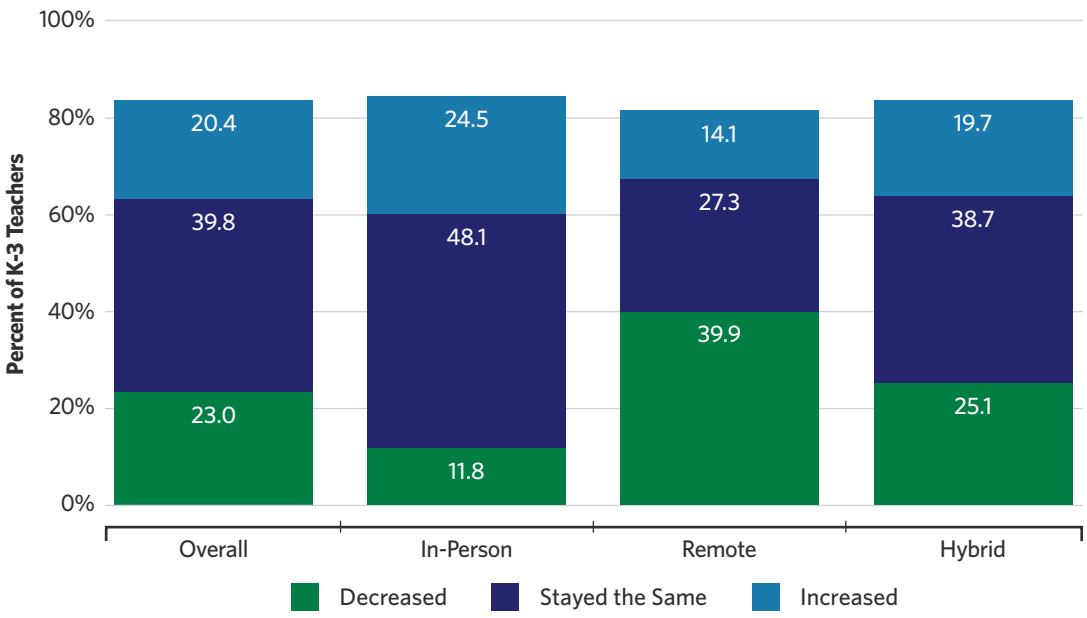
Students learning remotely likely received even less instruction. Figure 3.3 shows that remote teachers reported only six hours of literacy instruction per week compared to eight hours for in-person teachers and seven for hybrid teachers. This disparity suggests that the pandemic had an even more negative effect on the literacy instruction of students who learned remotely during the 2020-21 school than their in-person peers.

Teachers' perceptions of their change in literacy instructional time since last year, which we present in Figure 3.3, align with these results. Overall, 23% of teachers reported spending less time on literacy instruction than last year, 40% reported spending the same amount of time on literacy instruction, and 20% reported spending more time on literacy instruction. Interestingly, teachers who said they increased their time spent on literacy instruction since last year reported an average

of 8.4 hours of literacy instruction per week. This implies that, on average, even teachers who said they increased their literacy instruction time reported fewer hours of literacy instruction per week than the overall average in 2019-20.

Figure 3.4 provides additional evidence that students learning remotely in the 2020-21 school year received less literacy instruction. Primarily remote-instruction teachers were most likely to report that they decreased and least likely to report that they increased or maintained literacy instructional time during the 2020-21 school year relative to in-person and hybrid teachers. This discrepancy raises additional concerns about equitable learning opportunities, as remote districts are more likely to be those with lower pre-pandemic ELA performance and high proportions of economically disadvantaged students. Thus, students learning remotely—who were more likely to be low-income and facing challenges with literacy already—likely received less literacy instruction during the pandemic than their peers in more advantaged districts. Indeed, although not shown here, survey results show that teachers in high-performing ELA districts reported nearly one hour more literacy instruction per week than districts with low ELA performance.

FIGURE 3.4. Changes in Literacy Instruction Time by Modality



Note: Teachers were asked, "How has the amount of time you spend on instruction in this area changed since last year?" Source: EPIC survey of educators about the Read by Grade Three Law.

Open-ended responses to our surveys provide insight into why there was less time for literacy instruction during the 2020-21 school year, particularly for those teaching remotely. As we will detail later, teachers explained that teaching literacy via remote instruction was particularly difficult. COVID-19 protocols for in-person or hybrid instruction also reduced the amount of time teachers could spend on instruction. Activities like sanitizing desks and resources, and measures that allowed for distancing—like alternating groups of students in the classroom—while necessary, took time away from instruction.

In sum, these data make clear that the amount of literacy instructional time teachers reported decreased during the 2020-21 school year. Literacy instructional challenges were particularly salient for remote teachers, who are more likely to work in historically underserved districts (i.e., districts with higher proportions of economically disadvantaged students and students of color, lower ELA performance, and urban districts). Furthermore, teachers in districts with low prior ELA performance reported that their students received fewer hours of literacy instruction per week. Together, our results suggest that the COVID-19 pandemic most affected the time students spent learning literacy in historically underserved districts.

COVID-19 PANDEMIC AFFECTED THE IMPLEMENTATION OF THE READ BY GRADE THREE LAW

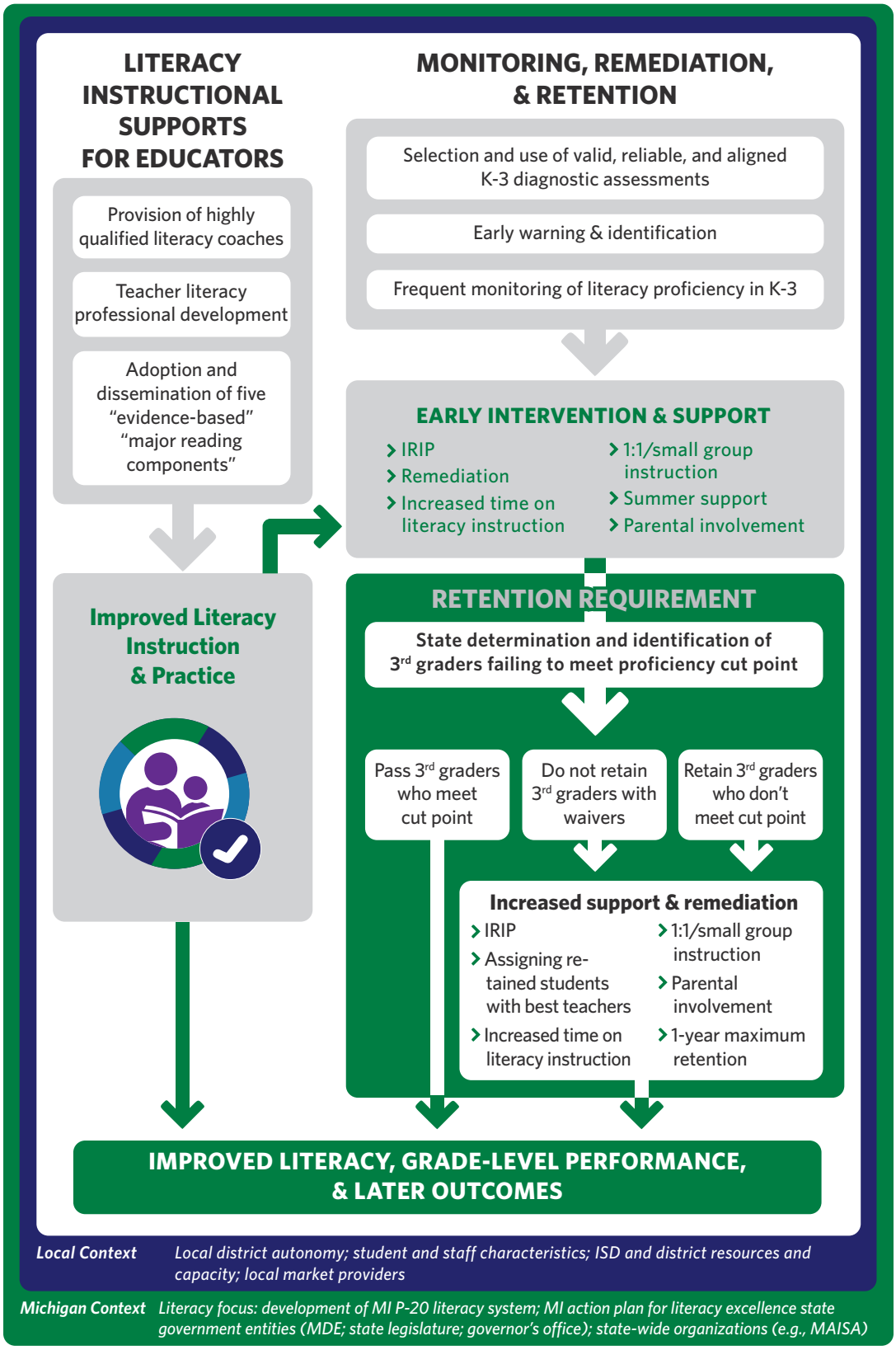
In 2018, EPIC worked with MDE and other state-level stakeholders to develop a Theory of Change to reflect the intended logic underlying the Read by Grade Three Law. This Theory of Change is displayed in Figure 3.5 and discussed in detail in the 2019-20 Report (Strunk et al., 2021). The Theory of Change traces the beliefs that underscore the Law: Literacy instructional supports for educators and early intervention for students, coupled with the threat of 3rd-grade retention, will improve literacy instruction and outcomes. For students who need additional assistance beyond early literacy supports to meet 3rd-grade proficiency standards, the Theory of Change holds that retention will allow for the extra time and instruction necessary to read on grade level.

The policy codified in the Law includes requirements for districts, ISDs, and the two state agencies assigned to its administration (MDE and CEPI). We represent these requirements in the gray and white boxes at the top of Figure 3.5. We group them into two main categories (represented by the two vertical pathways): **literacy instructional supports for educators** and **monitoring, remediation, and retention of students**. The first category, **literacy instructional supports for educators**, focuses on ensuring that classroom teachers provide high-quality instruction to all students based on research and best practice. This is done by providing literacy coaching and other literacy professional development, as well as the expectation that educators implement evidence-based literacy instructional practices in their classrooms. In alignment with the Law's use of MTSS, this supports "Tier I" classroom instruction.

The second category, **monitoring, remediation, and retention**, relies on educators' use of screeners and diagnostic assessments to identify and monitor student needs and provide increasingly intensive remediation to students who are reading below grade-level expectations ("Tier II" and "Tier III" interventions). Although many districts were already using these strategies, the passage of the Law in 2016 made the tiered supports mandatory for all educators and students. Policymakers scheduled all components of the Law, including retention, to take effect by the end of the 2019-20 school year. Due to the COVID-19-related federal state assessment waiver, the state suspended the retention component of the Law in spring 2020 and instead it went into effect in spring 2021.

While legislators made no amendments to the Read by Grade Three Law due to COVID-19 that would affect the Theory of Change itself, it is nonetheless likely that the pandemic affected educators' implementation of the Law.

FIGURE 3.5. Policy-Implied Theory of Change: Read by Grade Three Law

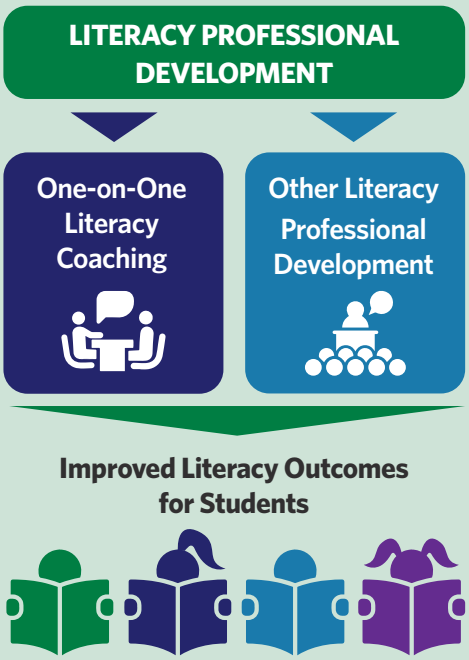


The Pandemic Changed Literacy Instructional Supports for Educators

The first set of legislated requirements under the Read by Grade Three Law ("Tier I") aims to improve literacy instruction and learning for all Michigan K-3 students, independent of student reading proficiency. This component of the Theory of Change, represented in the upper-left-hand section of Figure 3.5, comprises three elements: the **provision of highly qualified literacy coaches, teacher literacy professional development**, and the **adoption and dissemination of five "evidence-based" "major-reading components."** Together, the intent of these elements of the reform is to improve all Michigan K-3 classroom teachers' literacy instruction and practice, which should, in turn, enable teachers and schools to provide early literacy intervention and support to improve student literacy and grade-level performance.

THE LAW IS SUPPORTED BY MULTIPLE FORMS OF PROFESSIONAL DEVELOPMENT

Improved literacy instruction is supported by literacy professional development which includes providing highly qualified literacy coaches and other professional development in literacy.



The Pandemic May Have Shaped the Provision of Highly Qualified Literacy Coaches and Teacher Literacy Professional Development During the 2020-21 School Year

We distinguish between multiple forms of literacy professional development by referring to one-on-one literacy coaching separately from "other literacy professional development." Other literacy professional development consists of supports for teachers other than one-on-one coaching, such as large-group professional development, professional learning communities, online courses, and conferences. We use the more general term "literacy professional development" to refer to both one-on-one literacy coaching and other literacy professional development.

The state provides funding to support literacy professional development, including to ISDs to help them hire early literacy coaches to work with educators within their ISD. These coaches are commonly referred to as ISD Early Literacy Coaches and are provided for under section 35(a)4 (i.e., the Early Literacy Coaching Grant) of the State School Aid Act. In 2020-21, the state allocated $31.5 million for the hiring and training of these ISD Early Literacy Coaches, and each ISD is eligible to receive $112,500 from MDE per literacy coach.

ISD Early Literacy Coaches provide ongoing one-on-one literacy coaching and other professional development to K-3 teachers. The Read by Grade Three Law provides for at least one ISD Early Literacy Coach to assist teachers in implementing the instructional practices the Law requires, but not all ISDs apply for the additional 35(a)4 funding. Schools and districts may hire additional literacy coaches beyond the ISD Early Literacy Coaches funded under the Law. We refer to school-based literacy coaches as those employed by schools or districts to work with educators in a specific school, and district-based literacy coaches as those hired by specific

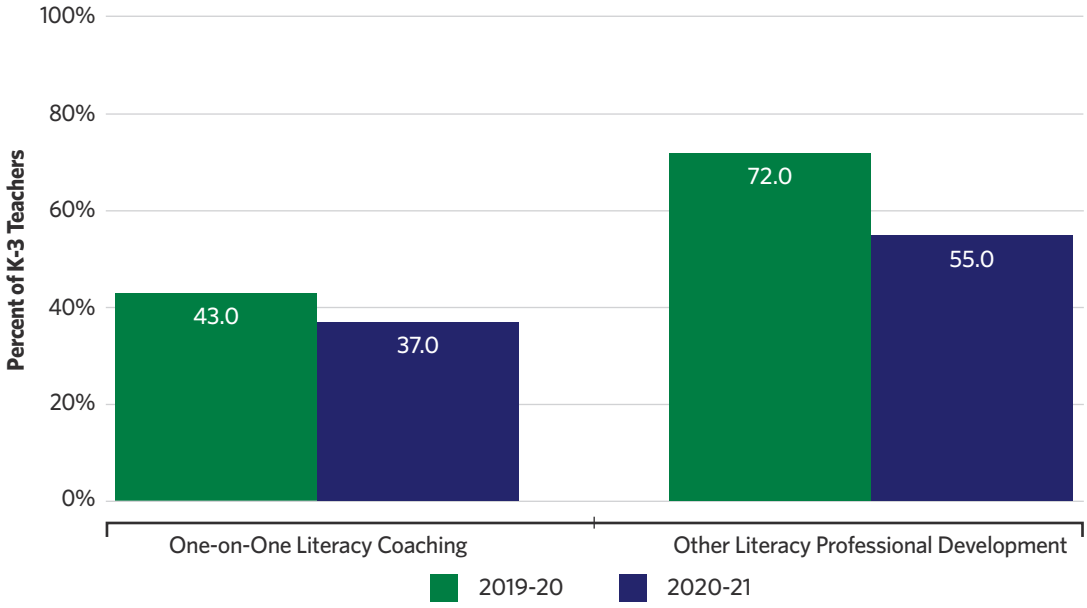
districts to work with teachers in that district (i.e., they may work in multiple schools within a district). Further, schools and districts may hire literacy specialists/interventionists to support literacy instruction. These individuals work to improve literacy achievement in schools and districts by serving in various roles, including as coaches. We compare the qualifications and activities of each of these different types of literacy coaches in Special Section A.

Providing one-on-one literacy coaching and other literacy professional development is a central component of the Read by Grade Three Law's implied Theory of Change. However, the pandemic may have affected the provision of these supports in fundamental ways.

Teachers Received Less One-on-One Literacy Coaching and Other Literacy Professional Development During the 2020-21 School Year

Survey data confirm shifts in providing one-on-one literacy coaching and other literacy professional development. Fewer K-3 teachers reported receiving literacy professional development—including one-on-one literacy coaching and other literacy professional development—in 2020-21 compared to 2019-20. Figure 3.6 shows that 43% of K-3 teachers reported receiving one-on-one literacy coaching from any provider in 2019-20 compared to 37% in 2020-21. Further, a much lower percentage of teachers reported receiving other literacy professional development; while 72% reported receiving other literacy professional development in 2019-20, just 55% said they did in 2020-21. This may be due to COVID-19 restrictions making it difficult to administer professional development in in-person settings or to educators taking on additional responsibilities during the pandemic, leaving less time to participate in literacy-focused professional development.

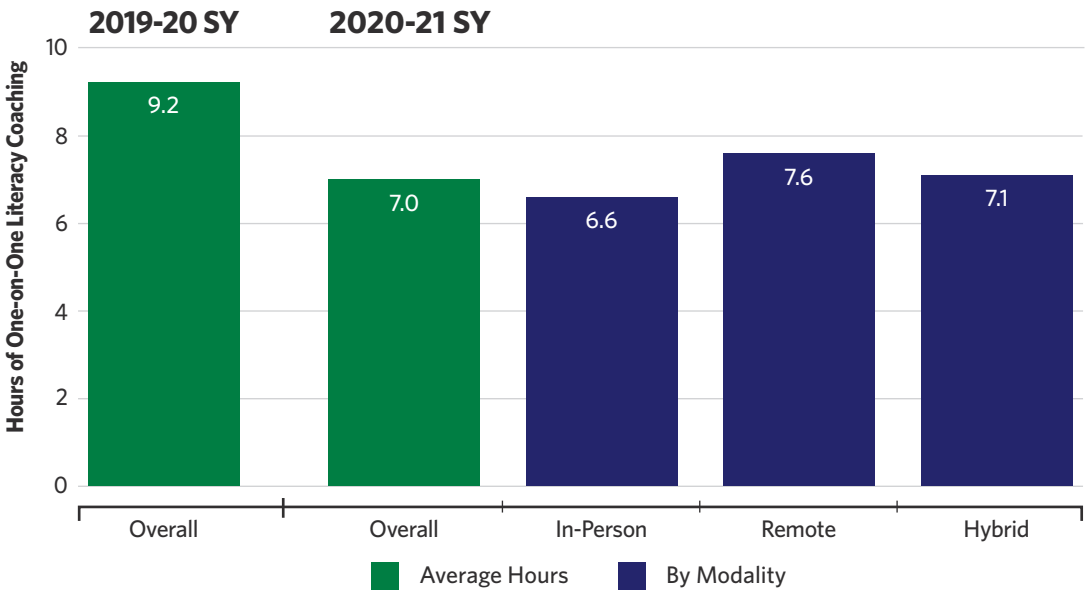
FIGURE 3.6. K-3 Teachers' Reported Receipt of Literacy Professional Development



Note: This figure combines results from the Year One and the Year Two surveys. In both years, teachers were asked, "Since the beginning of the school year, have you received one-on-one literacy coaching or other professional development from any of the following providers? Please mark all that apply. If you did not receive literacy professional development from a specific kind of provider, please leave that row blank." Source: EPIC survey of educators about the Read by Grade Three Law.

K-3 teachers also reported receiving fewer *hours* of one-on-one literacy coaching and other literacy professional development in 2020-21 than in 2019-20. Figure 3.7 shows that teachers who reported receiving at least some one-on-one literacy coaching reported receiving about two fewer hours than teachers last year.

FIGURE 3.7. Reported Hours of One-on-One Literacy Coaching



Note: Teachers were asked, "Since the beginning of the school year, approximately how many hours of one-on-one literacy coaching have you received?" Source: EPIC survey of educators about the Read by Grade Three Law.

Literacy coaches reported that it was challenging to provide one-on-one literacy coaching to teachers this year. Literacy coaches who provided one-on-one literacy coaching described logistical challenges with administering this support. For instance, one ISD Early Literacy Coach noted that they were using Zoom to observe teachers' in-person instruction and model literacy instructional practices, but that this platform created challenges that would not have been present if the coaches were able to be in person with teachers.

In addition, literacy coaches explained in open-ended survey responses that their responsibilities shifted away from working directly with teachers during the pandemic. This change hindered their ability to support as many teachers as they usually do. For instance, one literacy coach described how their focus shifted from coaching to working directly with students:

> *Due to [COVID-19], my role as literacy coach has been shifted this year to include working with small reading groups of students. This is not usually included in my job description. Usually, I am in classrooms coaching teachers or meeting with individual teachers or grade level teams for the majority of the day. Generally, I am extremely hands-on with teachers. This year has been an exception. I usually also work with multiple schools. However, due to [COVID-19], and my intervention work with students this year, I have only worked with one school.*

This shift in focus may have resulted from difficulties with the coaching model during the pandemic or from a greater need for students to receive direct intervention from expert instructors. Some educators said literacy coaching positions were shifted to direct instruction during the pandemic

due to health and safety concerns and the need to adopt greater social distancing as a COVID-19 mitigation strategy. As one teacher explained:

> *This year with [COVID-19], I was moved to Special Education and the Literacy Coach became a first-grade teacher. We did this to make smaller classrooms reducing the spread of [COVID-19]. However, this has negatively impacted the amount of coaching occurring within our building.*

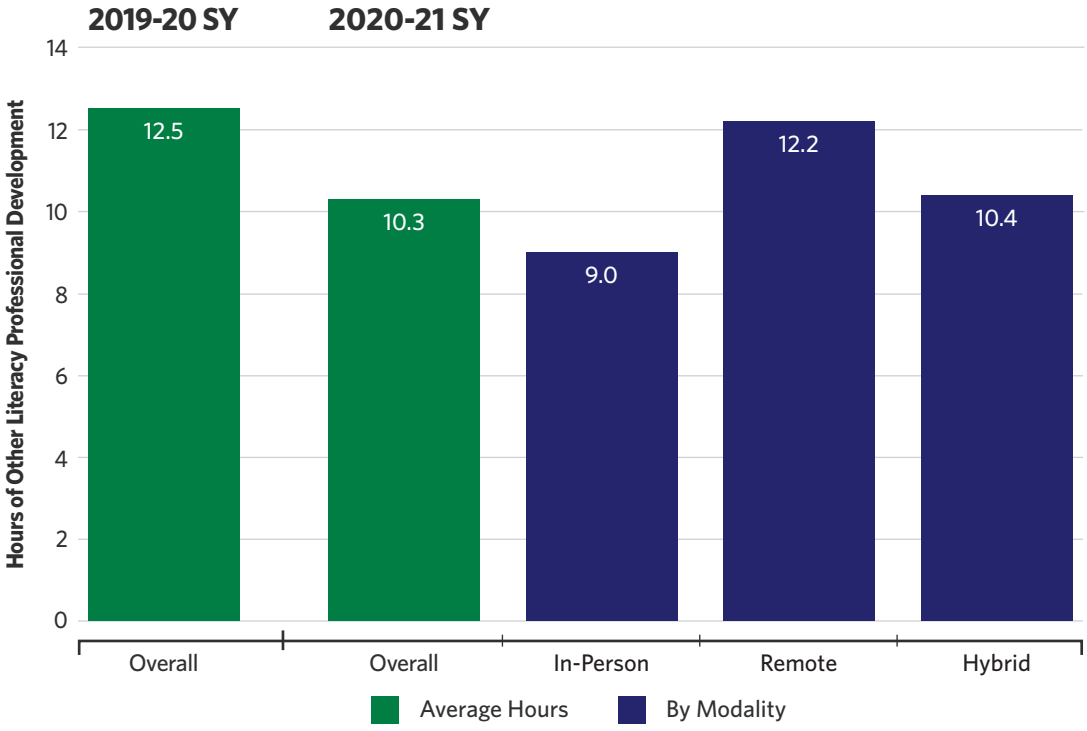
Others mentioned that coaching positions were cut due to pandemic-related budget constraints:

> *For the previous three years before this year, I was one of three literacy coaches in our district, assigned to one elementary school…All three of our positions were eliminated due to budget cuts. The services we were providing have not been replaced in any way with students or with staff. We do have one [literacy] coach for our county, but she has not been in to see teachers at all. The teachers and the students have been left on their own.*

Teachers in Remote Settings Received More One-on-One Literacy Coaching and Other Professional Development Than Those Teaching In-Person

Although teachers in all instructional modalities received fewer hours of one-on-one literacy coaching than the average teacher in 2019-20, Figure 3.7 and Figure 3.8 show that remote and hybrid teachers reported receiving more coaching and other literacy professional development hours than in-person teachers.

FIGURE 3.8. Reported Hours of Other Literacy Professional Development



Note: Teachers were asked, "Since the beginning of the school year, about how many hours of other literacy professional development have you received?" Source: EPIC survey of educators about the Read by Grade Three Law.

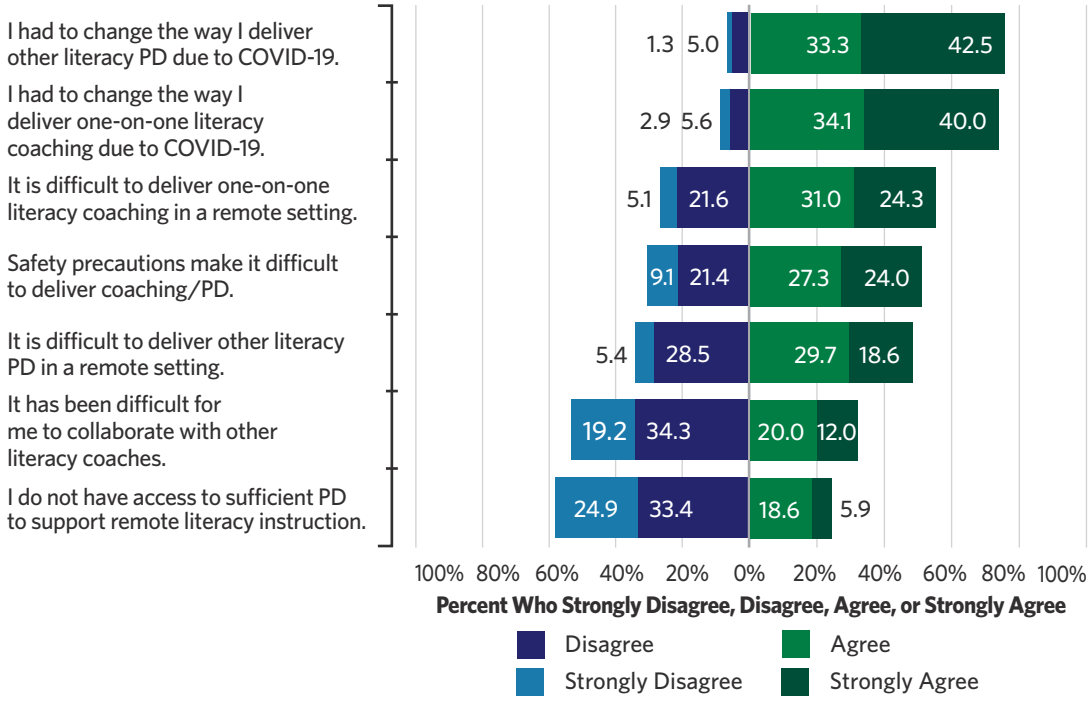
These disparities suggest that it may have been easier for literacy coaches to provide one-on-one coaching or for districts to offer other literacy professional development remotely than in-person settings during the pandemic. This may be due to safety protocols limiting the number of people in school buildings who were not working directly with students. Alternately, or in addition, remote teachers may have needed or requested more coaching and professional development to help support remote instruction. To that end, many teachers who wrote about professional development in their open-ended survey responses explained that this year's sessions focused on delivering remote instruction. For example, one teacher wrote:

> *All of our literacy professional development this year was based around planning how to use our curriculum virtually when/if schools were shut down. This time was extremely helpful given the current situation, but I do not feel it did anything to improve my literacy instruction this year.*

Coaches Noted Challenges in Providing Coaching and Professional Development During the COVID-19 Pandemic

Providing one-on-one literacy coaching during the COVID-19 pandemic proved challenging for literacy coaches. Figure 3.9 shows that about three-quarters of literacy coaches agreed or strongly agreed that they had to change how they delivered one-on-one literacy coaching and other literacy professional development in the 2020-21 school year. Approximately half of the coaches agreed or strongly agreed that it was difficult to provide one-on-one literacy coaching and other literacy professional development in a remote setting. About half of the literacy coaches reported that safety precautions made it difficult to deliver professional development. These challenges likely contributed to the diminished hours of literacy professional development provided to teachers during the pandemic.

FIGURE 3.9. Literacy Coaches' Reports of Effects of the COVID-19 Pandemic on One-on-One Literacy Coaching and Other Literacy Professional Development



Note: This includes responses from ISD, district-, and school-based literacy coaches as well as literacy specialists or interventionists. These professionals were asked, "We want to better understand how COVID-19 may have affected your ability to support effective literacy instruction and implement the Read by Grade Three Law. To what extent do you agree with the following statements?" Source: EPIC survey of educators about the Read by Grade Three Law.

The decrease may also be because school administrators reduced the overall amount of literacy professional development during the COVID-19 pandemic since teachers were already feeling overwhelmed. As one of the literacy coaches we interviewed explained:

> *Normally I'm providing professional development to our building teachers twice a month minimum, and also providing refreshers before school. My principal's really big on that, and the previous year I did that probably on average two to three times a month all year long. This year, my admin was like, "Back it down, back it down, people are overwhelmed, back it way off." Now, in the summertime, we're moving forward, but this was definitely a year where we didn't do things normally.*

A subset of interviews with state-level stakeholders and literacy coaches suggests that there may have been some advantages to the changes in their delivery of literacy coaching. As one external stakeholder who works with coaches noted:

> *It's really kind of cool with what we're finding...because there's less travel from building to building, they're saving time, and so...they're saving time with their pre and post planning, their post conversations. They're able to build relationships because it doesn't seem as threatening.*

Three of the four ISD Early Literacy Coaches we interviewed, each of whom provided one-on-one literacy coaching in a virtual setting, upheld this sentiment. All three of these coaches cited advantages to using virtual platforms, such as Zoom, to check in with teachers, set goals, co-plan, and engage in reflection. One told us:

> *I typically met with the teachers probably every week to check in on their goals. It was a little bit different than I think it would normally be with cycles. I typically don't meet with teachers that much, but because we had the virtual option and I was really only focused in on those three, it allowed me the opportunity to check in with them every week. They kept their goal the whole year, and that was just because of COVID-19, and it was just a little easier, I think, for them. All three of them worked on small groups, and so within that, we had different chunks that we worked on. Every week, we were checking in on the goal, reflecting on it, and revising it if needed.*

While they recognized opportunities with the virtual format, ISD Early Literacy Coaches also noted challenges. One coach said:

> *[The teachers] wanted to meet virtually, which creates another learning curve for me as well as them trying to figure out the dynamic and how to best support where they're at and where they're moving forward...I definitely think there's an opportunity for virtual coaching, but again, it's setting that up, and now that I'm learning more and more about virtual coaching, even having them record*

themselves and us process and think about that together...but I felt like there was a disconnect between that. ... We just [want to] get some more ideas on how we can implement [virtual] instruction.

Although most coaches reported that they received sufficient support to provide coaching and other literacy professional development to educators during the pandemic, a substantial proportion of coaches did not. Figure 3.9 shows that approximately one-third of literacy coaches noted that it was difficult to collaborate with other coaches in 2020-21. About one-quarter reported that they themselves did not have sufficient professional development to support remote literacy instruction.

About one-quarter of literacy coaches reported that they did not have sufficient professional development to support remote literacy instruction.

Overall, the COVID-19 pandemic reduced the amount of one-on-one literacy coaching and other literacy professional development teachers received. The effects of the pandemic, in particular the switch to remote instruction, also changed the content of teachers' professional development. Furthermore, the pandemic affected how literacy coaches delivered professional development, with many reporting that they provided virtual professional development. While this change may have been disruptive in some cases, in other cases, it may have been easier for literacy coaches to provide one-on-one coaching remotely than in person. Nonetheless, if the pandemic resulted in less one-on-one coaching and other literacy professional development for teachers, we may expect reduced benefits of the Law in the 2020-21 school year as educators largely believed that the Law helped improve student literacy partly because of the increased support for teachers in the years before the pandemic.

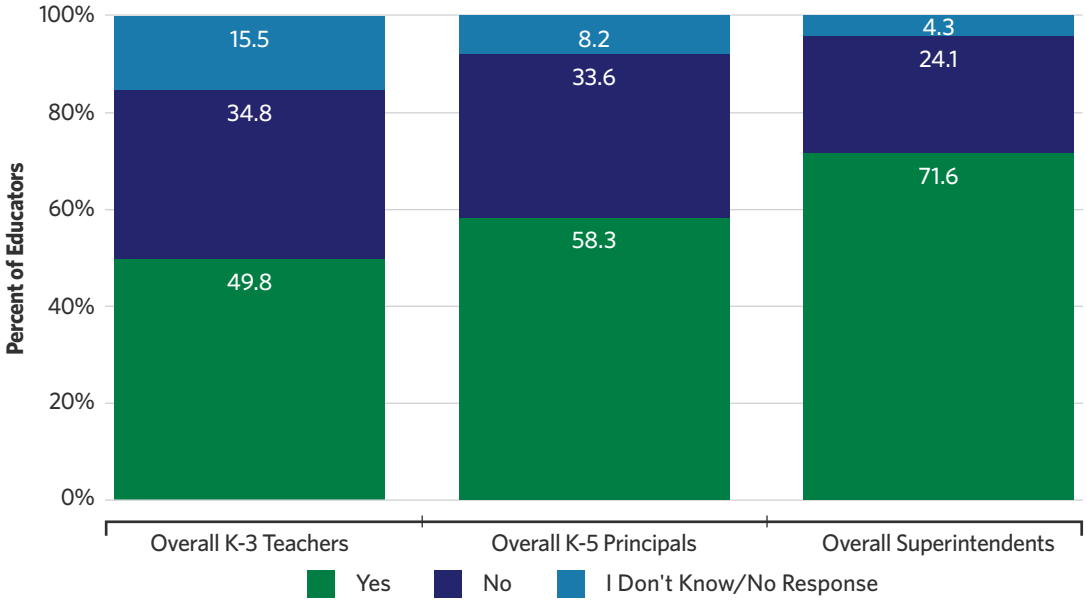
Educators Adapted Their Literacy Instruction and Practice During the Pandemic

According to the Theory of Change, the literacy instructional supports for teachers discussed above are intended to lead to **improved literacy instruction & practice**. However, the COVID-19 pandemic necessarily affected teachers' literacy instruction.

Educators Reported Changing or Adopting Curricula to Support Remote Instruction

As discussed earlier, educators adjusted the modalities through which they taught and the time they spent on literacy instruction. In addition, educators changed their curricula in response to pandemic teaching and learning challenges. Figure 3.10 shows that about half of teachers, 58% of principals, and 72% of district superintendents reported that their district changed or adopted curricula to support remote instruction. These changes may have supported teachers in delivering instruction remotely, but they also may have disrupted instruction as teachers adapted to a new or modified curriculum.

FIGURE 3.10. Changed or Adopted Curricula to Support Remote Instruction



Note: Educators were asked, "As a result of COVID-19, did your district change or adopt curricula to support remote instruction?" Source: EPIC survey of educators about the Read by Grade Three Law.

The Pandemic Made It Challenging for Educators to Monitor Literacy Proficiency and Identify Students Who Need Additional Literacy Support

Under the Read by Grade Three Law, districts must **select and use valid, reliable, and aligned K-3 diagnostic assessments** for screening and **frequently monitoring literacy proficiency in grades K-3**. These assessments are used for **early warning and identification** purposes to determine which students have a "reading deficiency" as defined in the Law.

Under the Read by Grade Three Law, districts must diagnose K-3 students with "reading deficiencies" based on state-approved screening, formative, and diagnostic assessments. The Read by Grade Three Law requires districts to choose one initial and at least one extensive assessment from a pre-approved list (Michigan Department of Education, 2019a).[1] Districts administer initial assessments to all K-3 students and use them to identify students with a potential "reading deficiency" (Michigan Department of Education, 2021b). Districts use extensive assessments to evaluate students they have identified as having a "reading deficiency" (Michigan Department of Education, 2021a). Districts use these assessment results to inform instruction and intervention services and monitor students' progress toward a "growth target" in reading, as described in the Law.

Given the educator-reported challenges regarding student attendance and engagement, as well as shifts in instructional modality and time spent on literacy instruction that we outlined earlier in this section, it might follow that districts faced challenges with monitoring students' "reading deficiency" status and their progress over the year. However, we do not find evidence of lower rates of district monitoring, at least in terms of participation in initial fall diagnostic assessments.

Table 3.2 shows the proportion of students who do not have a recorded fall semester "reading deficiency" status and thus seemingly did not participate in the fall early literacy diagnostic assessment by grade and year. Lower numbers in this table indicate higher participation and lower non-participation rates on the diagnostic assessments. In each year, we can see that kindergarten students had the highest non-participation rates of all grades. Before the pandemic, non-participation rates were around 1.5% in 2018-19 and 1% in 2019-20. During the pandemic, non-participation rates increased relative to 2019-20, to 1.3%, but were still lower than in 2018-19. This trend is consistent across grade levels. Together, these results suggest that the COVID-19 pandemic did not significantly change participation rates on the diagnostic assessments mandated by the Law.

TABLE 3.2. Non-Participation Rates for Fall Semester Read by Grade Three Law Literacy Diagnostic Assessments

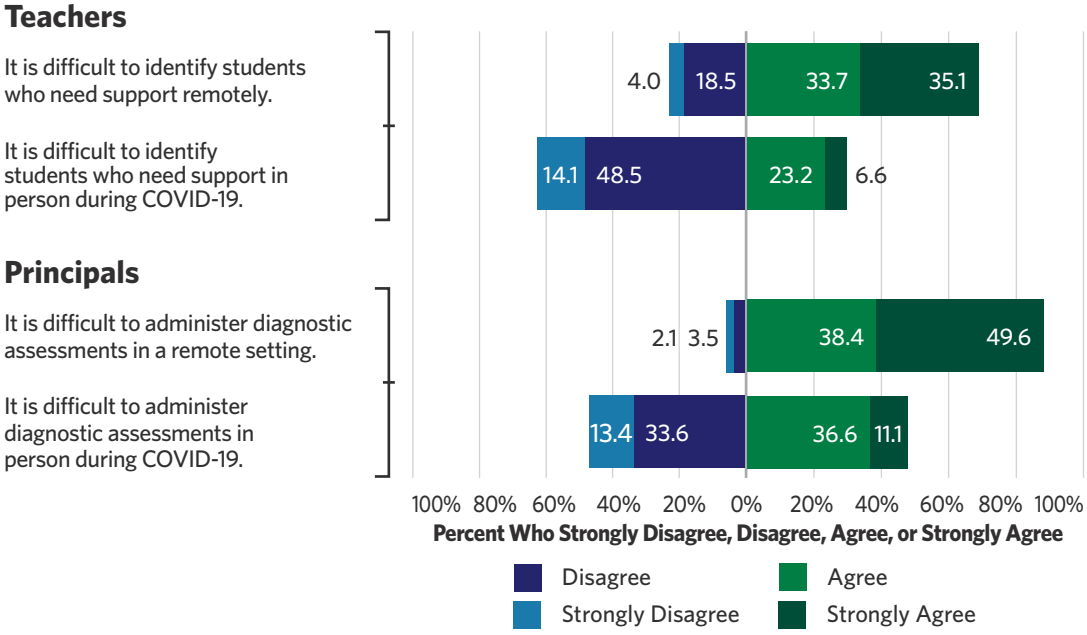
	School Year			
Grade	**2018-19**	**2019-20**	**2020-21**	**Overall**
Overall	0.015 (0.123)	0.010 (0.099)	0.012 (0.110)	0.012 (0.111)
Kindergarten	0.017 (0.131)	0.013 (0.111)	0.014 (0.119)	0.015 (0.121)
Grade 1	0.015 (0.121)	0.009 (0.095)	0.012 (0.109)	0.012 (0.109)
Grade 2	0.015 (0.120)	0.008 (0.091)	0.011 (0.105)	0.011 (0.106)
Grade 3	0.014 (0.118)	0.009 (0.094)	0.011 (0.105)	0.011 (0.106)

Note: Standard deviations are in parentheses. Data are derived from student-level administrative records for K-3 students in 2018-19 through 2020-21.

However, this does not mean it was easy for educators to monitor their students' literacy during the 2020-21 school year. Teachers teaching remotely encountered more difficulties than did in-person teachers. Figure 3.11 shows that 69% of K-3 teachers who taught primarily remotely agreed that it was difficult to identify students who needed support remotely. In contrast, only 30% of primarily in-person teachers felt this way about identifying students for support in an in-person setting during the pandemic.

We cannot know exactly what led to these challenges with identifying students who needed support. However, principals reported that it was difficult to administer diagnostic assessments—which may not be the Read by Grade Three Law-required assessments discussed above, but rather more informal diagnostics that teachers administer to assess student progress—during the 2020-21 school year, particularly during remote instruction. To that end, 88% of principals agreed that it was difficult to administer diagnostic assessments remotely relative to 47% of principals who agreed that administering diagnostic assessments was difficult in person during the pandemic.

FIGURE 3.11. Elements of the Law Particularly Affected by the COVID-19 Pandemic



Note: Teachers were asked, "We want to better understand how COVID-19 may have affected your or your school's ability to deliver literacy instruction and implement the Read by Grade Three Law. To what extent do you agree with the following statements?" Principals were asked, "We want to better understand how COVID-19 may have affected your school's ability to deliver literacy instruction and implement the Read by Grade Three Law. To what extent do you agree with the following statements?" Questions specifically about the challenges of remote settings were asked to teachers and principals who reported primarily remote or hybrid instruction. Questions specifically about in-person settings were asked to teachers and principals who reported primarily in-person or hybrid instruction. Source: EPIC survey of educators about the Read by Grade Three Law.

The Pandemic Made It Challenging for Students, and Especially Those in Remote Settings, to Receive the Early Intervention and Supports Required by the Law

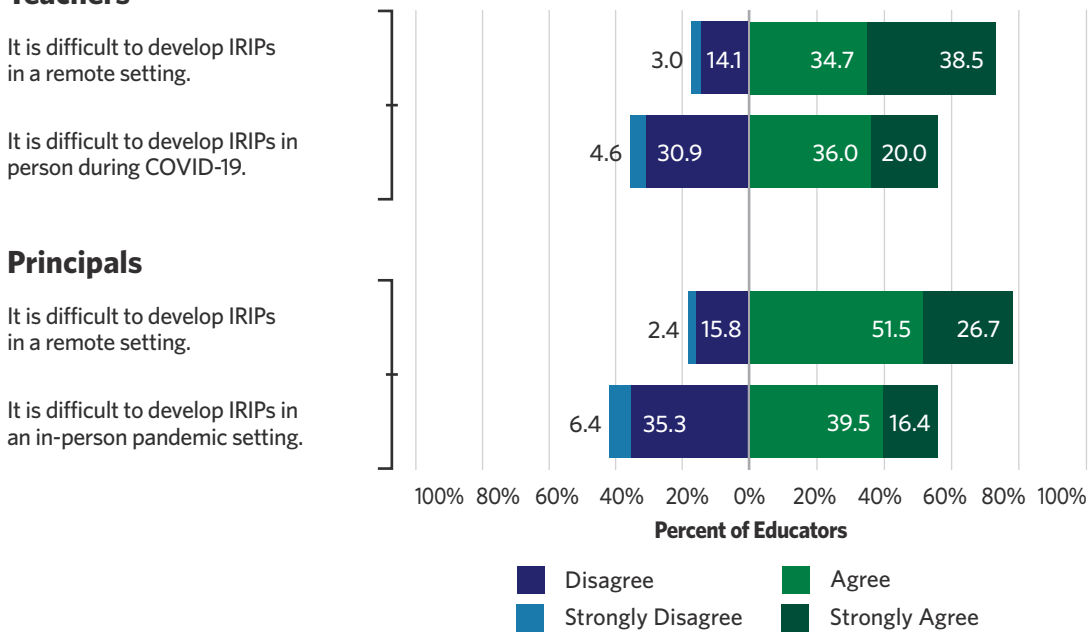
As shown in Figure 3.5, students identified with "reading deficiencies" will receive more intensive Tier II and III supports, including **early intervention and support**. These interventions include **IRIPs** that contain evidence-based interventions, such as **remediation, increased time on literacy instruction, one-on-one or small group instruction, summer support**, and **parental involvement**. IRIPs describe the interventions the individual student will receive to address their "reading deficiency." The district must provide the student with the interventions outlined in the IRIP until the district no longer identifies the student as having a "reading deficiency." Schools must provide IRIPs to students within 30 days of identification. MDE released communications clarifying that IRIPs were still to be implemented during the pandemic, although some flexibilities were granted to ease logistical challenges (Michigan Department of Education, 2020).

Educators Faced Challenges Developing IRIPs and Providing Students With Necessary Interventions

Figure 3.12 shows that teachers and principals believed that the COVID-19 pandemic had posed a challenge to developing IRIPs. While 56% of teachers and principals agreed or strongly agreed

that developing IRIPs was difficult in person during the COVID-19 pandemic, remote settings posed an additional challenge; 73% of teachers and 88% of principals agreed or strongly agreed that developing IRIPs was difficult in a remote setting.

FIGURE 3.12. Challenges to IRIP Development

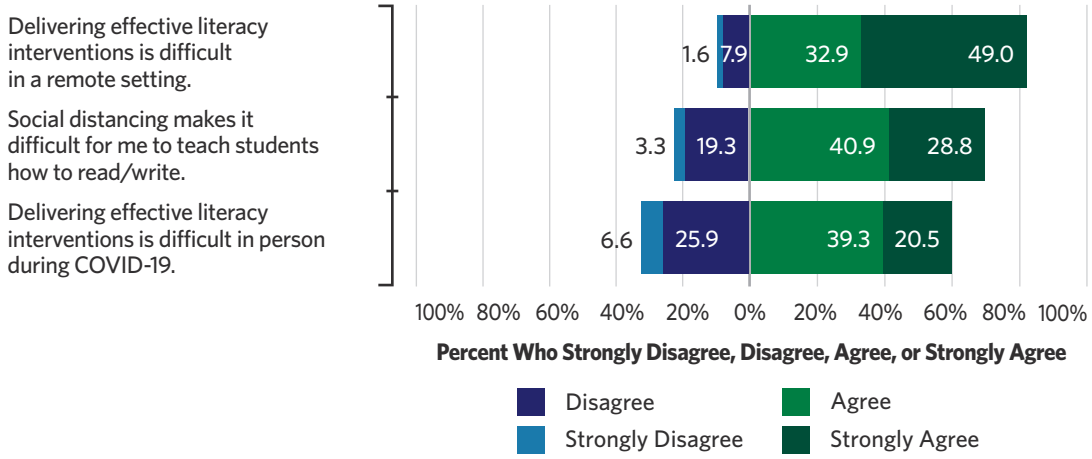


Teachers were asked, "To what extent do you agree with the following statements about Individual Reading Improvement Plans (IRIPs)?" Principals were asked, "We want to better understand how COVID-19 may have affected your school's ability to deliver literacy instruction and implement the Read by Grade Three Law. To what extent do you agree with the following statements?" Teachers and principals who reported primarily in-person instruction were asked only about in-person pandemic settings. Teachers and principals who reported primarily remote instruction were asked only about remote settings. Teachers and principals who reported primarily hybrid instruction were asked about both in-person and remote settings. Source: EPIC survey of educators about the Read by Grade Three Law.

COVID-19 also likely created challenges with administering the interventions outlined in students' IRIPs. As discussed earlier, educators—particularly those teaching remotely—reported having less time to devote to literacy instruction. In addition, Figure 3.13 shows that teachers reported challenges delivering effective literacy instruction and interventions. Again, difficulties were exacerbated in remote settings: nearly three-quarters of remote teachers and 60% of in-person teachers agreed or strongly agreed that delivering effective literacy interventions was difficult during the 2020-21 school year. Two-thirds of principals reported that it was difficult to develop "Read at Home" plans in remote settings relative to 44% in in-person settings.

Open-ended survey responses also highlight challenges with providing **one-on-one** or **small group instruction**, both when teaching remotely and in-person. One teacher summed it up by writing, *"With the amount of technology issues and the online supervision restrictions, small group instruction was almost impossible. With distance required in the in-person setting, small groups are improbable."*

FIGURE 3.13. The Effects of the COVID-19 Pandemic on Literacy Interventions and Support



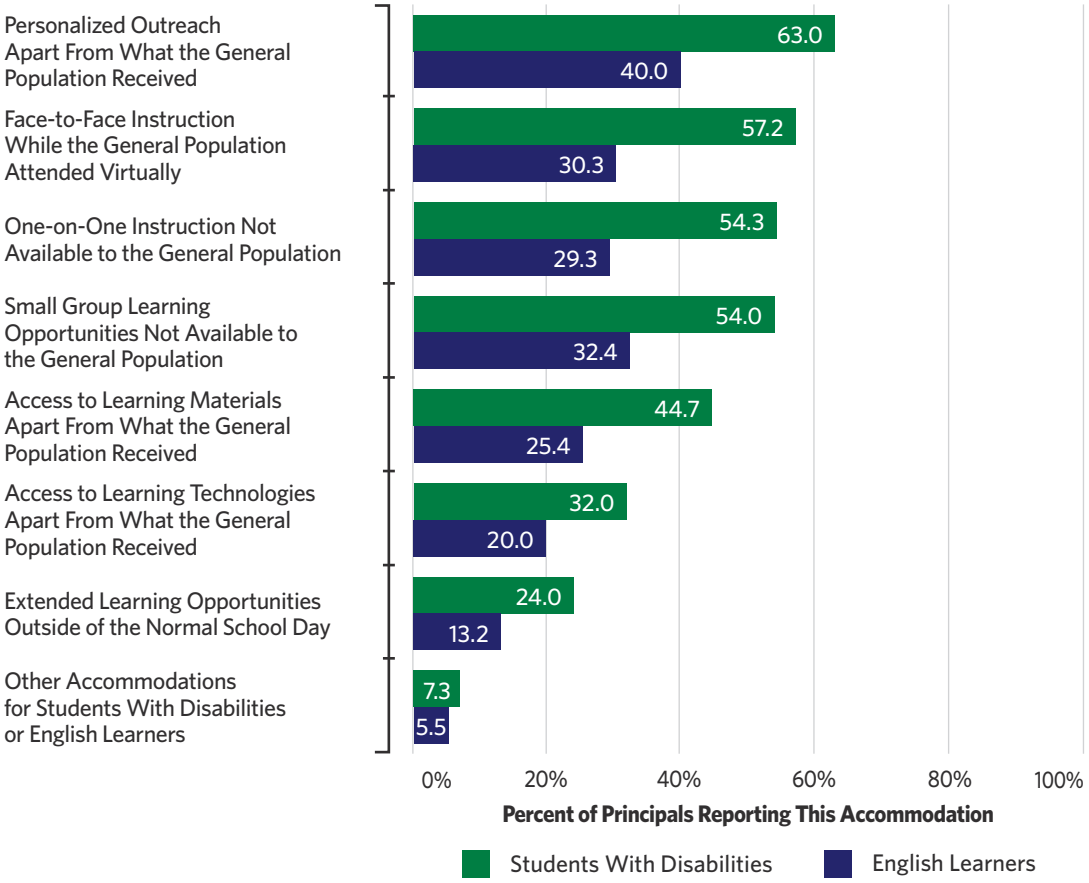
Note: Teachers were asked, "We want to better understand how COVID-19 may have affected your or your school's ability to deliver literacy instruction and implement the Read by Grade Three Law. To what extent do you agree with the following statements?" Questions specifically about the challenges of remote settings were asked only to teachers who reported primarily remote or hybrid instruction. Questions specifically about in-person settings were asked only to teachers who reported primarily in-person or hybrid instruction. Source: EPIC survey of educators about the Read by Grade Three Law.

Educators Provided Extra Supports to Students With Disabilities and English Learners

Although COVID-19 made it more difficult to administer the Law's literacy interventions overall, principals reported that special student populations received additional accommodations and individualized attention during the 2020-21 school year. Figure 3.14 shows principals' reports of the accommodations provided to both students with disabilities and English learners. Students with disabilities were more likely than English learners to receive every type of accommodation asked about in the survey question, suggesting that schools were more likely to consider the special needs of students with disabilities than English learners during the pandemic. Nearly two-thirds of principals reported providing students with disabilities personalized outreach apart from what the general population received. Over half of principals reported providing students with disabilities face-to-face and one-on-one or small group learning opportunities not available to the general population. By contrast, 40% of principals reported providing English learners with personalized outreach, and approximately one-third reported providing English learners learning opportunities above and beyond what the general population received.

Overall, principals reported that special student populations received additional accommodations and individualized attention during the 2020-21 school year.

FIGURE 3.14. Additional Accommodations for Special Populations Due to the COVID-19 Pandemic



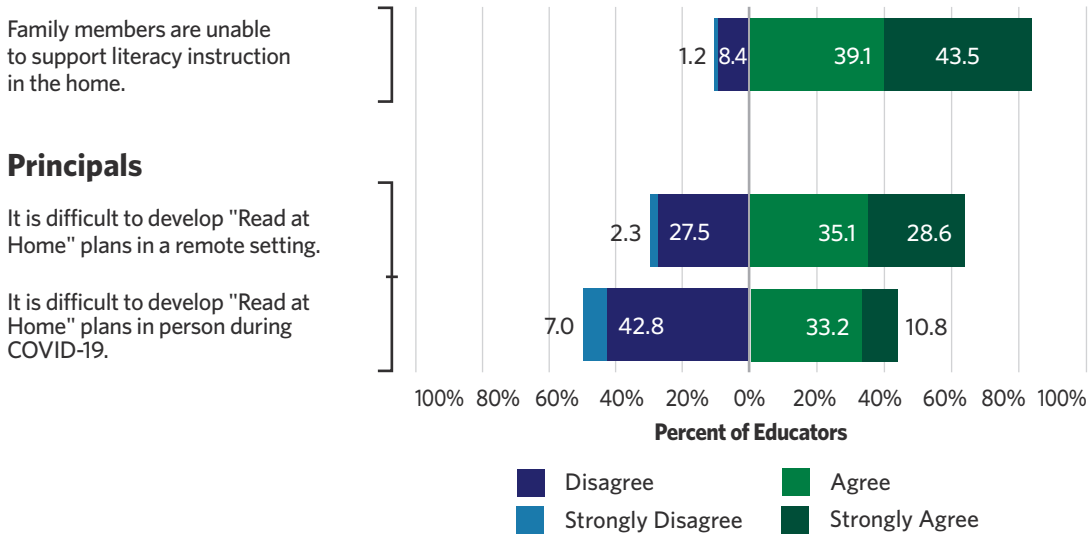
Note: Principals were asked, "During COVID-19, did your school provide additional accommodations for the following groups of students?" Source: EPIC survey of educators about the Read by Grade Three Law.

Parent and Guardian Engagement in at-Home Literacy Was Particularly Important, and Challenging, During the Pandemic

Parent and guardian engagement and support are always important in helping students with early literacy learning, even more so during the pandemic when educators struggled to teach children, especially in remote settings (Epstein, 2018). Precisely because of the documented connection between at-home literacy activities and student literacy success (Senechal & Young, 2008; Van Steensel et al., 2011), the Read by Grade Three Law recommends that IRIPs include a **"Read at Home" plan** that provides parents, guardians, or care-providers training workshops and regular home reading. COVID-19 required that educators rely heavily on parents and guardians to support their child's literacy instruction as students were learning from home in many cases. However, parents and guardians had responsibilities (e.g., work, caring for family members) that may have made them less available to support literacy learning at home.

Figure 3.15 shows that principals believed it was difficult to create "Read at Home" plans remotely. In addition, the majority of teachers thought that family members were unable to support literacy instruction at home.

FIGURE 3.15. Educators' Perceptions of Developing "Read at Home" Plans and the Ability of Family Members to Support Literacy Instruction in the Home During the COVID-19 Pandemic



Note: Educators were asked, "We want to better understand how COVID-19 may have affected your school's ability to deliver literacy instruction and implement the Read by Grade Three Law. To what extent do you agree with the following statements?" Principals who reported primarily in-person instruction were asked only about in-person pandemic settings. Principals who reported primarily remote instruction were asked only about remote settings. Principals who reported primarily hybrid instruction were asked about both in-person and remote settings. Source: EPIC survey of educators about the Read by Grade Three Law.

Open-ended survey responses suggest that family engagement decreased during the 2020-21 school year and was a particular hurdle for educators. Teachers cited parents struggling with technology problems, language barriers, lack of expertise, impeded access to resources (e.g., Family Literacy Nights) due to COVID-19 restrictions, limited time between work and other family responsibilities (e.g., multiple school-age children, caregiver), and feelings of being overwhelmed and frustrated.

This reliance on families and guardians for literacy support during the 2020-21 school year may have contributed to the inequitable opportunities for student learning during the pandemic documented both in Michigan and nationally (U.S Department of Education, 2021). Many teachers shared that they saw growth in students who they perceived had parental support while learning virtually. Meanwhile, teachers worried that students they perceived as having limited parental engagement or challenging home situations stagnated or missed out on learning opportunities. For example, one teacher commented:

> *The families who were able to provide time to their children during remote instruction and attended class regularly excelled more in reading than they would have in-person because their parents provide daily support based on teacher recommendations for reading improvement and it allowed me more time to pull one-on-one and small groups for reading intervention. The students who were not able to attend remote instruction regularly or attended but didn't have support in doing the suggested work at home did not have much success in reading growth this year.*

Given this, several teachers highlighted their opinion that family support is vital for implementing interventions and literacy resources at home, especially during remote instruction. However, not all parents can be at home to support their students' remote literacy instruction. If remote instruction relies heavily on parent support to improve students' literacy skills, students with help at home would excel. In contrast, those without at-home help might falter, thus exacerbating inequities in opportunities to learn and literacy achievement.

The Retention Component of the Law Was Amended Due to the Pandemic

The Read by Grade Three Law stipulates that students who score more than one grade level behind in reading proficiency at the end of 3rd grade (as measured by the state's 3rd-grade ELA M-STEP assessment) will be identified for retention. Before the pandemic, in December 2018, MDE determined that a score of 1252 or below would indicate that a student is more than one grade level behind in reading (Michigan Department of Education, 2019b). Any such student is subject to retention unless they receive a waiver from the district superintendent. The Law requires CEPI to send notifications to parents or guardians of these students via certified mail.

Notably, districts are not required to retain all retention-eligible students. Parents or teachers can initiate requests for waivers that enable districts to promote students even withstanding their ELA M-STEP score. Districts can grant waivers if a student demonstrates grade-level proficiency through an alternate assessment[2] or portfolio or merits a "good cause exemption." Under the Law, students are eligible for a good cause exemption if they have an IEP or Section 504 Plan; are English learners with less than three years of English language instruction; were retained in an earlier grade and had already received intensive reading instruction for two or more years; or have been enrolled in their current school for less than two years and there is evidence that they were not provided with an appropriate IRIP. Families, legal guardians, or school/district staff can also request good cause exemptions in an appropriate timeframe for students who have been identified with a "reading deficiency" if the superintendent agrees that the exemption is in the best interest of the student. Students who receive an exemption must have intensive reading intervention until the district can show there is no longer a "reading deficiency."

The retention component of the Read by Grade Three Law was paused in spring 2020 because Michigan did not administer the M-STEP in the 2019-20 school year due to pandemic-related school-building closures and an ensuing assessment waiver from the U.S. Department of Education. In January 2021, MDE submitted a request to the U.S. Department of Education to waive the M-STEP for the second year in a row (Whitmer & Rice, 2021). The U.S. Department of Education denied this request (as it did for all states that made similar requests). It waived the participation component of the ESSA that required the assessment of at least 95% of students (Michigan Department of Education, 2021c). The M-STEP could not be administered virtually, and students receiving remote instruction were not required to come into school buildings to take the assessment. Media coverage suggests that, even in many districts operating in person some or all of the time, M-STEP participation was effectively voluntary (Altavena, 2021; French, 2021; Gordan, 2021). As expected, M-STEP participation rates were far lower in 2020-21 than in previous years,

with only 72% of 3rd graders taking the ELA assessment compared to 97% in 2018-19. Students who did not participate in the assessment could not be eligible for retention under the Read by Grade Three Law.

Even with the participation waiver and widespread acknowledgment that retention may not be appropriate, especially during a pandemic with associated schooling disruptions, the retention component of the Read by Grade Three Law went into effect for the first time in 2020-21, by using the spring 2021 ELA M-STEP to identify students to be retained during the 2021-22 school year. In spring 2021, many districts announced that they would grant exemptions to students of any parent or guardian who requested one. Both large (Detroit Public Schools and Grand Rapids Public Schools) and small districts (Coloma County School District, Corunna Public Schools, and Holland Public Schools) announced that they would grant most or all exemptions submitted by families (Boatman, 2021; Bullion, 2021; French & Kalakailo, 2021). Section Four discusses the implementation and outcomes related to retention in detail.

Teacher Mobility Remained Relatively Stable, Even During the Pandemic

Although not specifically a part of the Theory of Change, effective literacy interventions stemming from high-quality teacher professional development can only improve student outcomes if teachers remain in their schools and districts to work with students once they have improved their literacy instruction practices. However, as described throughout this section, the pandemic made it increasingly difficult for teachers to do their jobs. Teachers might respond to the effects of the COVID-19 pandemic by making career changes. For instance, teachers might move to a school in a different district offering an instructional modality more aligned with their preferences. Teachers might also respond to the uncertainty of the pandemic by leaving Michigan public schools to move into private schools, a different profession, or retirement. Since the implementation of the Law relies on providing high-quality teachers, the pandemic's effects on teacher mobility are important to understand.

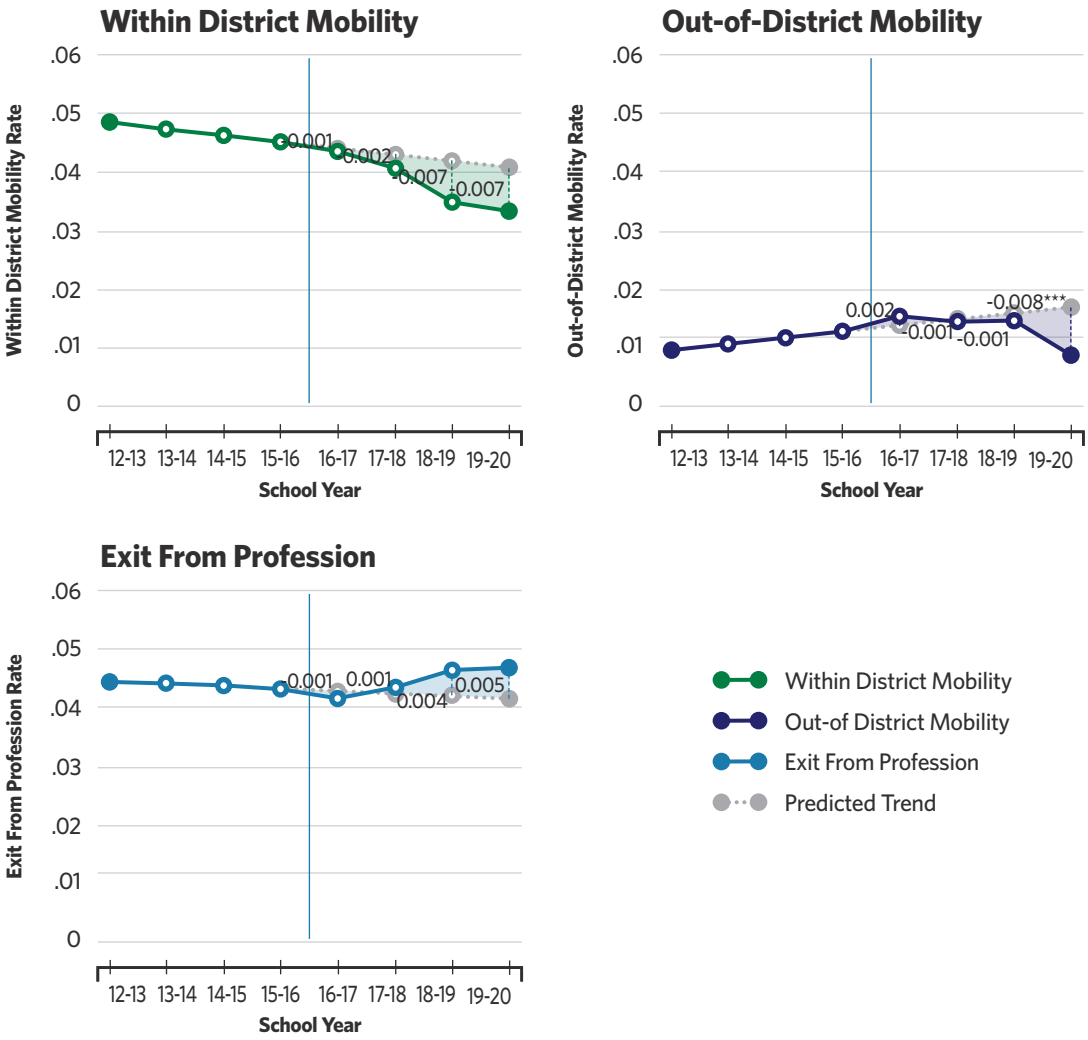
We study fall-to-fall teacher mobility rates from 2012-13 to 2019-20. We measure teacher mobility from the fall of the school year listed on the x-axis to the following year's fall semester. This definition means that teacher mobility in 2019-20 represents changes from fall 2019 to fall 2020 and that teachers in this year would have been affected by the COVID-19 pandemic.

Last year's report analyzed fall-to-fall teacher mobility from 2012-12 through 2018-19 and found that teacher mobility remained relatively stable in the years following the Law's implementation. This report extends our analysis by a year, examining whether teachers transferred schools within or out-of-district or exited the profession between fall 2019 and fall 2020.

Figure 3.16 presents estimates from an ITS analysis of teacher mobility rates, showing that within-district mobility and exits from the profession remained mostly unchanged in 2019-20 relative to 2018-19. However, we see a decrease in out-of-district mobility from 2018-19 to 2019-20, suggesting that teachers were less likely to transfer to a different district between fall 2019 and fall 2020. We find no statistically significant deviations from predicted pre-Law within-

district transfers or exits from the profession. Still, there is a significant decrease in out-of-district mobility of 0.8 percentage points relative to predicted pre-Law trends. Even though mobility rates in 2019-20 capture disruptions caused by the onset of the COVID-19 pandemic, teacher mobility rates remain surprisingly stable, with only a small decrease in out-of-district transfers relative to flat pre-Law trends.

FIGURE 3.16. Teacher Mobility: Changes From Predicted Pre-Law Trends



Note: Estimates from ITS models. Full coefficient estimates can be found in Appendix B. Data are derived from student-level administrative records for Michigan 3rd-grade students.

SUMMARY

The COVID-19 pandemic did not lead to any legislative changes to the Read by Grade Three Law itself, other than a temporary pause in retention after the 2019-20 school year. However, the pandemic dramatically affected literacy instruction in Michigan, independent of and in addition to substantially affecting educators' implementation of the Law.

We found that teachers reported spending less time on literacy instruction in 2020-21 than they did the previous year. This was particularly the case for teachers in remote settings relative to those teaching in person. Educators in remote settings also reported more challenges than did in-person educators, which affected their ability to provide effective literacy instruction to students. In addition, lower proportions of teachers reported receiving instructional supports such as one-on-one literacy coaching and other literacy professional development than they did in 2019-20, and teachers who received these supports reported fewer hours of professional development. Literacy coaches reported facing many challenges administering these supports, particularly in remote settings.

The COVID-19 pandemic also affected educators' ability to monitor students' literacy progress and implement the Read by Grade Three Law's interventions. Educators reported that it was difficult to identify students who needed literacy support and remotely administer diagnostic assessments. For students identified with a "reading deficiency," educators' survey responses indicated that administering the required interventions under the Law was challenging this year. They reported that developing and implementing IRIPs was particularly difficult for students learning remotely. Teachers also expressed that providing one-on-one or small group instruction was difficult both remotely and in person, given COVID-19 safety precautions like masking and social distancing. Lastly, most teachers perceived that families were unable to support literacy instruction in the home.

While the COVID-19 pandemic affected educators' literacy instruction and practice and created new uncertainty and risks, teachers' career decisions appear relatively similar to pre-pandemic. Teacher mobility rates remained relatively stable through fall 2020. However, we only measure teacher mobility through the early months of the pandemic and mobility changes might manifest later.

The effects of the COVID-19 pandemic on the implementation of the Law were particularly salient for educators in historically disadvantaged school districts (e.g., higher proportions of economically disadvantaged students, higher proportions of non-White students, and lower ELA performance). Our findings suggest that the pandemic may have exacerbated existing inequities in literacy skills.

SECTION THREE NOTES

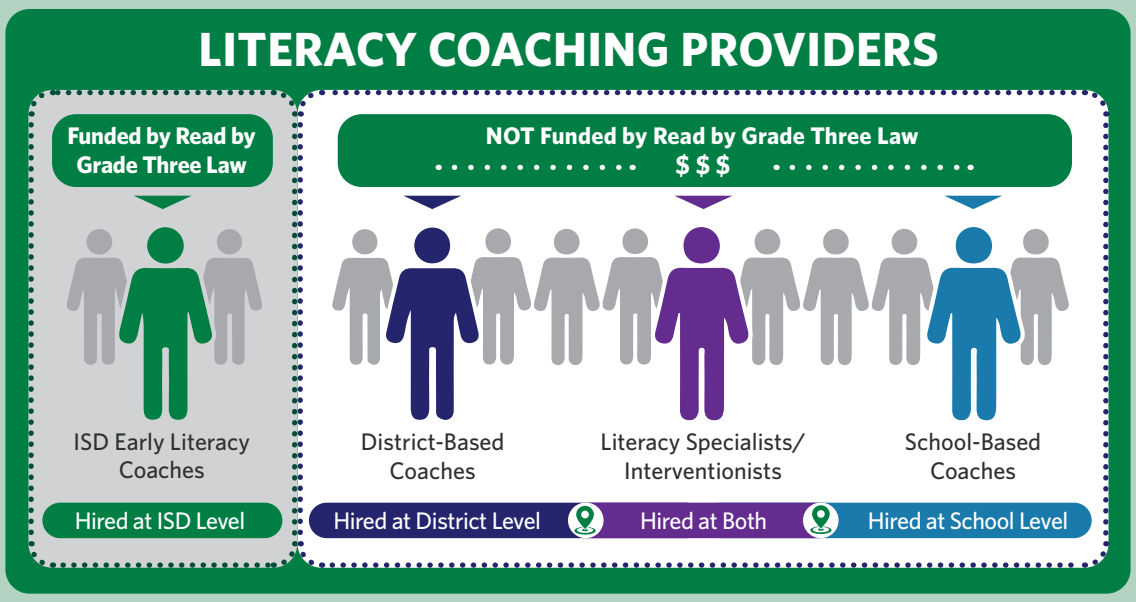
1. According to MDE, extensive assessments "will assist educators with better identification of areas in which to focus intervention" and "may be delivered only to those students for which an area of concern has been identified." Districts must select one initial assessment and at least one extensive assessment from MDE's approved list (Keesler, 2019).
2. MDE has not identified or approved an alternate assessment.

Special Section A: How ISD Early Literacy Coaches Compare to Other Literacy Coaches

WHO ARE ISD EARLY LITERACY COACHES AND WHAT MAKES THEM DISTINCT?

The Read by Grade Three Law's Tier I supports focus on improving literacy instruction for all students, including by providing one-on-one literacy coaching and other literacy professional development to K-3 teachers. As described in Section Four, the state provides funding to ISDs to support this component of the Law and to help them hire one or more early literacy coaches who are tasked with working with districts and educators within that ISD. Schools and districts may hire additional literacy coaches beyond the ISD Early Literacy Coaches funded under the Law, including school- and district-based coaches and literacy specialists/interventionists. These additional coaching providers may engage in similar activities as ISD Early Literacy Coaches and have similar qualifications, but the Read by Grade Three Law does not fund them nor does it mandate their responsibilities.

In this special section, we use survey data from ISD Early Literacy Coaches, school- and district-based literacy coaches, and literacy specialists/interventionists who serve as coaches to compare different types of coaches' qualifications and the literacy supports they provide. In particular, we examine whether the ISD Early Literacy Coaches funded under the Read by Grade Three Law are distinct from other literacy coaching providers.



LITERACY COACHES' QUALIFICATIONS AND TRAINING

A total of 582 literacy coaches responded to the survey: 188 school-based coaches, 163 ISD Early Literacy Coaches, 136 district-based coaches, and 95 literacy specialists/interventionists. These survey samples represent a 42% response rate for ISD Early Literacy Coaches and a 55% response rate for other types of coaches.

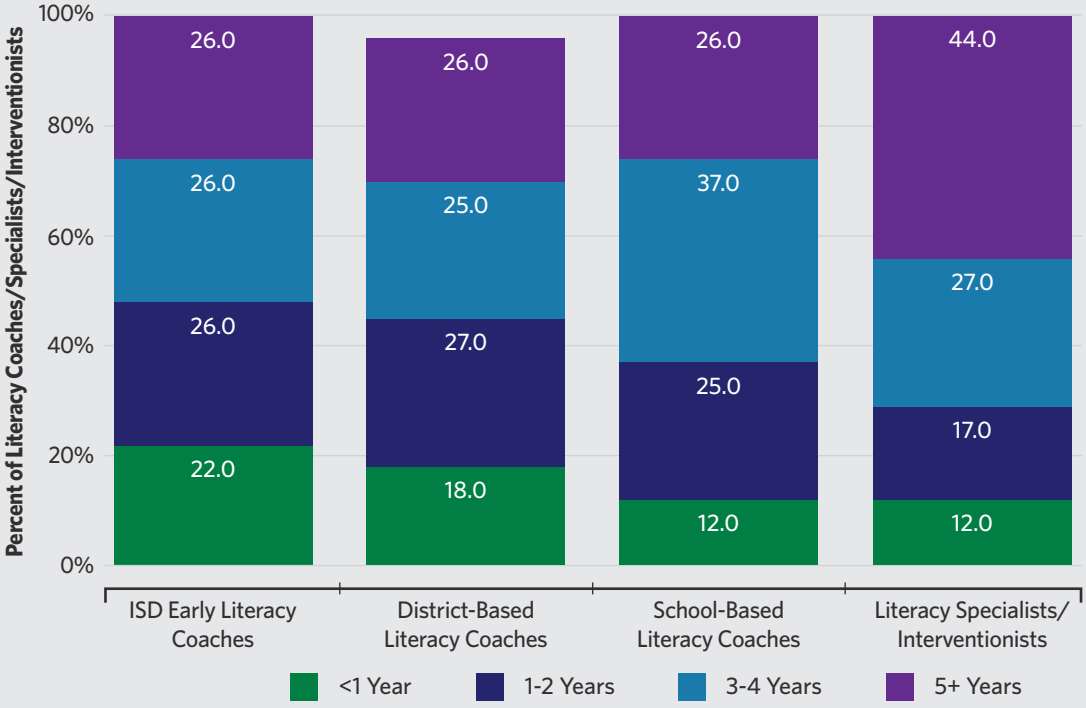
ISD Early Literacy Coaches Are New to Michigan's Literacy Coaching Landscape

We asked all types of literacy coaches how long they have worked in their current position: less than a year, one to two years, three to four years, or five or more years. As shown in Figure A.1, 48% of ISD Early Literacy Coaches and 45% of district-based literacy coaches had two or fewer years of experience in their current position, compared to 37% of school-based coaches and just 29% of literacy specialists/interventionists. Literacy specialists/interventionists reported having the longest tenure in their current position and were most likely to have worked in their current position for five years or longer.

These disparities are likely in part due to the relative recency of the Early Literacy Coaching Grant (implemented in 2015-16) that funds ISD Early Literacy Coaches and the Read by Grade Three Law (passed in 2016). Moreover, the legislature increased funding for ISD Early Literacy Coaches in 2019-20, more than quadrupling the amount allocated for these staff. We therefore would expect individuals to be serving in these positions for less

than six years (i.e., after 2015-16 when the funding for their position began) and to have more of them hired relatively recently. Meanwhile, school- and district-based coaches and literacy specialists/interventionists have been an integral part of school systems for much longer—though some of these individuals may have transitioned into ISD Early Literacy Coaching roles after those positions were established.

FIGURE A.1. Experience in Current Coaching Position



Note: Coaches were asked, "Including this year, for how many years have you been [an ISD Early Literacy Coach, a district-based literacy coach, a school-based literacy coach, a literacy specialist/interventionist]?" Response options included, "Less than 1 year," "1-2 years," "3-4 years," and "5 years or more." Bars do not total to 100% because of survey non-response to individual items; 1.4% of ISD Early Literacy Coaches, 3.9% of district-based literacy coaches, 1.4% of school-based literacy coaches, and 0% of literacy specialists/interventionists did not respond to this question. Source: EPIC survey of educators about the Read by Grade Three Law.

Literacy Coaches Average More Than Two Decades of Experience in Education, but Different Types of Coaches Specialized in Different Roles

We also asked literacy coaches about their experience in various roles prior to their current positions, as the Read by Grade Three Law requires ISD Early Literacy Coaches to have experience as a classroom teacher. Table A.1 shows that, on average, literacy coaches of all types are quite experienced, with between 20 and 25 years of experience in the field of education. However, previous experiences differed by coach type. ISD Early Literacy Coaches and district-based literacy coaches both reported about five years of experience as a coach (including over two years as a literacy coach) and nearly 13 years of classroom

experience, mostly at the lower elementary (i.e., K-3) level. ISD Early Literacy Coaches had greater leadership experience in other administrative and instructional leadership roles. This leadership experience may be especially important in their position as they are expected to provide literacy supports to educators across all the schools and districts within their ISD.

School-based literacy coaches have slightly less coaching experience, but more experience as a classroom teacher, particularly at the lower elementary level. Meanwhile, literacy specialists/interventionists had less experience overall and as a classroom teacher, but more experience as a literacy specialist/interventionist. This suggests that they likely spend a few years as a classroom teacher before specializing in their role as a literacy specialist/interventionist.

TABLE A.1. Years of Prior Experience in Various Roles

	ISD Early Literacy Coaches	District-Based Literacy Coaches	School-Based Literacy Coaches	Literacy Specialists/ Interventionists
Literacy specialist/interventionist	2.8	2.3	3.1	5.1
Coaching				
Instructional coach	2.3	2.8	2.2	1.4
Literacy coach	2.4	2.3	2.0	1.9
Total coaching experience	**4.7**	**5.1**	**4.2**	**3.3**
Teaching				
Lower elementary (grades K-3) classroom teacher	8.3	7.6	9.8	5.9
Upper elementary (grades 4-5) classroom teacher	2.8	3.0	2.7	2.7
Middle school (grades 6-8) classroom teacher	1.4	1.6	1.6	1.5
High school (grades 9-12) classroom teacher	0.2	0.6	0.2	0.2
Total teaching experience	**12.7**	**12.8**	**14.3**	**10.3**
Leadership				
In other administrative roles	1.3	0.6	0.6	0.2
In other instructional leadership roles	3.0	2.4	2.2	1.4
Total leadership experience	**4.3**	**3.0**	**2.8**	**1.6**
Total	**24.5**	**23.2**	**24.4**	**20.3**

Note: Coaches were asked, "We want to learn more about your experience prior to your current position. For how many years have you worked in each of the following settings? Please fill in numbers below for each category. If 'none' for any of the categories, please enter a zero (0)." Source: EPIC survey of educators about the Read by Grade Three Law.

ISD Early Literacy Coaches Are More Likely to Report Having Teaching and Literacy Credentials Than Other Types of Coaches

The Read by Grade Three Law requires ISD Early Literacy Coaches to have a minimum of a bachelor's degree and advanced coursework in reading or to have completed professional development in evidence-based literacy instructional strategies. This is intended to ensure that ISD Early Literacy Coaches are prepared to assist teachers with their literacy practice. Other types of literacy coaches are not subject to these same requirements because their positions are not regulated by the Read by Grade Three Law. Instead, school- and district-based literacy coaches and literacy specialists/interventionists are subject to the requirements dictated by the school or district in which they work. These requirements may or may not overlap with the Law's requirements for ISD Early Literacy Coaches.

On average, literacy coaches of all types are quite experienced, with between 20 and 25 years of experience in the field of education.

Table A.2 reviews the proportion of each type of literacy coach that reported having various credentials. We see that ISD Early Literacy Coaches were more likely than other types of literacy coaches to report having teaching and literacy credentials. For instance, ISD Early Literacy Coaches were more likely to report having attended a university-based undergraduate and/or graduate teacher preparation program. In their undergraduate programs, 57% of ISD Early Literacy Coaches reported having majored in elementary education with a literacy focus, which is 10-22 percentage points more than other kinds of literacy coaches in our survey sample. That ISD Early Literacy Coaches are likely to have a literacy-focused major is important given that their role is to support K-3 teachers' literacy instruction. Approximately a third of all types of literacy coaches reported majoring in elementary education with another (non-literacy) focus.

Nearly all surveyed literacy coaches—of all types—reported completing some type of post-BA university coursework. As shown in the bottom panel of Table A.2, ISD Early Literacy Coaches most often reported completing coursework in language and literacy (44%), as did literacy specialists/interventionists (42%). On the other hand, school- and district-based literacy coaches were most likely to report completing coursework in curriculum and teaching/curriculum and instruction (39% and 31%, respectively). This suggests that ISD Early Literacy Coaches and literacy specialists/interventionists may be specializing more in literacy than school- or district-based coaches, who focus more broadly on curriculum. This may be because ISD Early Literacy Coaches' and literacy specialists/interventionists' positions by nature center around literacy, while school- and

district-based coaches may provide literacy coaching in addition to coaching in other content areas or general instructional coaching.

TABLE A.2. Literacy Coaches' Reported Credentials

	ISD Early Literacy Coaches	District-Based Literacy Coaches	School-Based Literacy Coaches	Literacy Specialists/ Interventionists
Teacher Preparation Program				
Undergraduate university-based program	67%	41%	45%	60%
University-based graduate program	79%	65%	65%	74%
Other post-graduate or alternative program	8%	7%	7%	9%
Did not attend a teacher preparation program	7%	9%	9%	8%
Undergraduate Major				
Elementary education—literacy focus	57%	35%	47%	40%
Secondary education—literacy focus	8%	13%	7%	11%
Elementary education—other focus	35%	33%	33%	35%
Secondary education—other focus	3%	1%	2%	5%
Non-education—literacy focus	2%	2%	7%	5%
Other	11%	16%	8%	17%
Graduate Degree/Post-BA Coursework				
Curriculum and teaching/ curriculum and instruction	24%	39%	31%	22%
Early childhood education	12%	6%	9%	9%
Educational technology	7%	6%	4%	6%
Educational psychology	1%	2%	2%	2%
Language and literacy	44%	28%	29%	42%
Other	26%	21%	21%	21%
No graduate degree or post-BA coursework	3%	0%	3%	4%

Note: This table combines results from multiple survey questions. Coaches were asked, "What type(s) of teacher preparation program(s) did you attend? Please mark all that apply;" "Which of the following fields best describes the major(s) and minor(s) of your bachelor's degree? Please mark all that apply;" and, "If you completed any coursework after your BA, which of the following best describes the focus of your graduate degree or post-BA university coursework? Please mark all that apply." Percentages in the "Undergraduate Major" panel may be higher than the percentage of coaches who reported completing an undergraduate university-based program in the "Teacher Preparation Panel" because the latter only asks about the coaches' teacher preparation program, not whether they completed any undergraduate degree. Source: EPIC survey of educators about the Read by Grade Three Law.

FIGURE A.2. Supports Literacy Coaches Reported Receiving

Note: Coaches were asked, "Please indicate whether you have received each of the following types of support this school year, and whether you would like (more of) that type of support in the future. Please mark all that apply."
Source: EPIC survey of educators about the Read by Grade Three Law.

ISD Early Literacy Coaches Reported Receiving More Training Than Other Types of Literacy Coaches

In addition to having more teaching and literacy credentials than other types of coaches, ISD Early Literacy Coaches also reported receiving more literacy and coaching supports. This is illustrated in Figure A.2, which shows that ISD Early Literacy Coaches were more likely to report receiving ongoing support from the Early Literacy Coaches Network; resources about effective literacy instruction and coaching; workshops on the Essential Instructional Practices in Literacy and the Essential Coaching Practices for Elementary Literacy; opportunities to collaborate with other coaches; and access to university researchers who are experts in literacy. The only areas in which other types of coaches were more likely to indicate receiving support were professional development on teaching literacy to students with IEPs or 504 Plans and English learners. Given that the Read by Grade Three Law is intended to focus on general education (i.e., Tier I instruction), we would not expect ISD Early Literacy Coaches to receive support in these areas.

In addition to having more teaching and literacy credentials than other types of coaches, ISD Early Literacy Coaches also reported receiving more literacy and coaching supports.

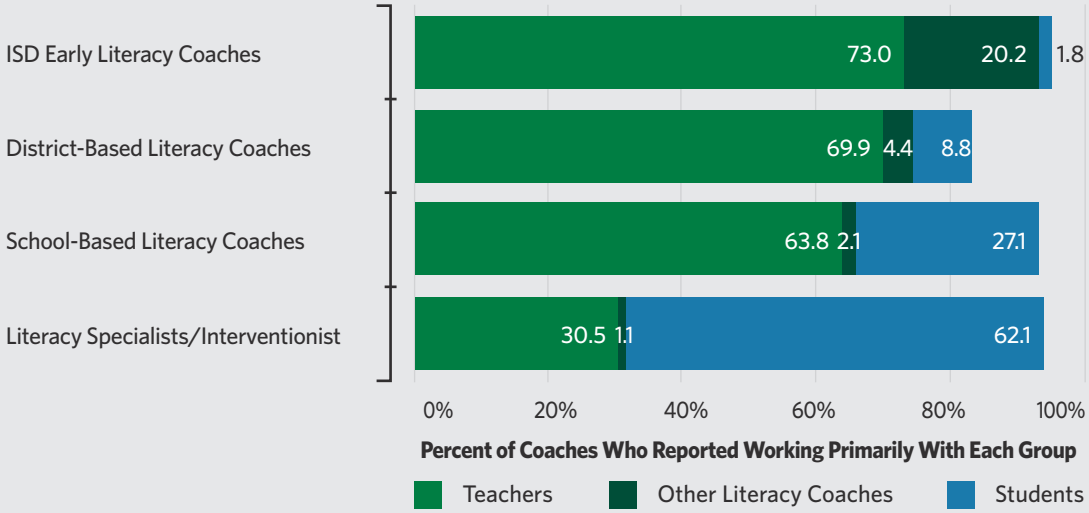
LITERACY COACHES' REPORTED ACTIVITIES

There Are Clear Delineations in the Job Expectations and Activities of Different Types of Literacy Coaches

ISD Early Literacy Coaches worked with teachers and other literacy coaches more often than did other literacy coaching providers.

Figure A.3 shows how the different job expectations for groups of coaches and interventionists plays out in the populations with whom they spend their time. ISD Early Literacy Coaches, who, according to the Read by Grade Three Law, are intended to provide literacy supports to other literacy coaches (i.e., in a "train the trainer" or "coach the coach" model) and to individual teachers, were the most likely to report working with teachers and other literacy coaches. They very infrequently reported working primarily with students. District-based coaches were the next most likely to work with other coaches and teachers, followed by school-based coaches. In contrast, nearly two-thirds of literacy specialists/interventionists reported working primarily with students and rarely working with other coaches, as befits their position expectations.

FIGURE A.3. Populations Literacy Coaches Work With by Group



Note: Coaches were asked, "In my role as [an ISD Early Literacy Coach, a district-based literacy coach, a school-based literacy coach, a literacy specialist/interventionist], I primarily work with _____. If you work with more than one of these groups, please select the group with which you spend the most time." Bars do not total to 100% because of survey non-response to individual items; 1.8% of ISD Early Literacy Coaches, 7.4% of district-based literacy coaches, 4.3% of school-based literacy coaches, and 2.1% of literacy specialists/interventionists did not respond to this question. Source: EPIC survey of educators about the Read by Grade Three Law.

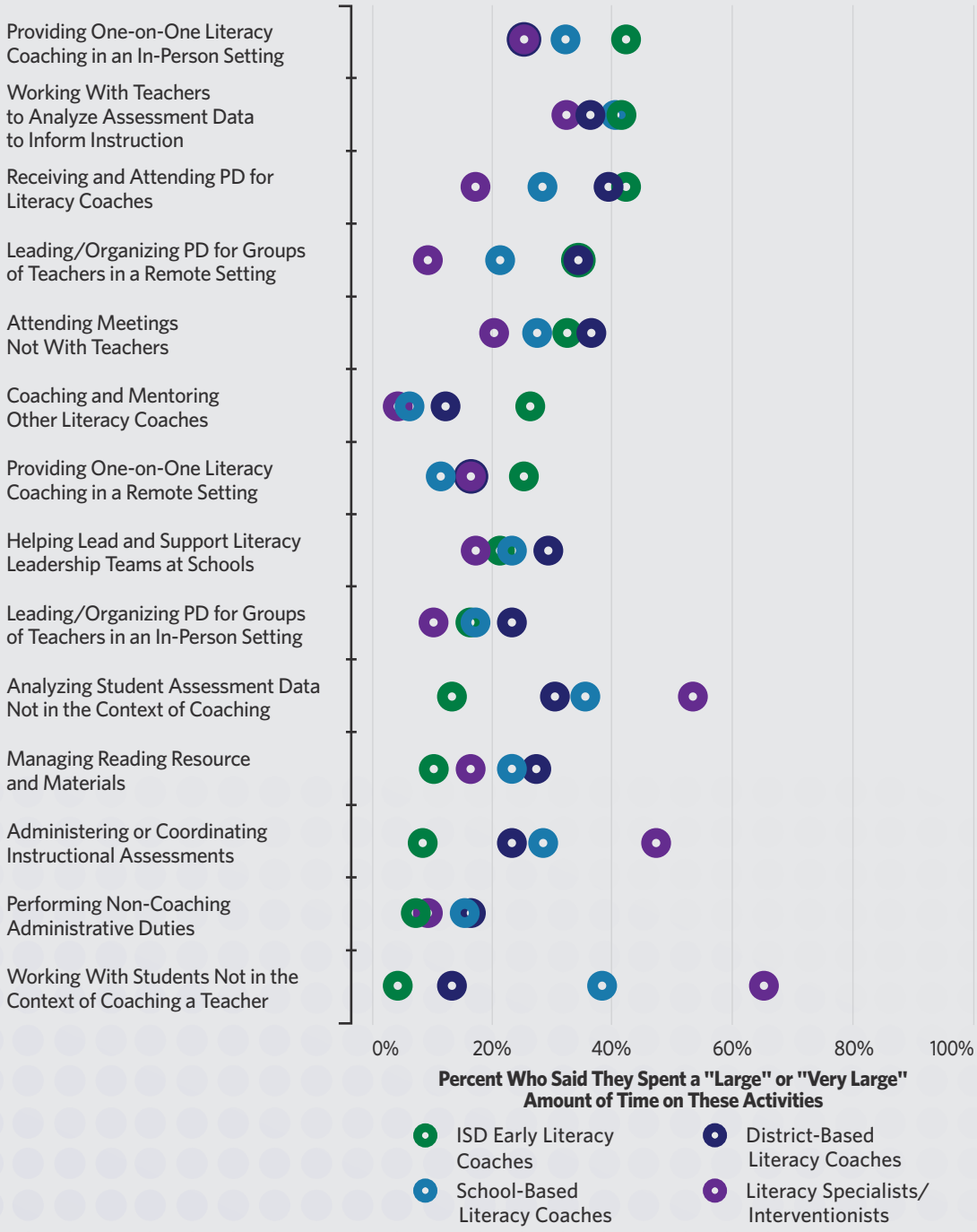
ISD Early Literacy Coaches perform the activities the Law requires, but have limited time to spend on them.

In their work with teachers and other literacy coaches, the Read by Grade Three Law requires ISD Early Literacy Coaches to engage in specific activities. As laid out in the Law, they are required to:

- support and provide initial and ongoing professional development to teachers,
- model effective instructional strategies for teachers,
- facilitate study groups,
- train teachers in data analysis,
- coach and mentor colleagues,
- work with teachers to implement evidence-based reading programs,
- train teachers to diagnose and address "reading deficiencies,"
- work with teachers in applying evidence-based reading strategies in other content areas,
- help to increase instructional density (e.g., layering on additional literacy supports, integrating literacy throughout other content areas),
- lead and support school reading leadership teams, and
- continue to increase their own knowledge in best practices in reading instruction and intervention.

Fewer than half of ISD Early Literacy Coaches reported spending a large or very large amount of time on any of these prescribed activities (see Figure A.4). This may be because with so many activities, they are unable to spend a large amount of time on any one of them. Over 40% of ISD Early Literacy Coaches reported spending substantial amounts of time in one-on-one coaching, working directly with teachers, and participating in professional development for coaches.

FIGURE A.4. Literacy Coaches' Activities in a Typical Week



Note: Coaches were asked, "How much time do you spend on the following activities during a typical week in your role as [an ISD Early Literacy Coach, a district-based literacy coach, a school-based literacy coach, a literacy specialist/interventionist]? Please mark one option for each row." Source: EPIC survey of educators about the Read by Grade Three Law.

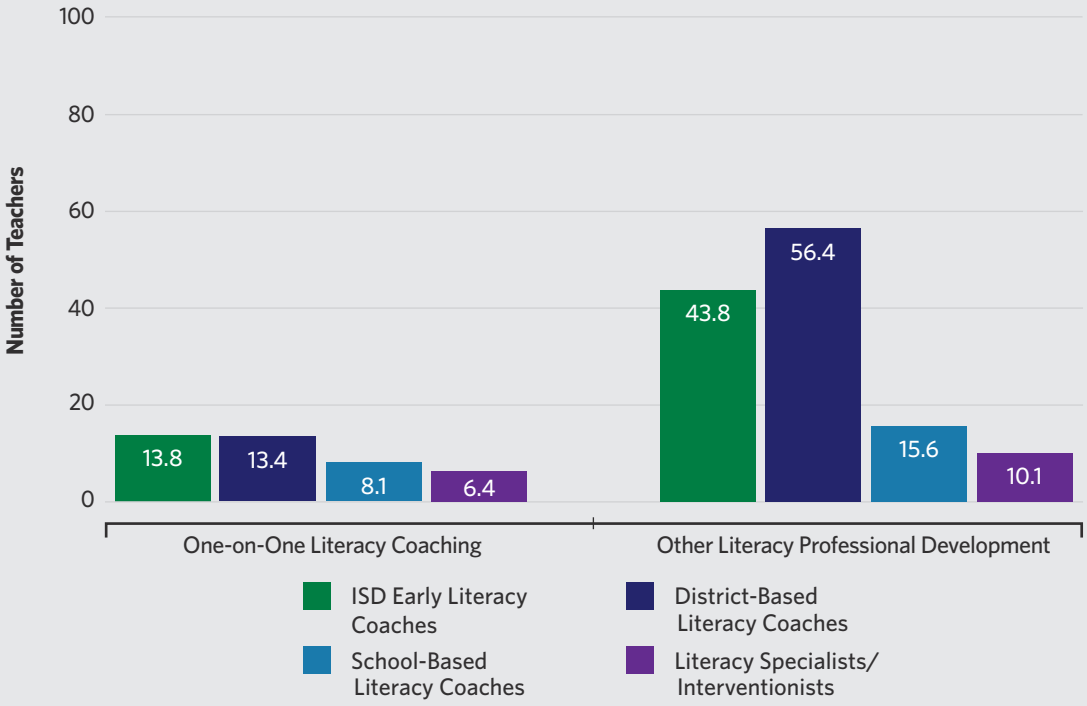
ISD Early Literacy Coaches were unlikely to spend time on the activities the Read by Grade Three Law expressly prohibits, such as performing administrative duties or working directly with students not in the context of coaching a teacher. These are activities on which school- and district-based literacy coaches and literacy specialists/interventionists were much more likely to report spending their time. This suggests that ISD Early Literacy Coaches, while they may not report spending a great deal of time on the activities outlined for them in the Law, are less likely than other types of coaches to deviate from these activities.

ISD Early Literacy Coaches Are Expected to Serve More Educators, but They Aren't Always Able To

ISD Early Literacy Coaches are expected to provide one-on-one literacy coaching and other literacy professional development to educators across all the schools and districts in their ISD. Meanwhile, school- and district-based literacy coaches are expected to provide these supports to educators only in their school and district, respectively. Literacy specialists/interventionists may work across multiple schools but are similarly expected to serve fewer educators than ISD Early Literacy Coaches.

Figure A.5 shows the average number of teachers to whom different types of literacy coaches reported providing one-on-one literacy coaching and other literacy professional development. ISD Early Literacy Coaches and district-based literacy coaches reported providing both supports to more teachers than did school-based literacy coaches and literacy specialists/interventionists. However, all types of literacy coaches reported providing other literacy professional development to more teachers than they provided one-on-one literacy coaching. This is likely because other literacy professional development more often takes place in group settings. This allows coaches to reach a larger number of teachers than they can through one-on-one literacy coaching, which necessarily requires more time with individual teachers. Providing other literacy professional development to more teachers than they provide coaching may be due to resource constraints and efficiency (i.e., coaches can support more teachers in a shorter amount of time) or due to COVID-19-related difficulties working one-on-one with teachers. Nonetheless, this implies that fewer teachers are receiving one-on-one coaching, which research suggests is more effective for improving teacher practice than group professional development (e.g., Garet et al., 2001; Kraft et al., 2018; Neuman & Cunningham, 2009). See Section Three for a detailed discussion of how one-on-one literacy coaching and other literacy professional development were affected by the COVID-19 pandemic.

FIGURE A.5. Average Number of Teachers to Whom Literacy Coaches Reported Providing Literacy Professional Development

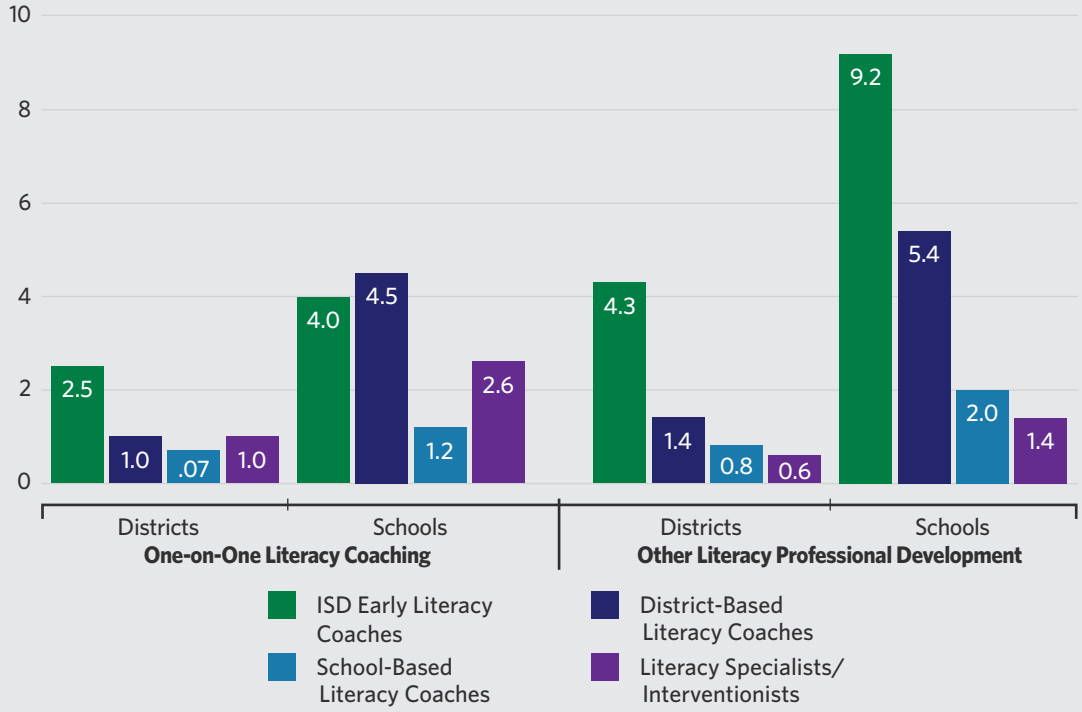


Note: Coaches were asked, "Since the beginning of the school year, to how many teachers and other literacy coaches have you provided each of the following services? If you cannot remember the exact numbers, please use your best estimate. If 'none' for any category, please enter a zero (0)." Source: EPIC survey of educators about the Read by Grade Three Law.

Figure A.6 shows the average number of schools and districts to which different types of literacy coaches reported providing one-on-one literacy coaching and other literacy professional development. Because ISD Early Literacy Coaches are expected to provide supports across all buildings within their ISD, we expect them to report providing one-on-one literacy coaching and other literacy professional development in more districts and schools than other coaches. This was true for the most part. The exception was that district-based literacy coaches provided one-on-one literacy coaching in more schools than ISD Early Literacy Coaches.

Together, Figure A.5 and Figure A.6 suggest that ISD Early Literacy Coaches may be overextended. They are providing one-on-one literacy coaching in the most districts—and other literacy professional development in the most schools and districts—yet district-based literacy coaches are providing these literacy supports to more teachers. ISD Early Literacy Coaches are expected to support such a large area—but provide literacy professional development to fewer teachers—suggesting that they are spread too thin or that traveling between buildings may be reducing the overall number of teachers they are able to support.

FIGURE A.6. Average Number of Schools and Districts to Which Literacy Coaches Reported Providing Literacy Professional Development



Note: This figure combines results from multiple questions. Coaches were asked, "Since the beginning of the school year, to how many schools and districts have you provided one-on-one literacy coaching for teachers? If you do not know the exact numbers, please use your best estimate. If 'none' for any category, please enter a zero (0)." Coaches were also asked, "Since the beginning of the school year, to how many schools and districts have you provided professional development (not including one-on-one literacy coaching) for teachers? If you do not know the exact numbers, please use your best estimate. If 'none' for any category, please enter a zero (0)." Source: EPIC survey of educators about the Read by Grade Three Law.

The Professional Development Literacy Coaches Provide to Teachers Somewhat Aligns With the Types and Areas of Instruction the Read by Grade Three Law Requires

We also asked literacy coaches about the different types and areas of instruction on which they provide one-on-one literacy coaching and other literacy professional development to teachers. **Types of instruction** reflect the pedagogical strategies and activities in which educators engage in their literacy instruction, whereas **areas of instruction** reflect the content of that instruction. The Read by Grade Three Law requires ISD Early Literacy Coaches to support and provide initial and ongoing professional development to teachers in each of the following types of instruction:

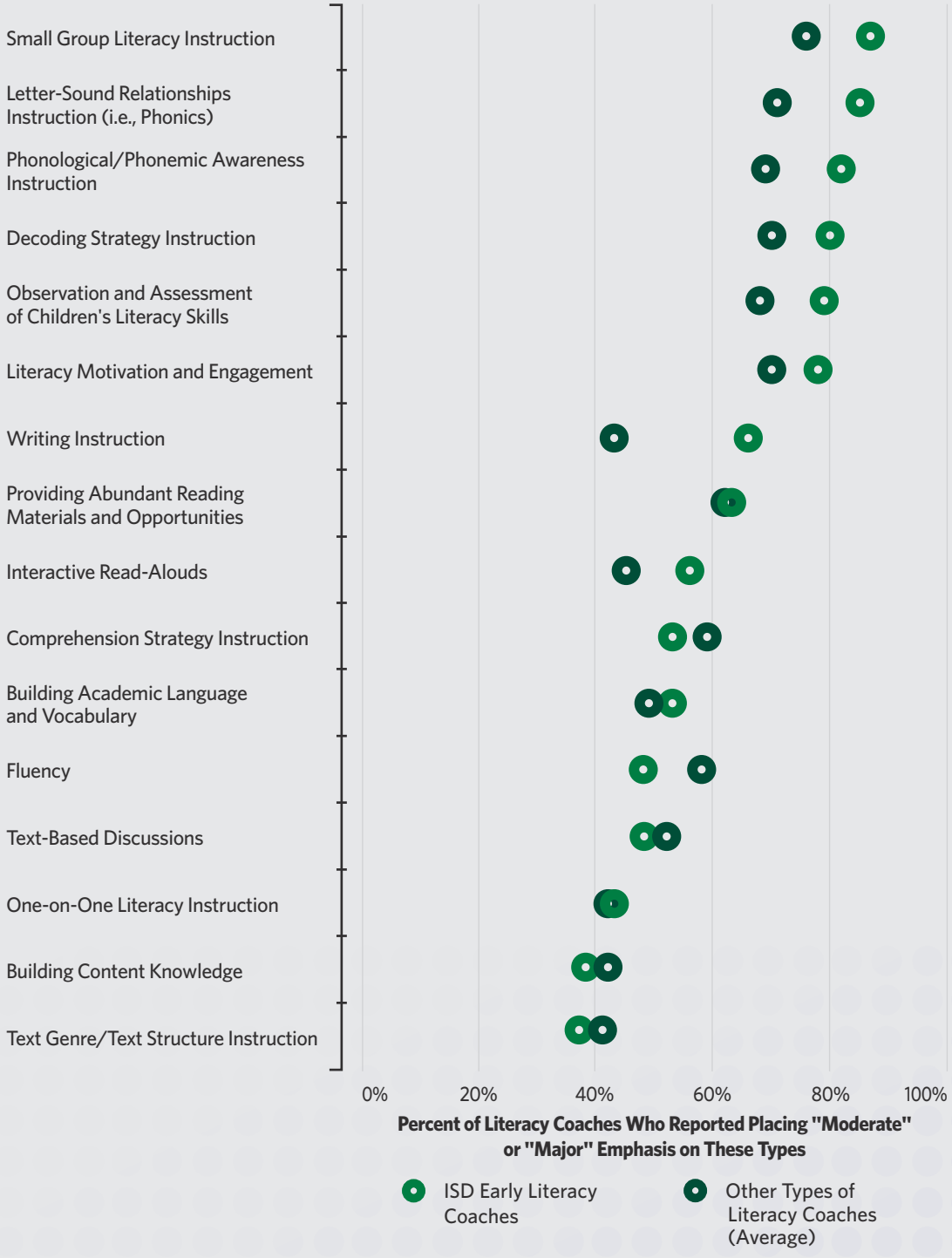
- administering and analyzing assessments,
- providing differentiated instruction and intervention,
- using progress monitoring, and
- identifying and addressing "reading deficiencies."

The Law also specifies that ISD Early Literacy Coaches are to provide professional development in the "five major reading components:" phonemic awareness, phonics, fluency, vocabulary, and comprehension. These reflect different areas of instruction.

FIGURE A.7. Types of Instruction Coaches Reported Emphasizing During One-on-One Literacy Coaching

Note: Coaches were asked, "Considering all the one-on-one literacy coaching sessions you have done with teachers this school year, please indicate how much emphasis you have placed on supporting the following areas of instruction. Please mark one option for each row."

FIGURE A.8. Instructional Content Coaches Reported Emphasizing During One-on-One Literacy Coaching



Note: Coaches were asked, "Considering all the one-on-one literacy coaching sessions you have conducted with teachers this school year, how much emphasis have you placed on supporting the following types of instruction? Please mark one option for each row." Source: EPIC survey of educators about the Read by Grade Three Law.

Figure A.7 and Figure A.8 show the proportions of literacy coaches that reported emphasizing various types and areas of instruction in the one-on-one coaching they provided to teachers. These figures make clear that ISD Early Literacy Coaches focused most on the types of instruction required by the Read by Grade Three Law. Other types of literacy coaches reported similar patterns, though they emphasized the types and areas of instruction outlined in the Law to a lesser extent than ISD Early Literacy Coaches. Further, as shown in Figure A.7, ISD Early Literacy Coaches were much more likely than other types of literacy coaches to report emphasizing the *Essential Instructional Practices in Early Literacy: Grades K-3*. This may be because ISD Early Literacy Coaches' training focuses on the Essentials, and they are specifically encouraged to emphasize these practices in their work with teachers.

Figure A.8 shows that literacy coaches most often reported emphasizing small group instruction, phonics, phonological awareness, and decoding strategies—which research suggests are effective strategies for improving students' literacy outcomes (e.g., Kamps et al., 2008; Michigan Association of Intermediate School Administrators General Education Leadership Network Early Literacy Task Force, 2016; National Reading Panel, 2000). At the same time, the areas of instruction literacy coaches most often reported emphasizing did not always overlap with the "five major reading components" outlined in the Read by Grade Three Law. While coaches often reported emphasizing phonemic awareness and phonics, lower proportions reported focusing on comprehension, vocabulary, and fluency. Nonetheless, ISD Early Literacy Coaches and other types of literacy coaches again exhibited similar patterns in the areas of instruction they reported emphasizing in their work with teachers, suggesting complementarity across different coaching types.

Although Figure A.7 and Figure A.8 show the types and areas of instruction literacy coaches reported emphasizing in their one-on-one literacy coaching, the patterns were similar to the other literacy professional development they reported providing.

SUMMARY

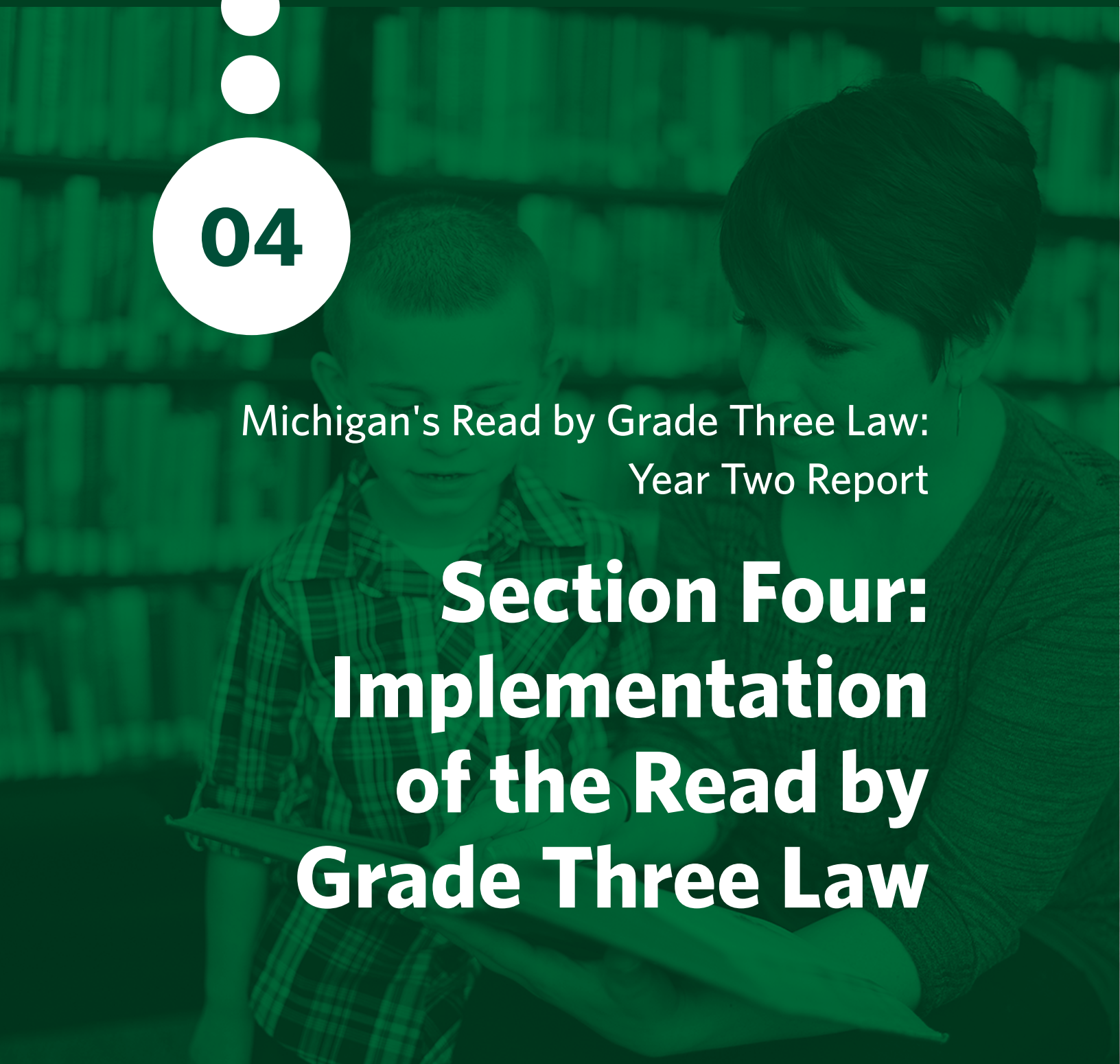
ISD Early Literacy Coaches are intended to provide unique services and coaching to other literacy coaches and teachers. Our survey data suggest that ISD Early Literacy Coaches' activities are distinct in ways that align with the specific expectations of their jobs. However, they also perform many of the same functions as other literacy coaches and interventionists.

Together, the survey data suggest that coaches—both ISD Early Literacy Coaches and other school- or district-based literacy coaches and interventionists—are spread quite thin. In particular, ISD Early Literacy Coaches are intended to provide a wide range of guidance and supports to teachers and other coaching professionals, and across a broad geography: an entire ISD. While ISD Early Literacy Coaches provided one-on-one literacy coaching and other literacy professional development on a range of types and areas of instruction, the limited number of them may mean that they are unable to provide as much one-to-one coaching as expected under the Law.

04

Michigan's Read by Grade Three Law:
Year Two Report

Section Four: Implementation of the Read by Grade Three Law



Section Four: Implementation of the Read by Grade Three Law

INTRODUCTION

As described in Section Three, the Read by Grade Three Law relies on many interventions to improve student literacy. These supports must be implemented by teachers, principals, district superintendents, and literacy coaches. This section examines the continued implementation of the Read by Grade Three Law and assesses the factors that shaped local responses to the Law. We focus on the implementation of all components of the Law except "reading deficiency" and retention identification; we discuss these outcomes in detail in Section Five.

Our implementation analysis primarily relies on the stakeholder interviews and educator surveys described in Section Two. These data enable us to understand stakeholders' and educators' perceptions of the implementation of the Read by Grade Three Law. We focus primarily on K-3 teachers' responses as they are the most affected by the Law and central to its implementation.

In what follows, we examine educators' perceptions of the Law's literacy supports. Then we assess educators' and literacy coaches' perceptions of literacy professional development. Finally, we describe educators' perceptions of resource constraints and their effects on the Law's implementation. Table 4.1 summarizes our main findings regarding educators' perceptions of each of these areas.

TABLE 4.1. Summary of Implementation Findings	
Literacy supports	Educators more often reported implementing the Law's interventions in 2020-21 than in 2019-20 and agreed that the interventions were useful. Leaders remain optimistic about IRIPs, but educators do not perceive them as useful.
Literacy professional development	The one-on-one literacy coaching and other literacy professional development teachers received focused on the topics emphasized in the Law, while they received limited support in teaching literacy to special populations. Access to ISD Early Literacy Coaches remains limited, but teachers continue to have positive perceptions of literacy professional development and it continues to serve the teachers who need it most.
Literacy resources	Consistent with 2019-20 findings, educators and stakeholders continue to believe that financial, human capital, and time constraints hinder their full implementation of the Law.

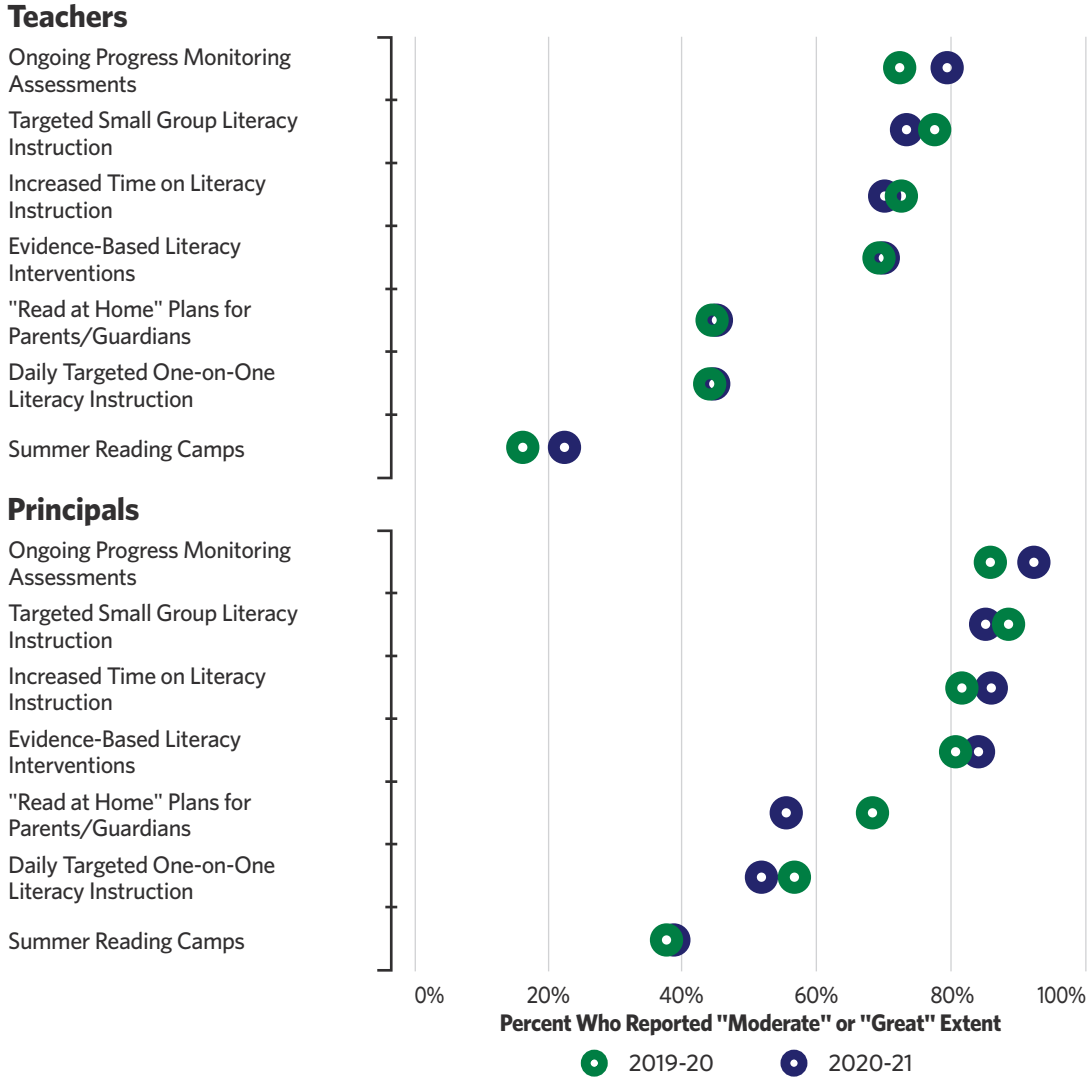
EDUCATORS PERCEIVE MANY, BUT NOT ALL, OF THE LAW'S LITERACY SUPPORTS TO BE EFFECTIVE

Teachers Reported Using and Finding Useful Many of the Law's Literacy Interventions

Figure 4.1 shows K-3 teachers and K-5 principals reported use of the literacy supports outlined in the Law for students identified with a "reading deficiency." The majority of principals and teachers reported using most of these supports (to a moderate or great extent) and at about the same rate as 2019-20. While summer camps remained the least frequently reported intervention, 22% of teachers said they used them to a moderate or great extent in the 2020-21 school year, a significant increase of 6 percentage points relative to 2019-20. This may have resulted from additional funding allocated to summer learning activities due to the pandemic.

As expected, based on the results discussed in Section Three, the proportion of teachers and principals reporting increased time on one-on-one literacy instruction and small group instruction for students identified with a "reading deficiency" fell from last year. Teachers and principals both reported increased use of ongoing progress monitoring assessments. In addition, there was a marked 13 percentage point decrease in the proportion of principals who reported using "Read at Home" plans in 2020-21. This decrease is consistent with our Section Three finding that educators found "Read at Home" plans challenging to administer in remote settings.

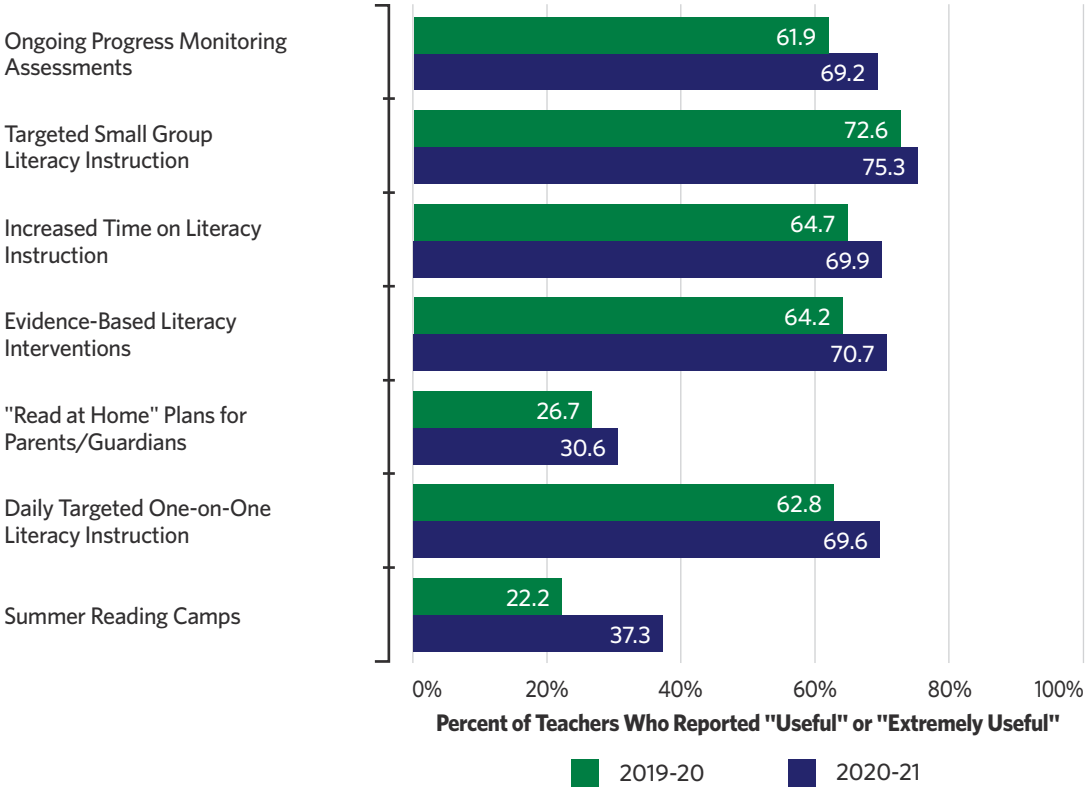
FIGURE 4.1. K-3 Teachers' and K-5 Principals' Reported Use of Literacy Supports for Students Who Are Identified as Having a "Reading Deficiency"



Note: This figure combines results from the 2019-20 survey and the 2020-21 survey. In both surveys, teachers and principals were asked, "To what extent are you using the following interventions when you work with students who are identified as having a 'reading deficiency?'" The available options varied slightly across the two different surveys, so only the answers that were directly comparable are represented here. On the 2020-21 survey, options included "Diagnostic and screening assessments" and "Supplemental evidence-based reading intervention." Source: EPIC survey of educators about the Read by Grade Three Law.

Teachers generally perceived these supports as helpful to improve students' literacy. Figure 4.2 shows that approximately 70% of K-3 teachers reported that most of the Law's required supports were useful in their teaching practice. In line with our findings in 2019-20, the largest proportion of teachers believed that targeted small group literacy instruction was useful. Notably, a greater proportion of teachers in the 2020-21 school year thought that each literacy support was useful relative to the previous year. The perceived usefulness of summer reading camps increased the most (15%), but still, less than 40% of K-3 teachers view them as useful overall. As in 2019-20, relatively few teachers perceive "Read at Home" plans as useful.

FIGURE 4.2. K-3 Teachers' Perceptions of the Usefulness of Read by Grade Three Law's Literacy Supports



Note: This figure combines results from the 2019-20 survey and the 2020-21 survey. In both years, teachers were asked, "If you use [the literacy support], how useful is it in improving students' literacy?" The available options varied slightly across the two surveys, so only the answers that were directly comparable are represented here. On the 2020-21 survey, options included "Diagnostic and screening assessments" and "Supplemental evidence based-reading intervention." Source: EPIC survey of educators about the Read by Grade Three Law.

School Leaders Remain Optimistic About IRIPs, but Educators Do Not Perceive Them as Useful

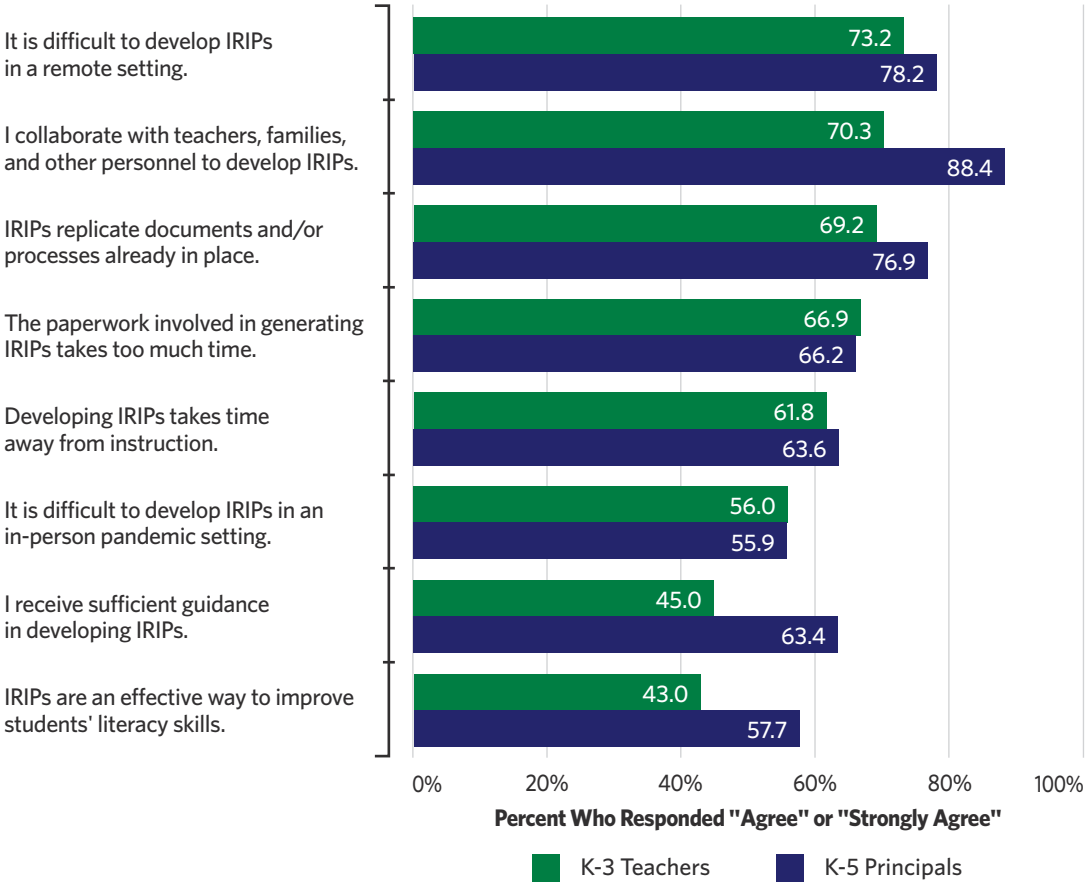
In 2019-20, state-level stakeholders and superintendents expressed optimism about IRIPs as a method of ensuring every student received individual attention and including parents and families in conversations about student literacy. State-level actors continued to believe IRIPs to be important tools during the pandemic; MDE issued a clarification that IRIPs must remain in place even as districts first went fully remote in the spring of 2020, and state-level stakeholders maintained that IRIPs are crucial literacy supports (Ford, 2021).

However, both in the 2019-20 and 2020-21 school years, teachers expressed skepticism about the utility of IRIPs. Figure 4.3 shows that, in the 2020-21 survey, less than half of teachers agreed or strongly agreed that IRIPs effectively improve literacy. Principals were slightly more likely to find value in IRIPs, although less than 60% of K-5 principals agreed or strongly agreed that they are effective. ISD Early Literacy Coaches' responses were in line with principals (not shown).

The reasons for this skepticism are apparent in the responses shown in Figure 4.3. More than half of surveyed teachers and principals indicated that it is difficult to develop IRIPs, especially in remote settings. Approximately two-thirds of surveyed educators also indicated that developing IRIPs takes too much time and duplicates pre-existing documents. One teacher commented:

> *While the Reading Law has shown a spotlight on the glaring issues in reading, I feel that completing the paperwork for the [IRIP] is an unnecessary step or needs to be streamlined. Each district has their own way to record it and some districts are quick checklists and other districts require documentation along the way. In order for the plans to be effective, we need to make the paperwork side quicker and focus on differentiating our learning.*

FIGURE 4.3. Educators' Perceptions of IRIPs



Note: Principals and teachers were both asked, "To what extent do you agree with the following statements about Individual Reading Improvement Plans (IRIPs)?" Source: EPIC survey of educators about the Read by Grade Three Law.

Together, these data suggest that while many of the interventions and supports outlined in the Law are both used and considered helpful by educators, there are areas in which these supports could be made more useful. In particular, educators believe that IRIPs can be streamlined and

perhaps standardized to enable educators to target instruction to individual students. In addition, educators continue to question the usefulness of "Read at Home" plans which are intended to engage families in at-home literacy instruction and learning.

EDUCATORS CONTINUE TO HAVE POSITIVE PERCEPTIONS OF LITERACY PROFESSIONAL DEVELOPMENT, BUT STILL WANT MORE SUPPORT

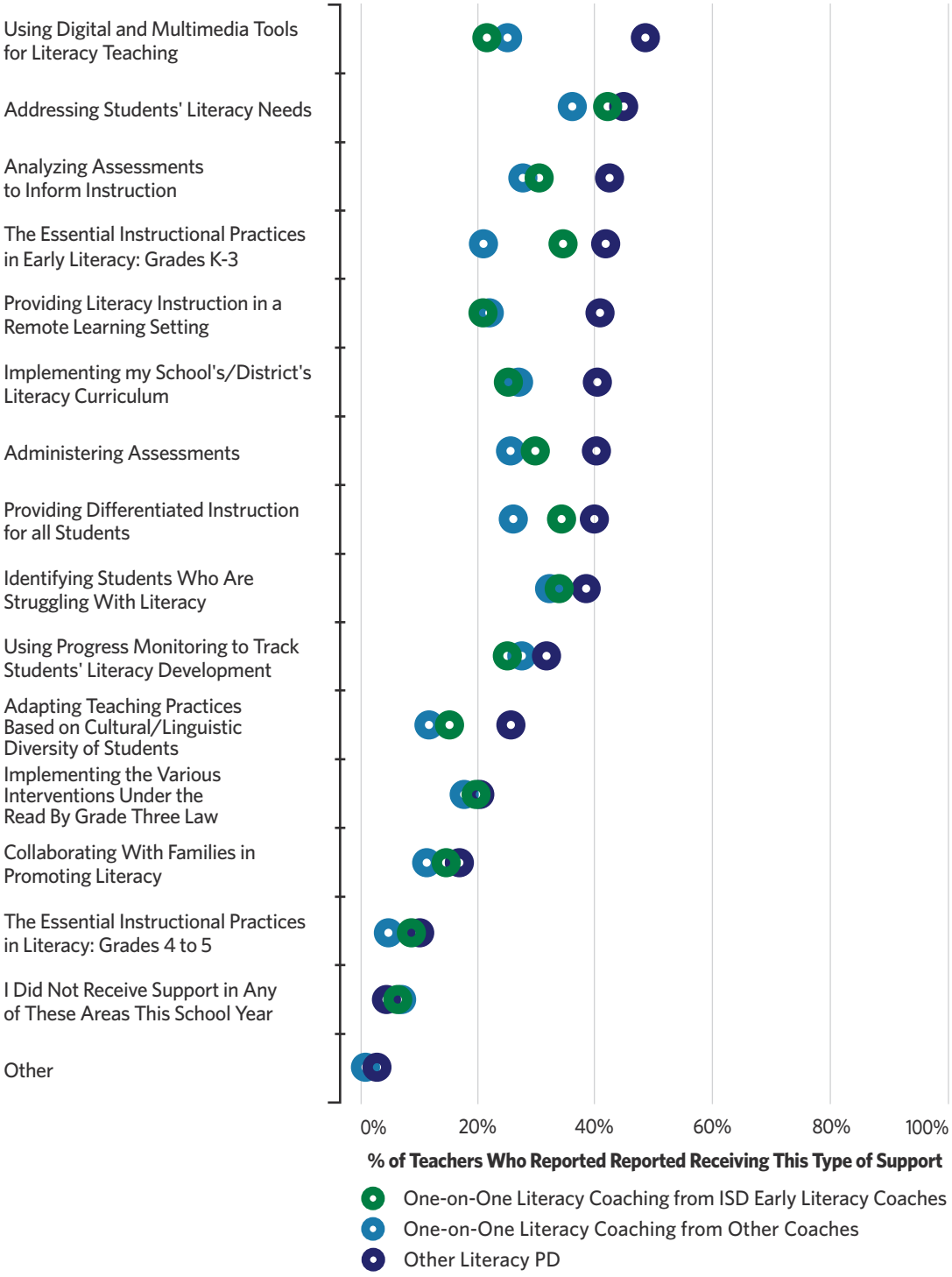
The Professional Development Teachers Received Focused on the Topics Emphasized in the Law

As discussed in detail in Section Three, educators reported receiving less literacy professional development on average in 2020-21 than they did in 2019-20—in part due to the COVID-19 pandemic. Nonetheless, Figure 4.4 shows that teachers still reported receiving support on a variety of topics. As in the 2019-20 school year, teachers reported that one-on-one literacy coaching focused on the topics emphasized in the Read by Grade Three Law, such as identifying and addressing students' literacy needs, using progress monitoring to track students' literacy development, analyzing assessments to inform instruction, and providing differentiated instruction for all students.

Teachers reported little difference in the topics covered in one-on-one coaching from ISD Early Literacy Coaches relative to other types of coaches, with two exceptions. First, the one-on-one coaching teachers received from ISD Early Literacy Coaches was much more likely to focus on the *Essential Instructional Practices in Early Literacy: Grades K-3.* This may be because ISD Early Literacy Coaches themselves receive training on the Essentials and are instructed on how to support teachers' implementation of the Essentials. Second, ISD Early Literacy Coaches were more likely than other literacy coaches to emphasize differentiating instruction.

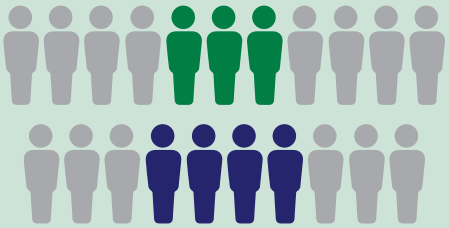
Teachers were more likely to report receiving professional development on all topics through other literacy professional development (e.g., large-group professional development, professional learning communities, online courses, conferences) as opposed to one-on-one literacy coaching. Some of the biggest differences in the topics covered in one-on-one coaching relative to other professional development included professional development surrounding literacy instruction in a remote environment, using digital multi-media tools for literacy teaching, and implementing teachers' school- or district-specific literacy curriculum. The first two areas may suggest that districts shifted their professional development to accommodate new instructional modalities during the COVID-19 pandemic. The third area is likely because coaches—in particular, ISD Early Literacy Coaches—are taught to help teachers engage in research-based instructional practices regardless of and independent of the district curriculum.

FIGURE 4.4. Topics on Which K-3 Teachers Reported Receiving Literacy Professional Development



Note: This figure combines results from multiple questions. Teachers who indicated that they received literacy professional development were asked, "Please tell us on which of the following topics you have received literacy professional development this school year and in what format. Please mark all that apply. If you did not receive professional development in a given area, please leave that row blank." Teachers who received one-on-one literacy coaching were asked, "Please tell us on which of the following topics you have received literacy professional development this school year and in what format. Please mark all that apply. If you did not receive professional development in a given area, please leave that row blank." Source: EPIC survey of educators about the Read by Grade Three Law.

K-3 TEACHERS REPORTED HAVING SPECIAL POPULATIONS OF STUDENTS IN THEIR CLASSROOMS

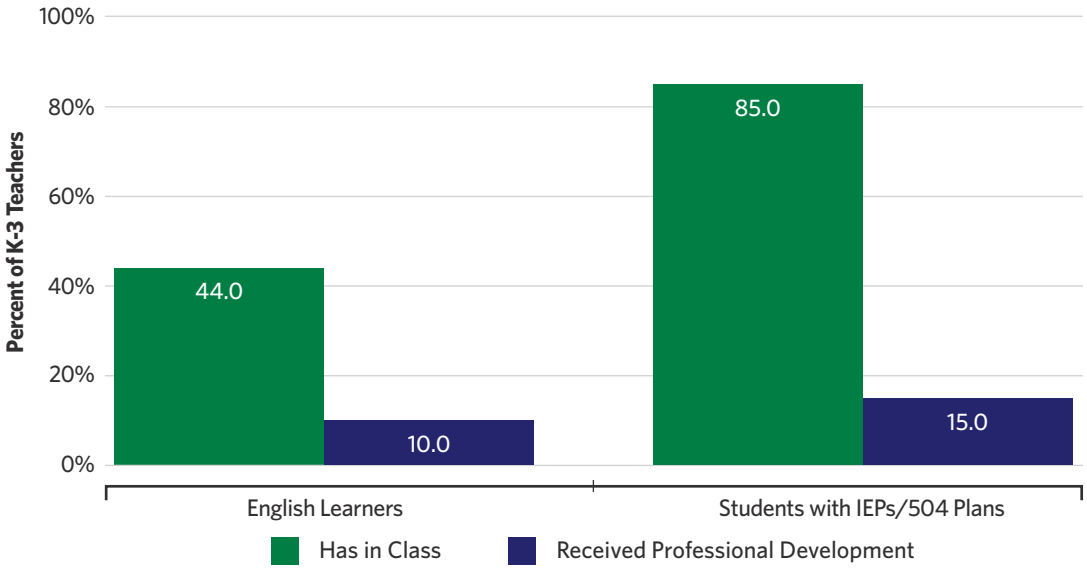


On average, K-3 teachers reported having **four students with IEPs or 504 Plans** in their classroom and **three English learners** in a class of (on average) 21 students.

Teachers Received Little Support to Help Them Teach Special Populations of Students

As noted in Section Three, the Read by Grade Three Law's interventions are aimed at Tier I general education instruction, and students with disabilities and English learners can receive good cause exemptions to waive them from retention under the Law. However, many K-3 teachers report having special populations of students in their classrooms. On average, K-3 teachers reported having four students with IEPs or 504 Plans in their classroom and three English learners in a class of (on average) 21 students. As shown in Figure 4.5, 85% percent of K-3 teachers reported having at least one student with an IEP or 504 Plan in their classroom, and 44% reported having at least one English learner. However, of the teachers who reported having special populations of students in their classroom, relatively few reported receiving any professional development (i.e., either one-on-one literacy coaching or other literacy professional development) supporting these students' literacy learning.

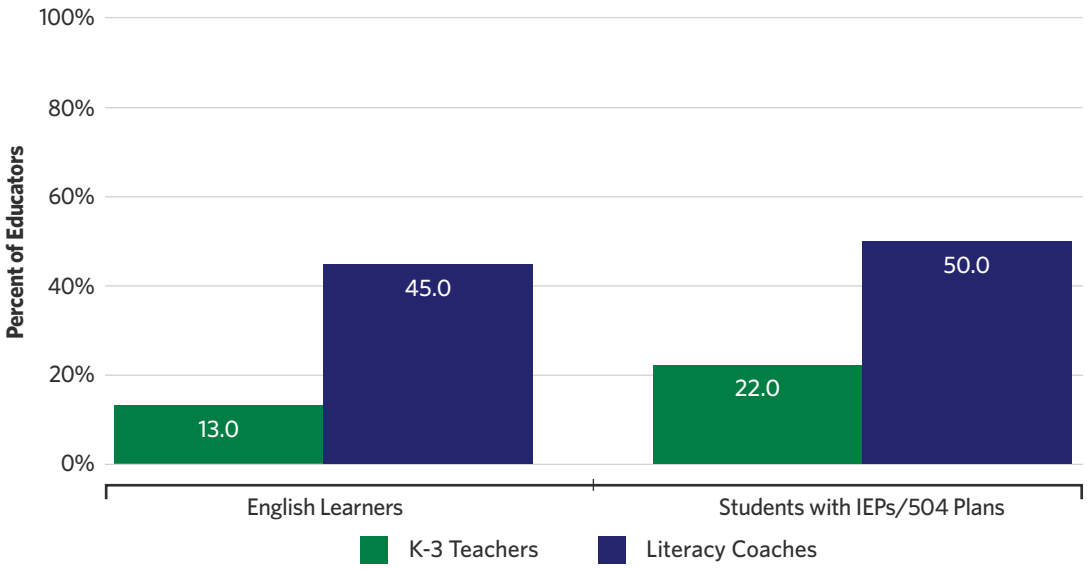
FIGURE 4.5. Percentage of K-3 Teachers Who Have English Learners and Students With IEPs/504 Plans in Their Class and Received Professional Development in Working With These Students



Note: This figure combines results from multiple survey questions. Teachers were asked, "Please answer the following questions about the students in your classroom. If you are not a classroom teacher, please answer about the students with whom you meet each week. If you teach multiple classrooms, please answer the question based on the classroom with which you spend most of your time. Please write in the number of students for each row. If you do not know the exact numbers, please use your best estimate. If you do not work with any students in a given category, please enter zero (0)." Teachers were also asked, "Have you received any one-on-one literacy coaching or other literacy professional development that included content about the following populations of students?" Source: EPIC survey of educators about the Read by Grade Three Law.

When coaches and teachers were asked about the areas in which they would like to receive additional professional development, all types of coaches expressed some desire for assistance with these special populations. Half of coaches said they would like additional training in supporting teachers with literacy instruction for students with disabilities, and 45% said the same for English learners. Far fewer teachers expressed a similar desire; only 22% and 13% of teachers said they wanted more support in literacy instruction for students with disabilities and English learners, respectively (see Figure 4.6).

FIGURE 4.6. Percentage of K-3 Teachers and Literacy Coaches Who Want Additional Support Working With Special Populations of Students



Note: This figure combines results from multiple survey questions. Teachers were asked, "We want to understand the areas in which you would like to receive additional literacy support (through either one-on-one literacy coaching or other literacy professional development). Please mark the top five areas in which you would like to receive additional literacy support." 12.3% of respondents did not respond to this question. Literacy coaches were asked, "Please indicate whether you have received each of the following types of support this school year, and whether you would like (more of) that type of support in the future. Please mark all that apply." 17.5% of respondents did not respond to this question. Source: EPIC survey of educators about the Read by Grade Three Law.

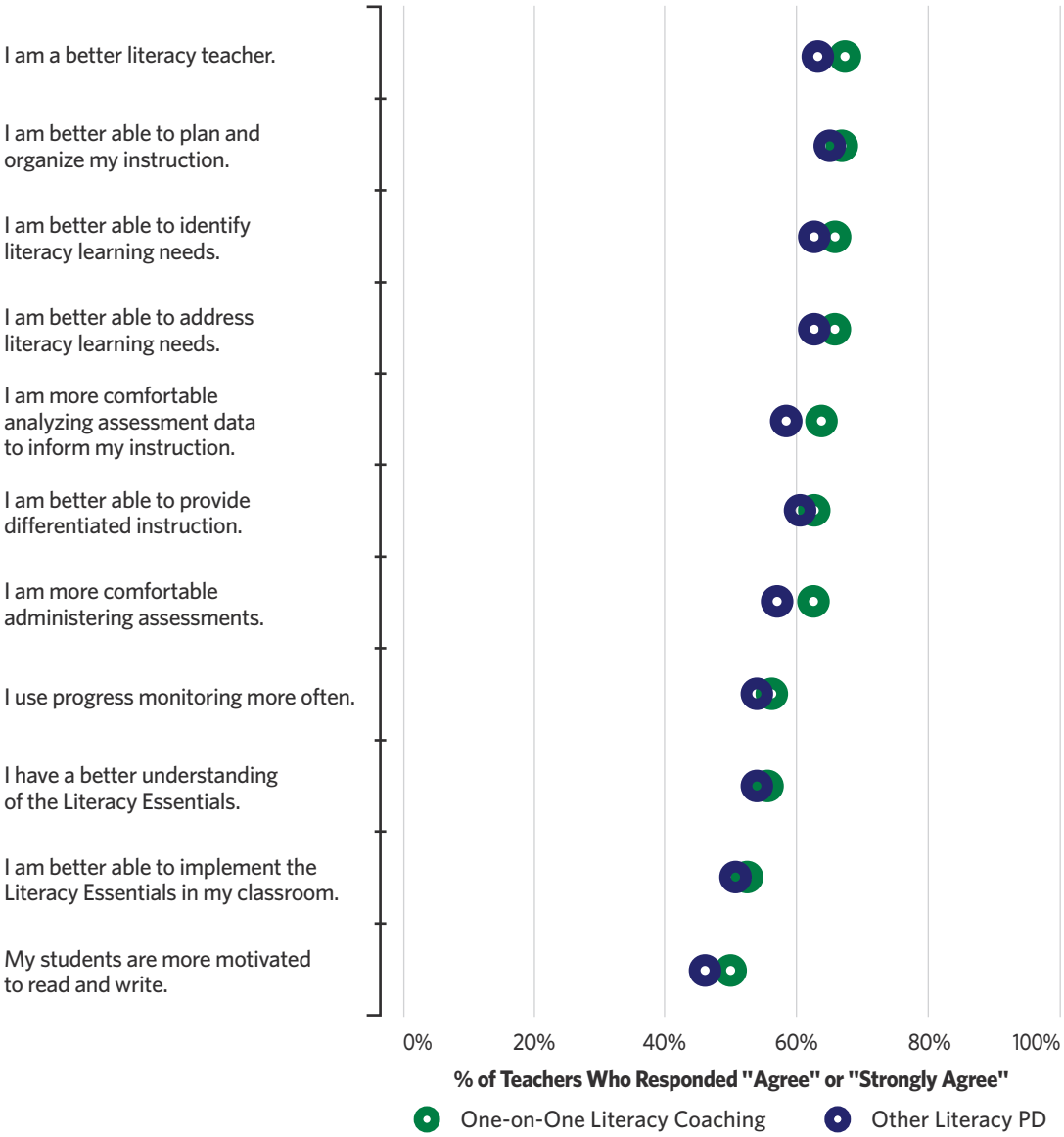
Nonetheless, the small percentage of teachers who did receive literacy support in working with special populations overwhelmingly agreed that it was useful. Eighty-nine percent of K-3 teachers who reported working with students with IEPs or 504 Plans and receiving support in doing so agreed or strongly agreed that the support enabled them to better meet the needs of these students in their classroom. Ninety percent of teachers working with English learners and receiving support also agreed that it was useful.

Most Teachers Have Positive Perceptions of Literacy Professional Development

Teachers generally believed that the literacy professional development they received improved their literacy instruction, regardless of the type of professional development. As shown in Figure 4.7, more than 60% of K-3 teachers who received one-on-one literacy coaching or other literacy

professional development agreed or strongly agreed that the support they received made them a better literacy teacher, better able to plan and organize their instruction, and better able to identify and address literacy learning needs.

FIGURE 4.7. K-3 Teachers' Perceptions of the Ways in Which Literacy Professional Development Affected Their Literacy Instruction



Note: This figure combines results from two questions. Teachers who received one-on-one literacy coaching were asked, "To what extent do you agree with the following statements about how the one-on-one literacy coaching (from any provider) you have received this school year has affected your literacy instruction? Please mark one option for each row." Teachers who received other literacy professional development were asked, "To what extent do you agree with the following statements about how the literacy professional development (NOT including one-on-one coaching) you received this school year has affected your literacy instruction? Please mark one option for each row."
Source: EPIC survey of educators about the Read by Grade Three Law.

Educators' open-ended survey responses largely reflected the survey results. The majority, but not all, of teachers expressed positive perceptions of literacy professional development. Some volunteered that these supports were the most valuable part of the Law. As one teacher shared:

> *I feel the most beneficial component of the Read by Grade 3 initiative is the emphasis placed on professional development regarding literacy instruction and the access teachers have to literacy coaches from the ISDs.*

Of the 218 educators (13% of respondents) who wrote specifically about one-on-one literacy coaching in their responses to the open-ended survey question, 18% said it was not helpful, while nearly double (32%) said it was. Most often, negative responses about literacy coaching reflected teachers' perceptions that coaches were insufficiently qualified or that students would be better served by coaches working in classrooms directly with students.

Of the 236 educators (15% of respondents) who wrote about other literacy professional development, 16% indicated that it was not helpful, and the same percentage said that it was. Teachers' negative responses often centered on the lack of engaging content or how time-consuming the professional development was, especially during a pandemic year.

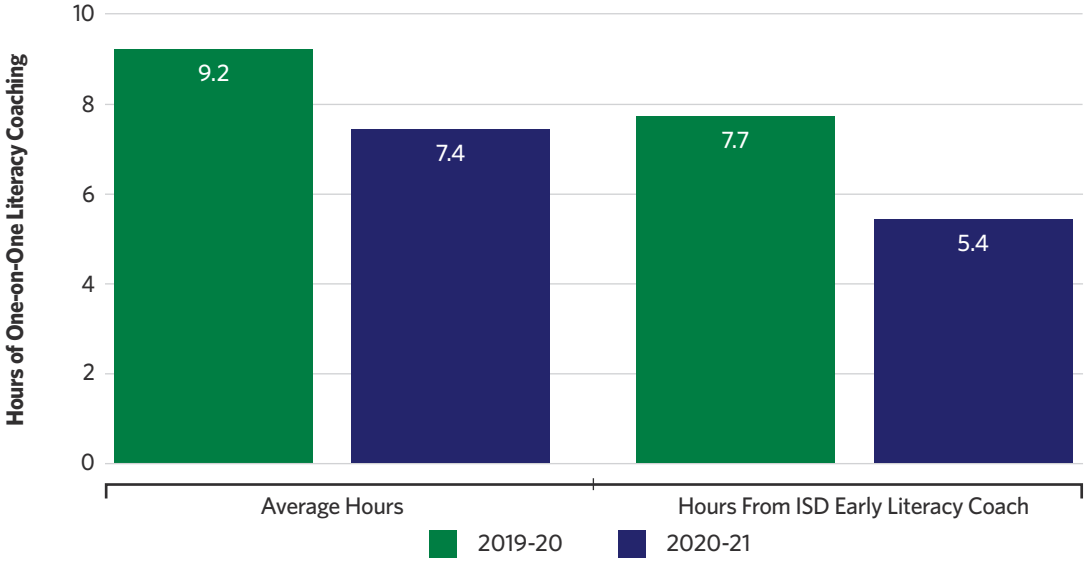
State-level stakeholders also continue to see the value in literacy professional development, particularly literacy coaching. Five of the six state-level stakeholders we interviewed this year discussed literacy coaching. Of those, four spoke positively about coaching. One external stakeholder shared, *"I also think instructional coaches for educators [are] good because not all of us are experts at teaching reading, but all of us are going to have to teach literacy."* A policymaker also stated, *"If you're going to give literacy coaches and funding where it's needed, I like all that. Let's continue all that."* At the same time, one policymaker expressed reservations about scaling up literacy coaching too quickly:

> *I would argue that we probably put in place too many literacy coaches. When you haven't had water, and you get water, you get rain, you want some rain. You don't want a deluge because then it simply ponds. I think that's what we got with respect to literacy coaches. We operated under the presumption that more is better.*

Access to ISD Early Literacy Coaches Remains Limited

While perceptions of literacy professional development—particularly one-on-one literacy coaching—are positive, access to coaching remains limited, especially when it comes to the ISD Early Literacy Coaches provided under the Read by Grade Three Law. Not only did teachers report receiving fewer hours of one-on-one literacy coaching in 2020-21 than they did in 2019-20 (as discussed in Section Three), but they also reported receiving far fewer hours from the ISD Early Literacy Coaches that the Law provides. As shown in Figure 4.8, K-3 teachers reported receiving an average of 7.7 hours of one-on-one literacy coaching from ISD Early Literacy Coaches in 2019-20, but they reported receiving only 5.4 hours in 2020-21.

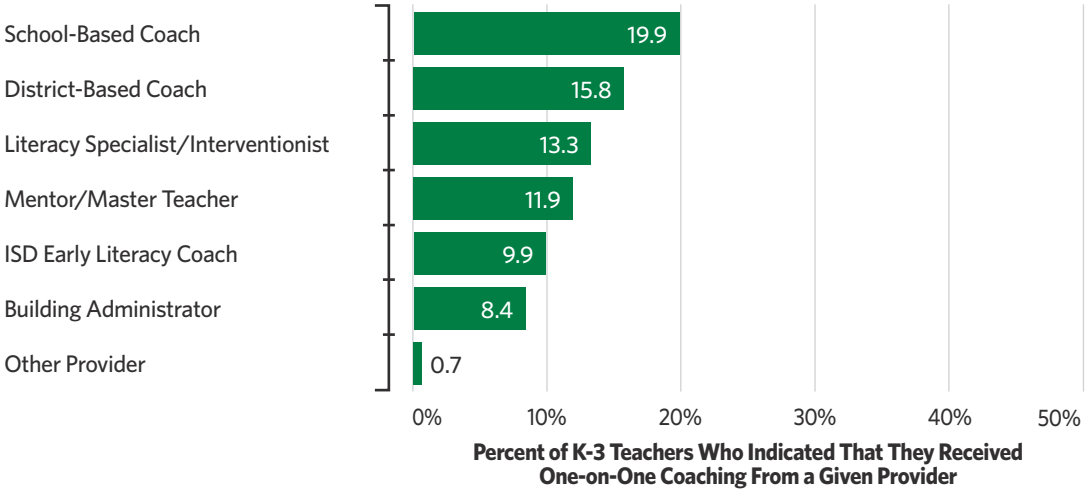
FIGURE 4.8. K-3 Teachers' Reported Hours of One-on-One Literacy Coaching



Note: This figure combines results from the 2019-20 and the 2020-21 surveys. In 2019-20, teachers who indicated that they received one-on-one literacy coaching were asked, "Since the beginning of the school year, approximately how many hours of one-on-one literacy coaching have you received? Please write in the number of hours. If you do not know the exact number of hours, please use your best estimate." If they provided a number greater than zero, they were asked, "In this last question, you indicated that you received one-on-one literacy coaching. Approximately how many of these hours were provided by the ISD Early Literacy Coach/Consultant? If you do not know the exact numbers, please use your best estimate." In 2020-21, teachers who indicated that they received one-on-one literacy coaching were asked, "Since the beginning of the school year, approximately how many hours of one-on-one literacy coaching have you received? Approximately how many of these hours were provided by the ISD Early Literacy Coach? Please round to the nearest half-hour interval. If you do not know the exact number, please use your best estimate." Source: EPIC survey of educators about the Read by Grade Three Law."

ISD Early Literacy Coaches were also among the least-reported coaching providers. Like last year, K-3 teachers were more likely to report receiving coaching from school- and district-based literacy coaches, literacy specialists/interventionists, and mentor/master teachers. This disparity is likely because there continue to be few ISD Early Literacy Coaches relative to the number of K-3 teachers (i.e., typically just one to two per ISD). For this reason, school and district administrators may be hiring additional literacy coaches and specialists to supplement ISD Early Literacy Coaches.

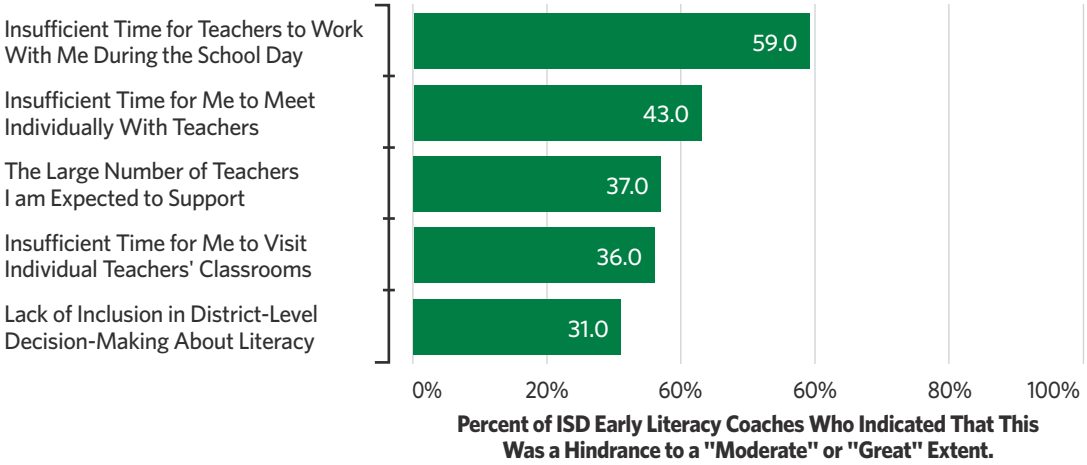
FIGURE 4.9. K-3 Teachers' Reported One-on-One Literacy Coaching Providers



Note: Teachers were asked, "Since the beginning of the school year, have you received one-on-one literacy coaching or other literacy professional development from any of the following providers? Please mark all that apply. If you did not receive literacy professional development from a specific kind of provider, please leave that row blank." Source: EPIC survey of educators about the Read by Grade Three Law.

The COVID-19 pandemic likely contributed to the limited access to ISD Early Literacy Coaches in 2020-21. Section Three discusses many of the challenges coaches experienced when administering one-on-one literacy coaching and other literacy professional development during the pandemic. However, there appear to be other, more structural hindrances to working as an ISD Early Literacy Coach unrelated to the pandemic. Figure 4.10 shows ISD Early Literacy Coaches' top five reported challenges (i.e., those for which the highest proportion indicated that it was a challenge to a moderate or great extent). ISD Early Literacy Coaches' responses suggested that they take on too much. Fifty-nine percent of ISD Early Literacy Coaches believe that there is insufficient time for teachers to work with them during the school day. Although no other challenge was reported by a majority of ISD Early Literacy Coaches, the next three greatest hindrances also had to do with insufficient time to work with teachers.

FIGURE 4.10. Top 5 Reported Hindrances to Working as an ISD Early Literacy Coach



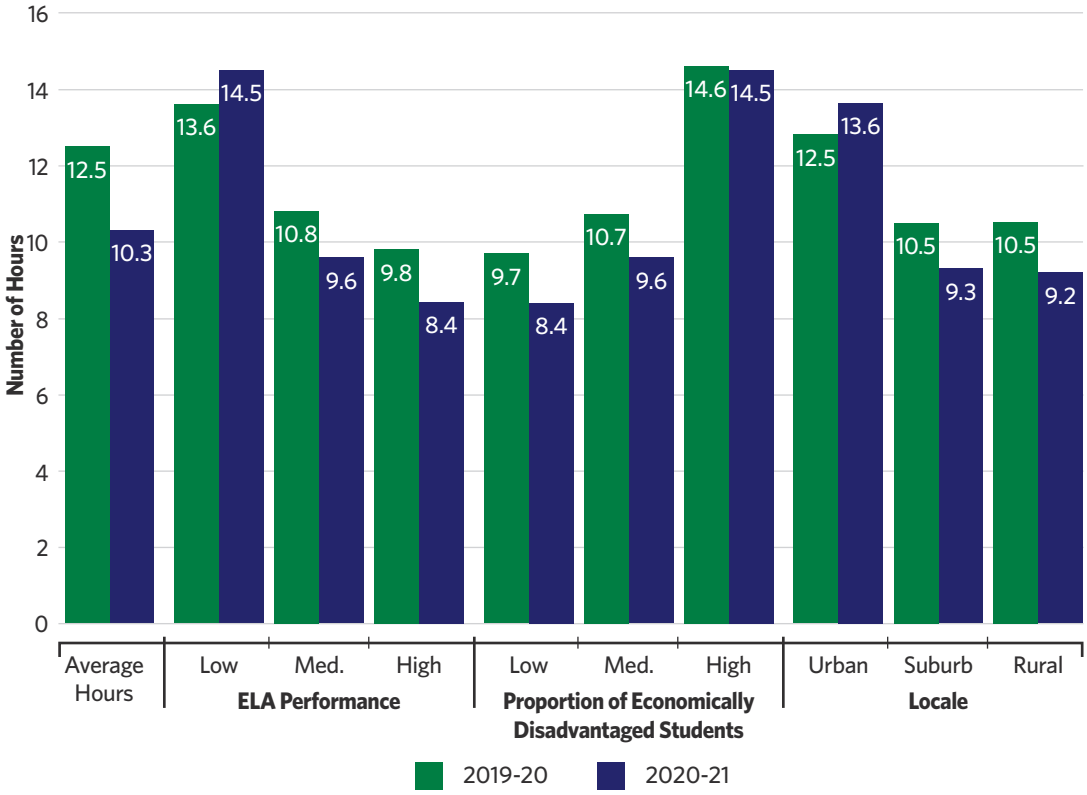
Note: Literacy coaches were asked, "To what extent is each of the following a hindrance to your work as an ISD Early Literacy Coach? Please mark one option for each row." Source: EPIC survey of educators about the Read by Grade Three Law.

Literacy Professional Development Continues to Serve the Teachers Who Need It Most

Although professional development opportunities were more limited in 2020-21 than in the previous year, teachers in historically underserved districts—those with low performance on the ELA M-STEP, with high proportions of low-income students, and those in urban areas—received more hours of professional development than their colleagues in more traditionally advantaged districts. Figure 4.11 shows this for other professional development, but results hold for one-on-one coaching. These findings echo similar results from the 2019-20 school year. In addition, teachers in districts with low ELA performance and in urban districts reported receiving more hours of literacy professional development in 2020-21 than they did in 2019-20.

This increase in the hours of professional development for teachers in low-performing and urban districts may be because these are largely the same districts that were remote for more of the year and thus may have provided additional professional development to teachers to support the transition to remote instruction during COVID-19. Nonetheless, this suggests that literacy professional development continues to be allocated to the teachers who could most benefit from it—despite the challenges of administering professional development during a pandemic.

FIGURE 4.11. K-3 Teachers' Reported Hours of Other Literacy Professional Development, by Subgroup



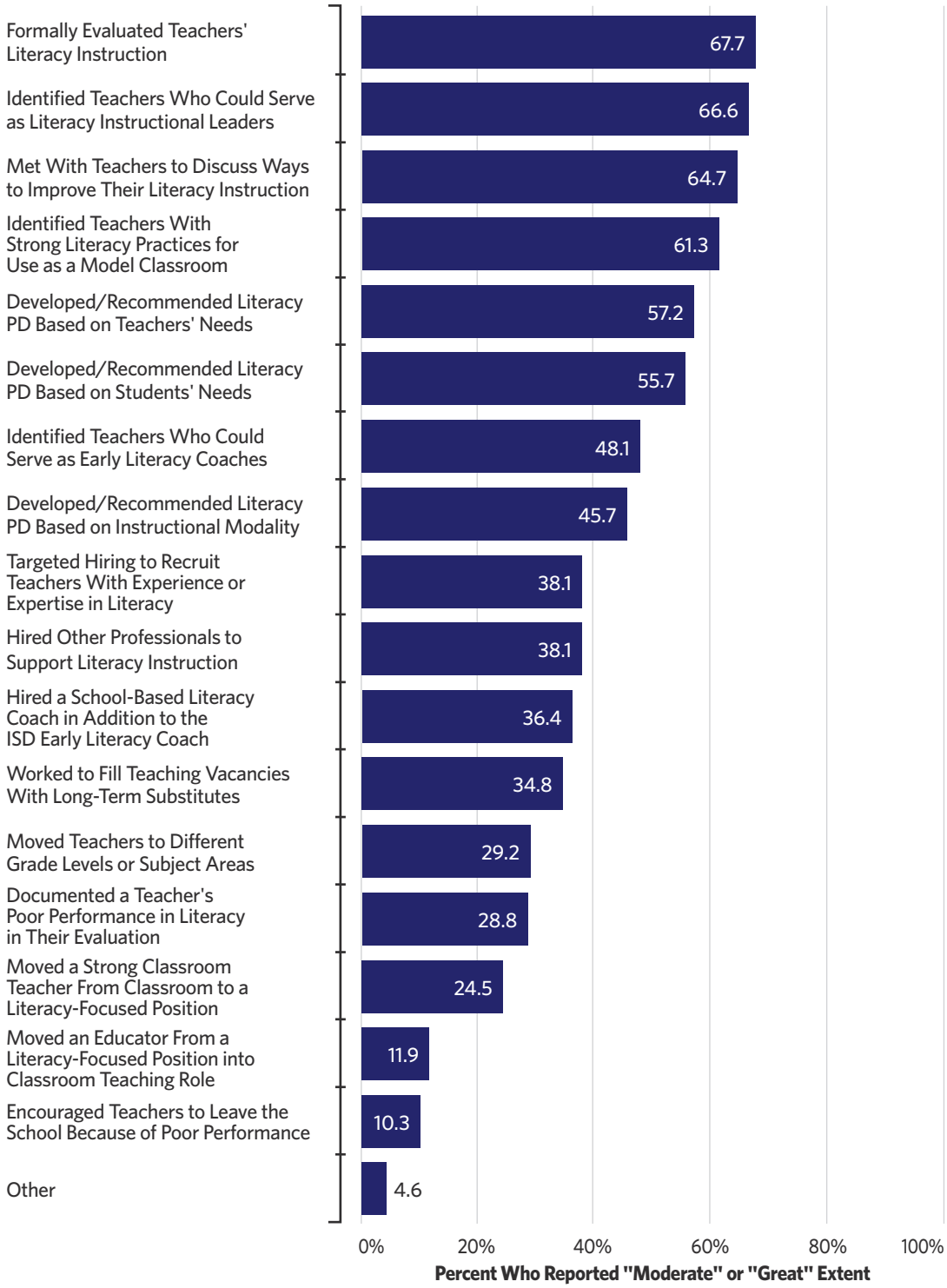
Note: This figure combines results from the 2019-20 and 2020-21 surveys for teachers who reported receiving other literacy professional development (72% of K-3 teachers in 2019-20 and 55% in 2020-21). In 2019-20, teachers who reported receiving other literacy professional development were asked, "Since the beginning of the school year, approximately how many hours of literacy professional development (not including one-on-one literacy coaching) have you received?" In 2020-21, teachers who reported receiving other literacy professional development were asked, "Since the beginning of the school year, about how many hours of other literacy professional development have you received?" Source: EPIC survey of educators about the Read by Grade Three Law.

Principals Used Professional Development Strategies to Improve Teacher Practice and Student Literacy

Principals offer an important source of literacy professional development, with 8.4% of K-3 teachers reporting one-on-one literacy coaching from a building administrator and just over 20% reporting some other literacy professional development from principals. Figure 4.12 shows that principals used several personnel management strategies to improve literacy in their schools. More than half of principals reported formally evaluating their teachers' literacy instruction, identifying teachers who could serve as literacy instructional leaders, meeting with teachers to discuss ways to improve

their literacy instruction, identifying teachers with strong literacy practices for use as models, and developing professional development content based on students' and teachers' needs. All of these are key professional development strategies intended to help teachers improve their literacy practice.

FIGURE 4.12. K-5 Principals' Reported Engagement with Personnel Activities Related to the Read by Grade Three Law



Note: Principals were asked, "To what extent have you engaged in each of the following personnel activities as a result of the Read by Grade Three Law?" Source: EPIC survey of educators about the Read by Grade Three Law.

However, very few principals reported using strategies that were either resource-intensive (e.g., hiring new teachers or coaches) or required shifting teachers' roles (e.g., moving teachers to different classrooms or roles or encouraging teachers to leave the school due to poor performance). This suggests that principals may not feel able to use the full range of personnel management strategies suggested under the Law to improve student literacy.

Overall, the pandemic altered how literacy professional development was provided in some ways but not others. Literacy professional development continued to focus on elements of instruction emphasized in the Read by Grade Three Law while also accommodating shifts to remote instruction. At the same time, teachers and coaches want additional support in working with students with disabilities and English learners. Although the Law does not explicitly target these students, many teachers have these students in their classrooms. Teachers continued to have positive perceptions of the one-on-one literacy coaching and other literacy professional development they received but expanding access to coaching will be difficult as access to the ISD Early Literacy Coaches provided for under the Law remains limited. Perhaps in response, principals used personnel management strategies that focused on professional development. Overall, literacy professional development continues to more often serve the teachers who could most benefit from it: those in historically underserved districts.

RESOURCE CONSTRAINTS CONTINUE TO AFFECT THE IMPLEMENTATION OF THE LAW

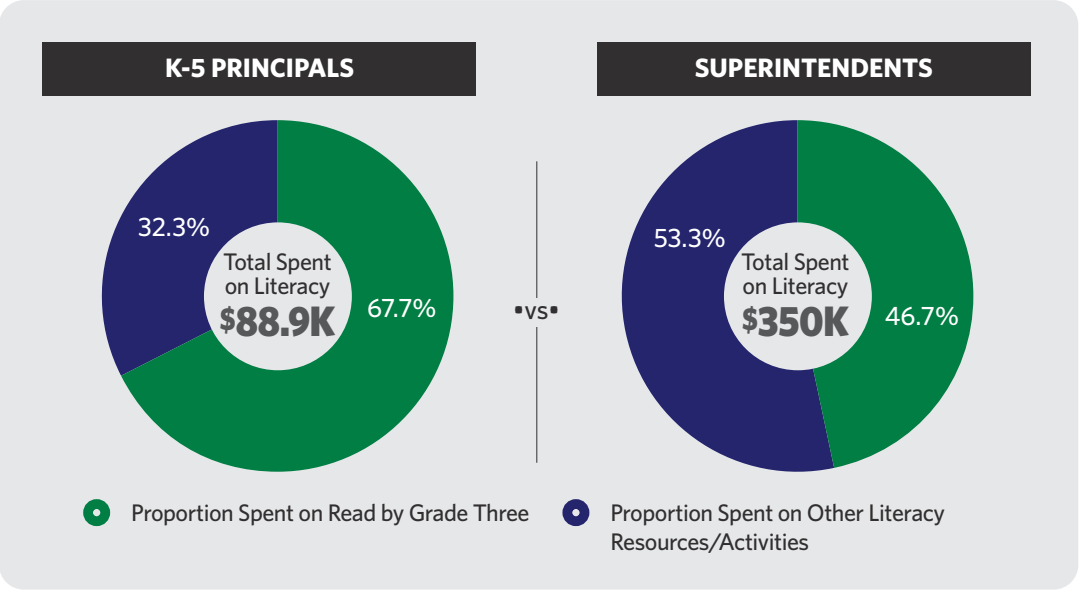
Consistent with our findings in 2019-20, educators and stakeholders reported that resource constraints posed challenges to implementing the Law. In particular, educators and districts believe that financial, human capital, and time constraints impede full implementation of the Law.

Educators Believe the Law is Underfunded

Financial constraints continue to complicate the Law's implementation. As shown in Figure 4.13, principals who were asked and responded to survey cost questions (n=35) reported that their schools spent an average of $89,000 on literacy resources and activities to support literacy instruction. Principals reported that more than two-thirds of these literacy expenditures were on activities and resources to support the implementation of activities associated with the Law. District superintendents attributed just under half of their district's $350,000 average literacy spending to the Read by Grade Three Law. This distribution of spending suggests that schools allocate money for Read by Grade Three-related literacy resources roughly proportional to the grades most affected by the Law.

Despite the share of total literacy funding attributable to the Law, 47% of principals and over 60% of district superintendents said that their school or district did not have sufficient funding to implement the Law. This sentiment was consistent regardless of school or district characteristics.

FIGURE 4.13. K-5 Principals' and Superintendents' Reported Funding for the Law



Note: A 10% random sample of principals and all district superintendents were asked, "Approximately how much does your school spend on literacy resources and activities to support literacy instruction in your school/district?" Source: EPIC survey of educators about the Read by Grade Three Law.

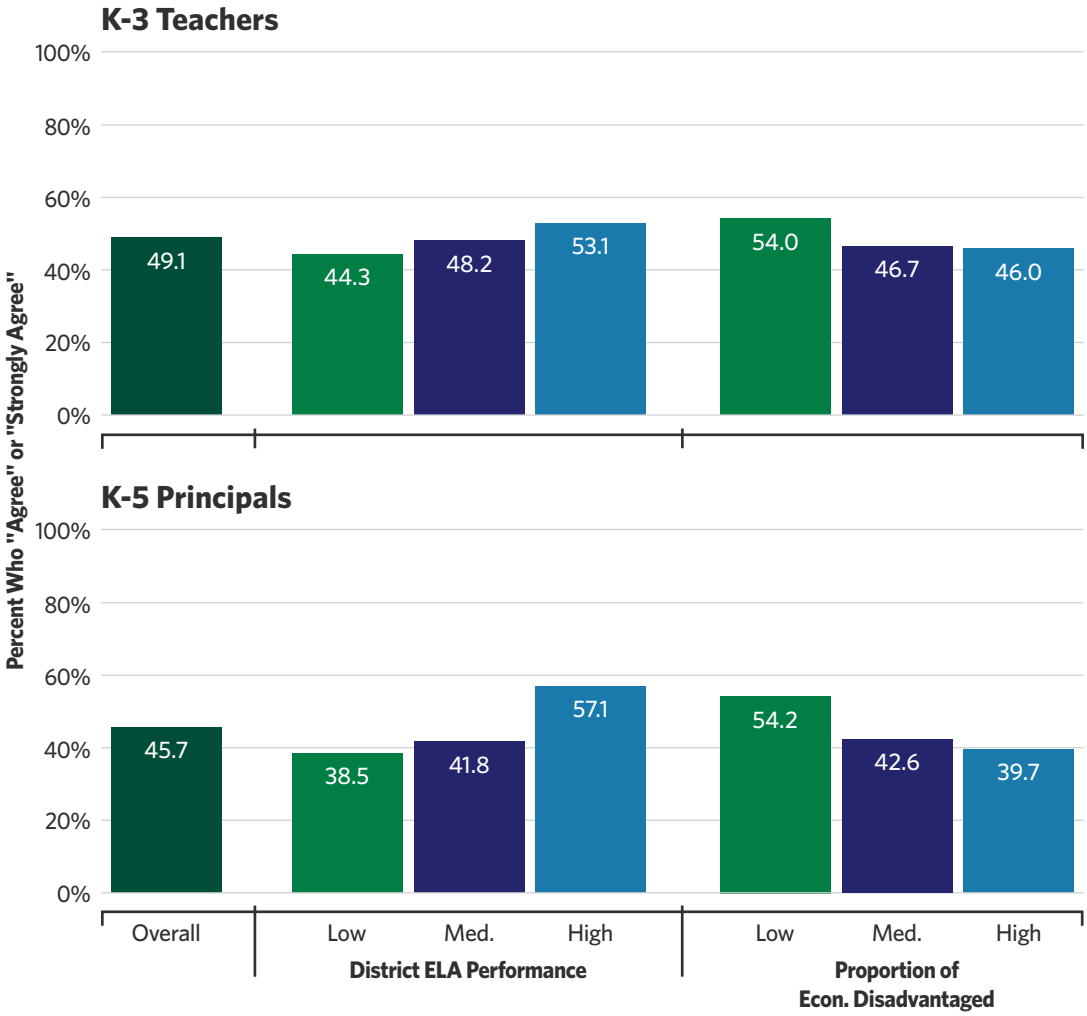
State-level stakeholders were aware of these funding concerns. All six stakeholders we interviewed felt that more funding is required both for early literacy generally and the Law's interventions specifically. As one MDE staff member with whom we spoke said:

> *There are some of us who point to the absence of funding or the relative absence of funding to get [early literacy] done...The absence of funding is reprehensible... We underfund public education in the state of Michigan. We just did a report before [the State Board of Education] that estimated that that underfunding in the state of Michigan is $3.1 billion. That's not "Here's $3.1 billion, and you've got it figured out." That's annually. That's an annual gap. Though that is all not associated with the literacy challenges that we have, it is in part associated with those literacy challenges.*

Human Capital Constraints Impeded Implementation of the Law

As discussed in the 2019-20 report, personnel constraints continued to strain the implementation of the Law. As shown in Figure 4.14, only about half of teachers and principals agreed that their school has a sufficient number of teachers with a literacy specialization. Educators in historically underserved districts reported the most significant constraints. Teachers and principals in districts with lower ELA performance or higher proportions of economically disadvantaged students were less likely to report having a sufficient number of literacy-focused teachers than those in more historically advantaged districts. For instance, only 39% of principals in districts in the bottom quarter of ELA performance agreed that their school has a sufficient number of literacy teachers compared to 57% of principals in districts in the top quarter of ELA performance.

FIGURE 4.14. Educators' Reports of Sufficient Numbers of Literacy-Focused Teachers



Note: Principals and teachers were asked the extent to which they agree that, "My school has a sufficient number of teachers with a specialization in literacy." Source: EPIC survey of educators about the Read by Grade Three Law.

These staffing concerns extended beyond teachers to include school-based literacy coaches and literacy specialists/interventionists available to provide literacy professional development in their schools. As we show in Table 4.2, on average, principals reported 0.7 school-based literacy coaches and 1.3 literacy specialists or interventionists providing literacy professional development per school.

We find that less advantaged districts employ more specialized literacy professionals. Principals in districts with higher proportions of economically disadvantaged students reported that more school-based literacy coaches provided professional development in their schools than in their peers' districts with a smaller proportion of economically disadvantaged students.

TABLE 4.2. Principal-Reported Personnel Providing Literacy Professional Development, Overall and by Proportion Economically Disadvantaged	
	Number of FTEs per school
Overall:	
School-based literacy coaches	0.7 (1.0)
Literacy specialists/interventionists	1.3 (1.6)
Low Proportion Economically Disadvantaged:	
School-based literacy coaches	0.5 (0.9)
Literacy specialists/interventionists	1.3 (1.4)
High Proportion Economically Disadvantaged:	
School-based literacy coaches	1.1 (2.2)
Literacy specialists/interventionists	1.4 (2.1)

Note: Standard deviations are in parentheses. Principals were asked, "How many of the following personnel provide literacy professional development (including one-on-one literacy coaching or other literacy professional development) to the teachers in your school?" Source: EPIC survey of educators about the Read by Grade Three Law.

In their open-ended survey responses, teachers expressed concerns about staffing and human capital constraints. For example, one teacher wrote:

> *Our school has struggled with staffing this year. Our literacy coach quit, and later our two ELL teachers quit. They had been pulled to cover a first grade class, so our ELL students have been lacking support all year. Our school really is trying and giving many supports to students, but it's been a huge struggle.*

Another responded:

> *Most schools are not properly staffed with support staff to help implement—full implementation of intervention programs. Money should be provided to these school to support this if you are making a law that all children should pass. Seems silly to expect something of districts when lack of funding makes it impossible to reach these goals.*

Not Enough Time Was Available to Implement Literacy Interventions

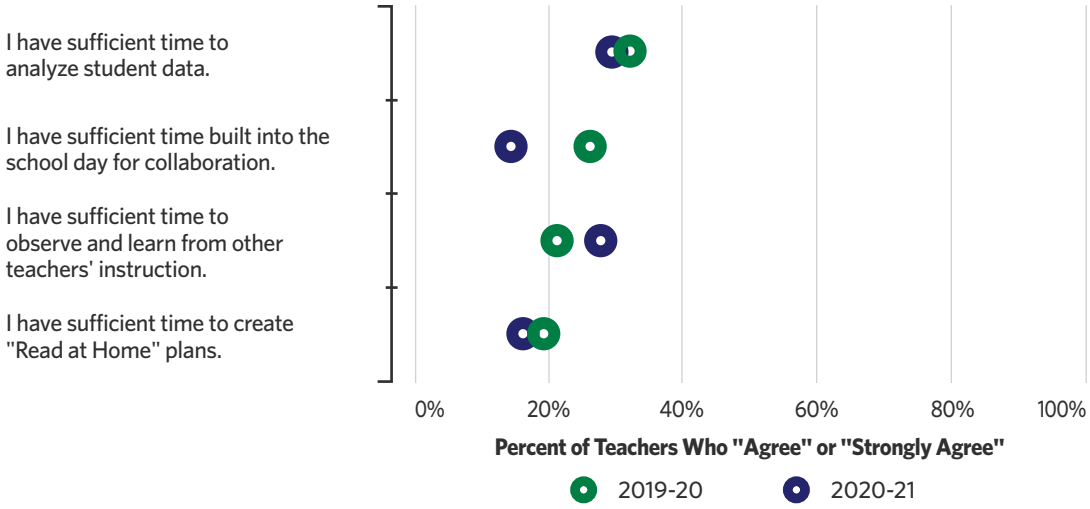
Teachers Reported Having Insufficient Time to Implement Many of the Law's Interventions

The literacy supports and interventions outlined in the Law take time to implement. In 2019-20, teachers felt that such time was scarce. A majority of teachers reported they had insufficient

time to analyze student data, collaborate during the school day, observe and learn from other teachers' instruction, or create "Read at Home" plans. ISD Early Literacy Coaches listed time constraints as one of the greatest hindrances to their work.

In the 2020-21 school year, teachers again reported that time was a factor constraining the implementation of the Law. Figure 4.15 shows that fewer than a third of K-3 teachers agreed that they have sufficient time to analyze student data, observe other teachers' literacy instruction, collaborate around literacy instruction, or create "Read at Home" plans. In general, teachers' sentiments were in line with last year's survey, although two differences stand out. First, teachers in 2020-21 were noticeably less likely to report having sufficient time built into the school day for collaboration than in the previous year. Second, teachers in 2020-21 were around 7 percentage points *more* likely to agree or strongly agree that they had sufficient time to observe and learn from other teachers' instruction than in 2019-20. Both differences could be due to shifts in instructional modality; virtual instruction might make it easier for instructors to observe one another but may make collaboration more difficult.

FIGURE 4.15. Educators' Perceptions of the Time to Implement the Law

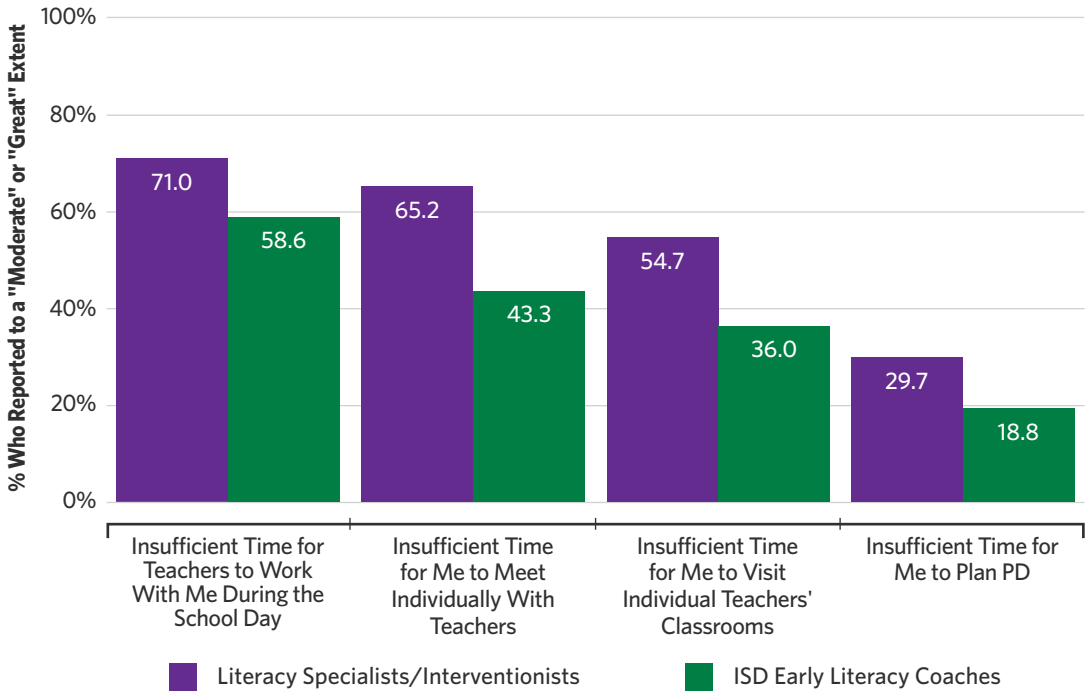


Note: Teachers were asked, "To what extent do you agree or disagree with the following statements? Please mark one option for each row." Source: EPIC survey of educators about the Read by Grade Three Law.

Literacy Coaches Believed That Time Constraints Hindered Their Practice

Consistent with last year's survey results, the most frequently reported hindrances to literacy coaches' practice were time-related. While most literacy coaches reported sufficient time to plan professional development, they generally reported having insufficient time to meet individually with teachers, visit teachers' classrooms, or work with teachers during the school day. These time-related issues were generally more of a hindrance for literacy specialists/interventionists than for ISD Early Literacy Coaches.

FIGURE 4.16. Literacy Coaches' Reported Hindrances



Note: Literacy coaches were asked, "To what extent is each of the following a hindrance to your work as an ISD Early Literacy Coach or literacy specialist/interventionist? Please mark one option for each row." Source: EPIC survey of educators about the Read by Grade Three Law.

Many Teachers Decreased Instructional Time Across Several Subject Areas

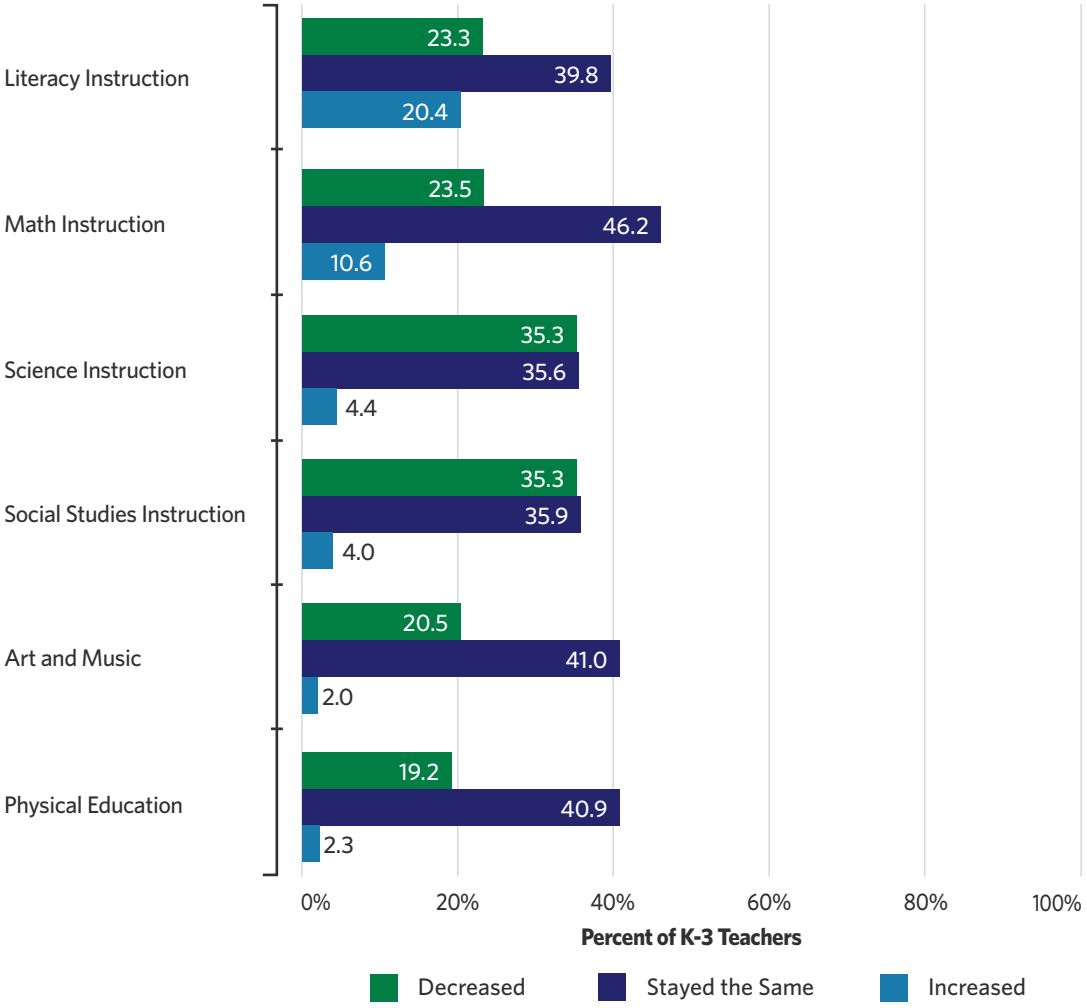
As shown in Figure 3.3, teachers reported spending 7.3 hours per week on literacy instruction during 2020-21, about two fewer hours per week than teachers reported in 2019-20. Additionally, fewer teachers reported increasing time spent on literacy instruction this year than last year. However, it appears that even with the diminished time spent on literacy instruction, teachers may have cut back even more in other subject areas.

Figure 4.17 shows that the majority of teachers reported either maintaining or increasing the amount of instructional time devoted to literacy and math instruction, although only 20% of K-3 teachers reported increasing time on literacy instruction and only 10% of teachers reported increasing time on math instruction. Almost a quarter of teachers said they decreased time on both literacy and math instruction.

In contrast, very few teachers said they increased instruction in other subject areas, and over a third of teachers reported decreasing instructional time spent on science and social studies. Over 19% of teachers reported decreasing time spent on physical education, which is likely a direct outcome of pandemic-related shifts to instructional modality or COVID-19 mitigation strategies.

Thus, while a quarter of K-3 teachers spent less time on literacy and math instruction, other subjects fared worse. Facing time constraints due to the pandemic, K-3 teachers may have tried to redistribute instructional time to maintain their focus on literacy and math at the expense of science and social science.

FIGURE 4.17. Teachers' Reported Change in Instructional Time by Subject



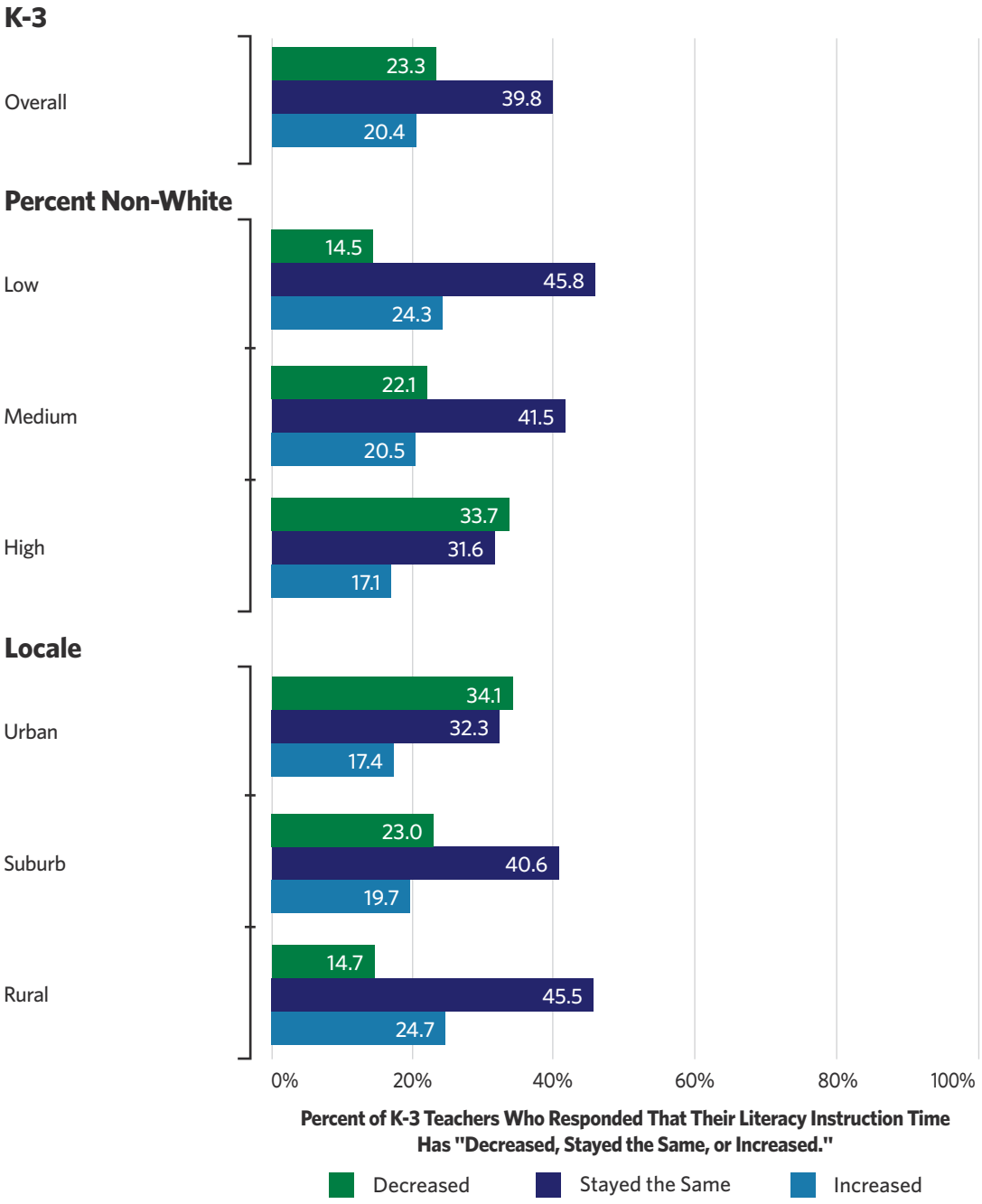
Note: Teachers were asked, "How has the amount of time you spend on instruction in each of these areas changed since last year?" Source: EPIC survey of educators about the Read by Grade Three Law.

School district characteristics appear to be an important determinant of shifts in the time spent on literacy instruction. Figure 4.18 shows that teachers in urban districts or districts with a high proportion of non-White students were less likely to increase and more likely to decrease literacy instruction time than the average. This disparity could be due to the correlation between modality and these characteristics. However, we don't see a significant difference in changes in instructional time by the proportion of economically disadvantaged students or district ELA performance, both of which also correlate with instructional modality.

Resource constraints continue to hamper the implementation of the Read by Grade Three Law. Even though nearly half of all superintendent-reported literacy spending is attributable to the Law, educators and policy stakeholders alike believe that the Law is underfunded. Educators believe their schools have insufficient literacy-focused personnel, with principals reporting less than one full-time equivalent school-based literacy coach per school on average.

Finally, educators do not feel that they have sufficient time to implement many of the Law's interventions. Together this suggests that educators need additional resources to implement the Read by Grade Three Law with fidelity.

FIGURE 4.18. Change in Literacy Instruction Time by District Characteristics



Note: Teachers were asked, "How has the amount of time you spend on instruction [Literacy] changed since last year?" Source: EPIC survey of educators about the Read by Grade Three Law.

SUMMARY

Educators continue to implement the Law's interventions and provide additional support to students with a "reading deficiency." Most teachers believe these interventions are effective and improve their literacy instruction. IRIPs and "Read at Home" plans are the two notable exceptions, as teachers continue to disagree with state-level stakeholders on the effectiveness of IRIPs in improving student literacy. Teachers maintain that they don't receive enough support in creating IRIPs and that IRIPs create unnecessary extra work.

While the pandemic changed the modality of literacy professional development, teachers continued to have positive perceptions of literacy professional development. Teachers reported that one-on-one literacy coaching and other literacy professional development effectively improved their literacy instruction, and they wanted more literacy professional development. However, meeting teachers' desires for additional literacy professional development is challenging as access to ISD Early Literacy Coaches remains limited. Principals' reported personnel management strategies focused on professional development, perhaps in response to the needs of their teachers.

Resource constraints continue to plague the implementation of the Read by Grade Three Law. In particular, educators identified insufficient fiscal and human capital resources, as well as limited time to implement all of the interventions associated with the Law. Time was particularly limited during the 2020-21 school year as a result of the pandemic, with a quarter of teachers reporting that they decreased time on literacy and math instruction and a third of teachers reporting that they spent less time on social science and science instruction. These findings have substantial implications for student learning during the 2020-21 school year and hopes for learning recovery in the years to come.

Special Section B: Charter School Educators Perceive and Implement the Law Differently

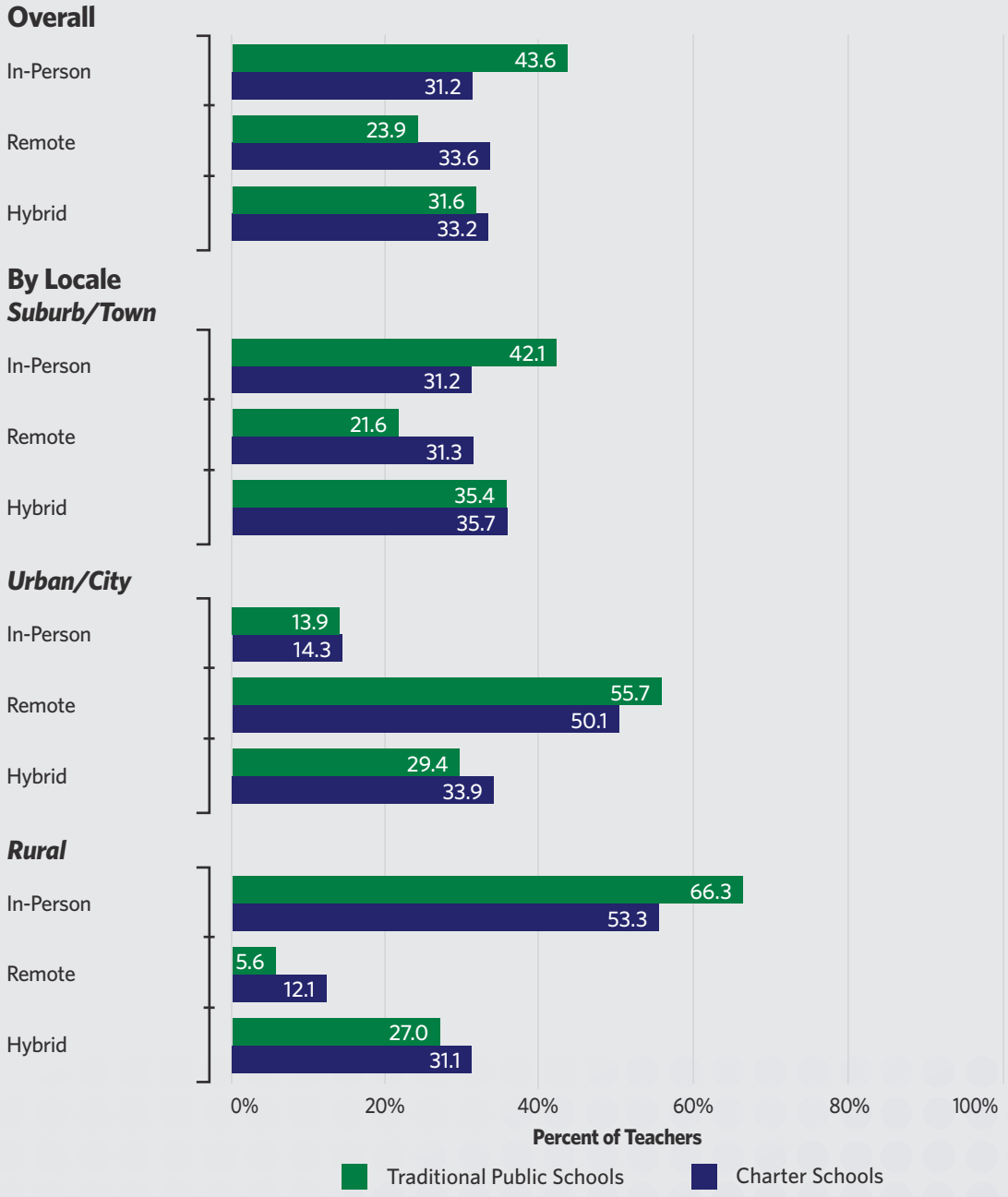
In Michigan, public school academies are publicly funded schools that operate independently of a traditional school district, often called charter schools. Since charter schools have a degree of independence from TPSs in Michigan, we expect that charter school educators will experience and implement the Read by Grade Three Law differently. This special section will examine how COVID-19 affects the Law and how educator perceptions of the implementation of the Law in charter schools differed from TPSs.

THE COVID-19 PANDEMIC AFFECTED THE LAW'S IMPLEMENTATION DIFFERENTLY IN CHARTER SCHOOLS

Charter Schools Were More Likely to Be Remote

During the 2020-21 school year, charter schools were more likely to report that they planned to offer fully remote instruction and less likely to offer fully in-person instruction than TPS districts (Hopkins et al., 2021). Our teacher survey results are in line with this finding. Figure B.1 shows that teachers in charter schools were 13 percentage points less likely to report in-person instruction as their primary mode of instruction in 2020-21 than TPS teachers. One potential explanation is that charter schools are more likely to be in urban areas and urban districts were more often remote. However, Figure B.1 shows that charter schools in urban areas are slightly less likely to be remote than urban TPSs, whereas charter schools in suburbs, towns, and rural areas are significantly more likely to be remote than TPSs in those areas. Since recent evidence suggests that in-person instruction during the pandemic was beneficial to student learning (Kogan & Lavertu, 2021; Malkus, 2020), charter school students may miss crucial school-based learning opportunities.

FIGURE B.1. Teachers' Reported Primary Instructional Modality



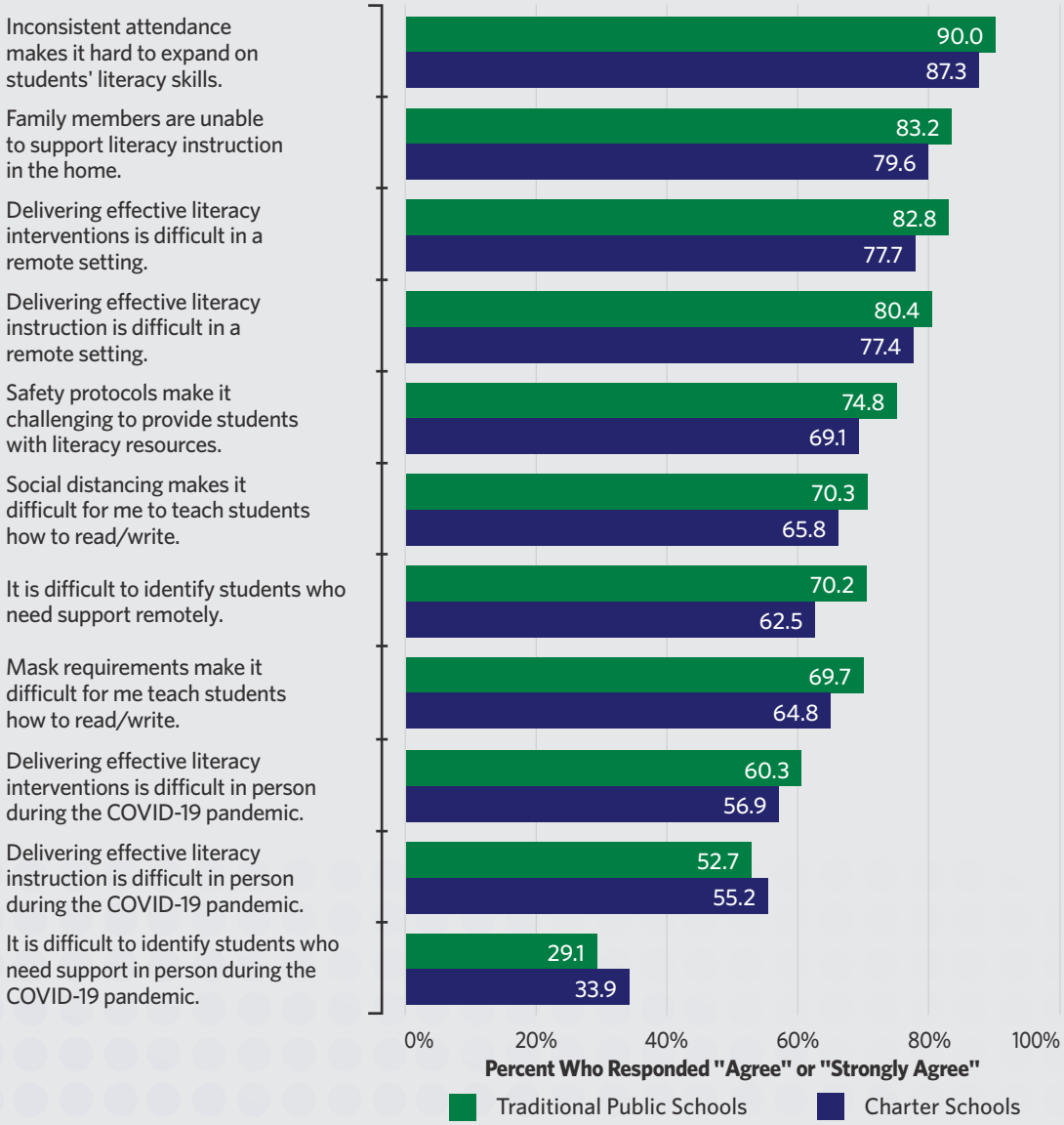
Note: In our survey, "Hybrid" is defined as "...both in person and remote, including livestreaming." Teachers were asked, "In what format have you primarily delivered instruction for the majority of the 2020-21 school year?" Source: EPIC survey of educators about the Read by Grade Three Law.

Charter School Teachers Were Less Likely to Report Challenges Due to the Pandemic

In Section Three, we showed that the majority of teachers reported that the COVID-19 pandemic made it more difficult to implement the Read by Grade Three Law's interventions and to deliver effective literacy instruction. Further, we found that teachers in remote settings were more likely to report these challenges.

Consistent with our findings in Section Three, Figure B.2 shows that the majority of teachers in charter schools reported that the COVID-19 pandemic created challenges in literacy instruction and implementing the Law's interventions. However, charter school teachers were generally slightly less likely than their colleagues in TPSs to report these issues. Charter school teachers were about 8 percentage points less likely than TPS teachers to agree or strongly agree that it is difficult to identify students who need support remotely.

FIGURE B.2 Effects of the COVID-19 Pandemic by School Type



Note: Teachers were asked, "We want to better understand how COVID-19 may have affected your or your school's ability to deliver literacy instruction and implement the Read by Grade Three Law. To what extent do you agree with the following statements?" Questions specifically about the challenges of remote settings were only asked to teachers who reported primarily remote or hybrid instruction. Questions specifically about in-person settings were only asked to teachers who reported primarily in-person or hybrid instruction. Source: EPIC survey of educators about the Read by Grade Three Law.

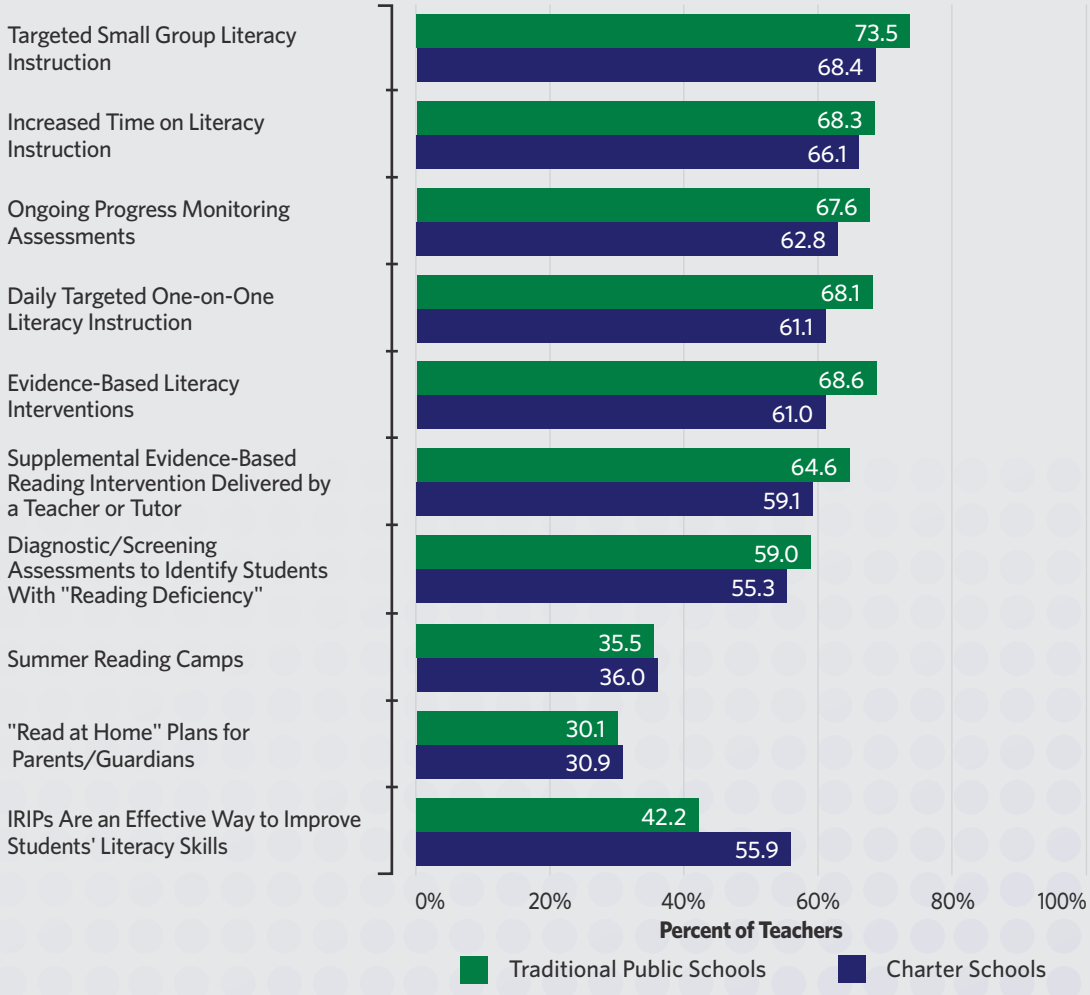
These differences in the opinions of charter and TPS teachers are puzzling. We have shown that charter school teachers were more likely to report teaching remotely and that

remote teachers overall were more likely to report challenges due to COVID-19. Yet charter school teachers were less likely to describe challenges due to the pandemic. One potential explanation is that charter schools in Michigan had more flexibility to adjust instruction in response to the pandemic than TPSs.

CHARTER SCHOOL EDUCATORS IMPLEMENT AND PERCEIVE THE LAW DIFFERENTLY

In Section Four, we showed that many teachers viewed the literacy supports outlined by the Law as valuable, and only two supports (summer reading camps and "Read at Home" plans) were not viewed as useful by at least half of the teachers surveyed. However, as seen in Figure B.3, a slightly smaller percentage of charter school teachers said that they viewed most of the literacy supports in the Law as useful compared to TPS teachers. The largest gap in perceived usefulness was for "evidence-based literacy interventions," where only 61% of charter school teachers viewed them as useful compared to 69% of TPS teachers (an 8 percentage-point gap).

FIGURE B.3. Teachers' Perceived Usefulness of Literacy Supports by School Type



Note: This graphic combines responses from two questions asked to teachers on the 2021 survey. The first nine responses accompanied the question, "To what extent are you using the following interventions when you work with students who are identified as having a "reading deficiency." If you use it, how useful is it in improving students' literacy?" The last response about IRIPs accompanied the next question on the survey, which read, "To what extent do you agree with the following statements about Individual Reading Improvement Plans (IRIPs)?" Source: EPIC survey of educators about the Read by Grade Three Law.

In Section Four, we also showed that less than half of K-3 teachers viewed IRIPs as an effective way to improve students' literacy skills. However, charter school teachers were significantly more likely to view IRIPs as effective. As Figure B.3 shows, more than half of the charter school teachers surveyed (56%) reported IRIPs as an effective way to improve students' literacy skills, whereas only 42% of TPS teachers did.

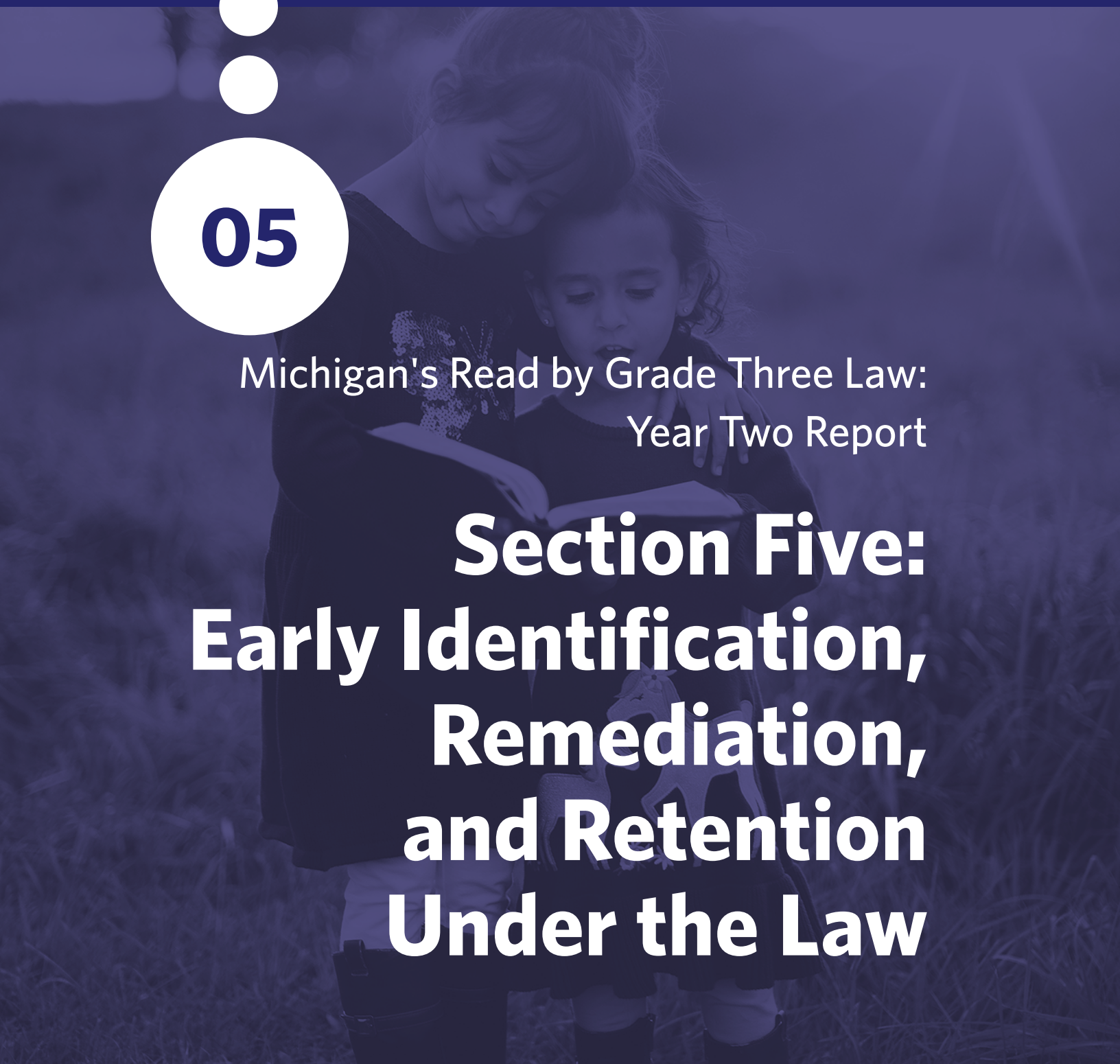
In Section Three, we also showed that, on average, K-3 teachers reported spending about 7.3 hours per week on literacy instruction. Although not shown here, charter school teachers reported spending slightly less time than TPS teachers on literacy instruction (6.7 hours per week for charter teachers relative to 7.4 hours per week reported by TPS teachers). The reported time spent on math, science, and social studies was the same for both charter school and TPS teachers. While these differences in instruction time are statistically significant, they represent relatively small changes in students' experiences. For instance, 0.7 hours per week represents just 10 minutes per school day. Nonetheless, 50 minutes per week of extra literacy instruction could potentially provide extra opportunities to TPS students relative to their charter school peers.

In sum, we find that charter schools were more likely to be remote than TPSs, but teachers in charter schools were less likely to report issues related to remote instruction. This difference might be because charter schools have more flexibility to adjust than TPSs. While charter school teachers tended to have more pessimistic perceptions of the Law's interventions, they had significantly more positive views on the effectiveness of IRIPs than TPS teachers. Overall, there were significant differences in the approaches taken by charter schools versus TPSs and in the opinions held by teachers in charter schools about the literacy supports at their disposal.

05

Michigan's Read by Grade Three Law:
Year Two Report

Section Five: Early Identification, Remediation, and Retention Under the Law



Section Five: Early Identification, Remediation, and Retention Under the Law

INTRODUCTION

The Read by Grade Three Law requires districts to administer diagnostic literacy assessments three times each school year to K-3 students to identify whether students have a "reading deficiency" as defined by the Law. Districts must select this diagnostic assessment from MDE's approved assessment list and establish their own criteria for identifying students as having a "reading deficiency" based on their assessment performance. Once students are identified with a "reading deficiency," districts must provide evidence-based literacy interventions to support their literacy development until the "reading deficiency" is "remedied," as defined by the district's chosen diagnostic assessment.[1] These additional supports are intended to improve students' literacy skills to avoid retention under the Law.

This section first analyzes the characteristics of students identified with a "reading deficiency" and examines the patterns of "reading deficiency" identification and "remedy." Next, we describe the interventions received by students identified with a "reading deficiency." Then, we discuss the retention outcomes of 3rd-grade students based on the 2020-21 3rd-grade ELA M-STEP. Finally, we study the relationship between "reading deficiency" identification and the M-STEP and retention outcomes of 3rd-grade students in 2020-21. Table 5.1 summarizes our main findings regarding each of these outcomes.

TABLE 5.1. Summary of "Reading Deficiency" Identification, Intervention, and Retention Outcomes	
"Reading deficiency" identification	Just over half of K-3 students are ever identified with a "reading deficiency," and about a third are identified as such each school year. Historically underserved students are most likely to be identified.
"Reading deficiency" "remedy"	Though small proportions of students "remedy" their "reading deficiency" within that school year, 45% "remedy" it by the end of 3rd grade. Historically underserved students are least likely to "remedy" their "reading deficiency."
Literacy interventions	Students identified with a "reading deficiency" were most likely to receive supports during the school day. Historically underserved students are least likely to receive support outside of traditional school hours.
3rd-grade retention	Districts offered exemptions to most retention-eligible students, intending to retain less than 1% of 3rd graders. Historically underserved students and students identified with a "reading deficiency" were more likely to be eligible for retention and actually retained than their peers.

MANY K-3 STUDENTS ARE IDENTIFIED WITH A "READING DEFICIENCY," WITH HIGHER RATES FOR HISTORICALLY UNDERSERVED STUDENTS

Approximately a Third of K-3 Students Are Identified With a "Reading Deficiency" Each School Year

Table 5.2 shows the percentage of students identified with a "reading deficiency" in the fall of each school year from 2018-19 through 2020-21 by grade level. In general, about a third of all K-3 students are identified as having a "reading deficiency" each school year, though there are differences by grade level and from one school year to the next. Kindergarten students' "reading deficiency" rates declined by about 10 percentage points between 2018-19 and 2020-21. However, this decline is likely explained in part by the decrease in kindergarten enrollment and other challenges due to the COVID-19 pandemic.[2]

The "reading deficiency" identification rates of 1st-3rd-grade students are consistently higher than for kindergarten students. The percentage of 1st-3rd-grade students identified with a "reading deficiency" declined in 2019-20 but rebounded in 2020-21. This 2020-21 increase may be because students' literacy skills were affected by missed opportunities for learning during the COVID-19 pandemic, such that higher percentages needed support upon returning to school buildings in 2020-21.

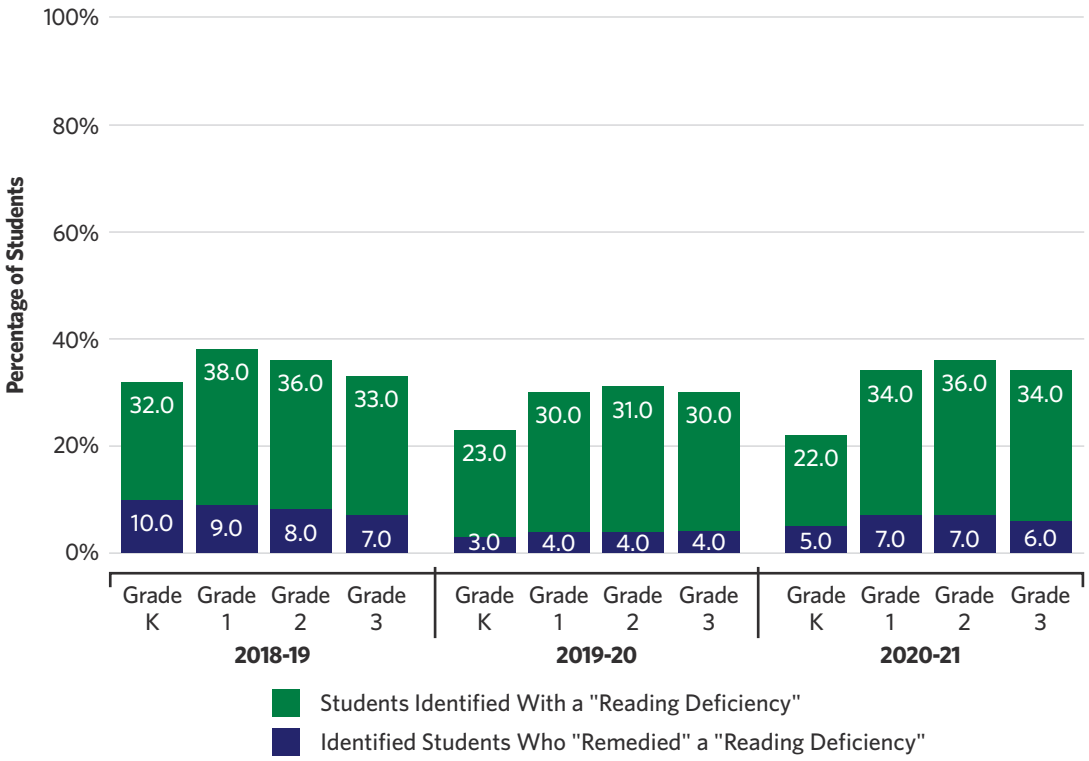
TABLE 5.2. Fall "Reading Deficiency" Rates by Year and Grade Level			
	Total Number of Students	**Number of Students Identified with a "Reading Deficiency"**	**Percentage of Students Identified with a "Reading Deficiency"**
2018-19			
Kindergarten	119,524	37,535	32.0%
Grade 1	105,707	39,401	37.8%
Grade 2	105,625	37,853	36.4%
Grade 3	104,462	34,200	33.2%
2019-20			
Kindergarten	121,639	28,159	23.4%
Grade 1	105,918	31,494	30.0%
Grade 2	104,479	31,910	30.8%
Grade 3	105,274	31,296	30.0%
2020-21			
Kindergarten	109,705	23,895	22.1%
Grade 1	102,743	34,155	33.7%
Grade 2	101,793	36,575	36.3%
Grade 3	101,590	34,467	34.3%

Note: Data are derived from student-level administrative records for K-3 students in 2018-19 through 2020-21.

A portion of K-3 students identified with a "reading deficiency" at the beginning of the school year are no longer designated as "reading deficient" by the end of the year, suggesting that they are now meeting district-established criteria for their grade level. The Read by Grade Three Law denotes this progress as students' "reading deficiencies" having been "remedied," and so we use this terminology throughout this report.

Figure 5.1 shows the percentage of students identified with a "reading deficiency" by grade and school year (the same percentages displayed in the far-right column of Table 5.2) as well as the percentage who "remedied" a "reading deficiency" by the end of that school year. The percent of students whose "reading deficiency" was "remedied" was largest in 2018-19 and smallest in 2019-20. The low percentage of students whose "reading deficiency" was "remedied" in 2019-20 may be due to pandemic-related school-building closures hindering districts' ability to administer end-of-year diagnostic assessments—which would mean that a greater percentage of students actually had their "reading deficiency" "remedied" than is indicated in Figure 5.1. Alternatively, it may be that fewer students had their "reading deficiency" "remedied" because of missed opportunities for literacy learning and intervention in spring 2020 due to COVID-19. The percentage of K-3 students whose "reading deficiency" was "remedied" increased in 2020-21, with the proportion of identified students whose "deficiencies" were "remedied" increasing almost to 2018-19 levels. This could indicate that students' literacy skills improved enough during the 2020-21 school year to qualify them as no longer "reading deficient" or that districts were better able to administer diagnostic assessments in 2020-21 than they were in 2019-20.

FIGURE 5.1. Percentage of Students Identified With and Who "Remedied" a "Reading Deficiency" by Year and Grade Level



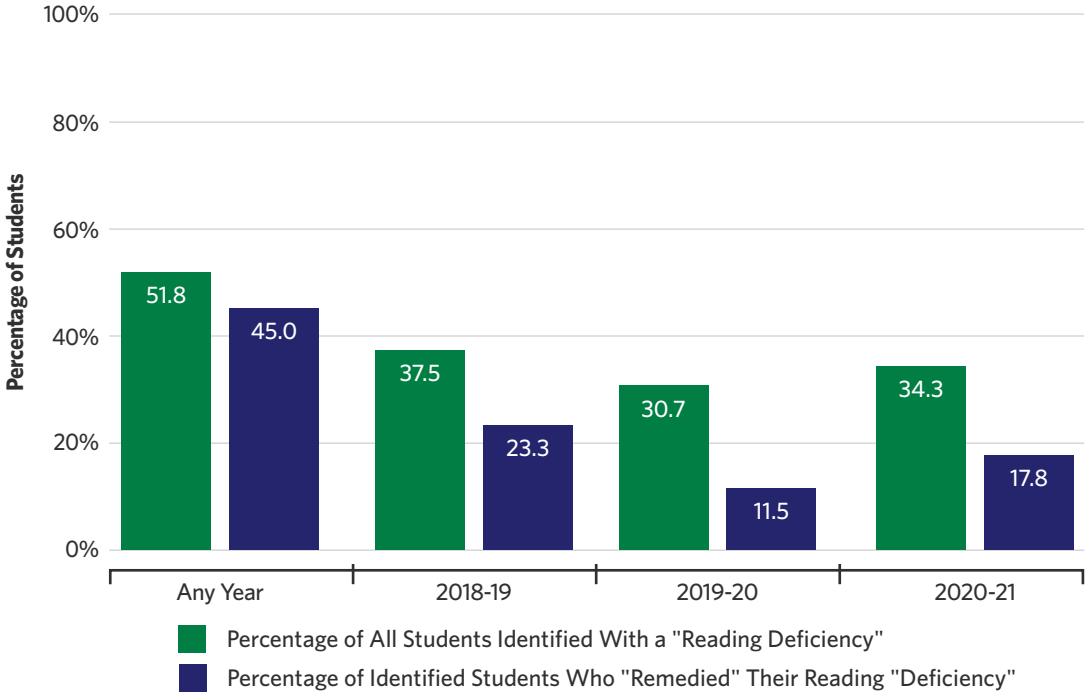
Note: Data are derived from student-level administrative records for K-3 students in 2018-19 through 2020-21. A student "remedied" their "reading deficiency" if they are no longer flagged as having a "reading deficiency" in the spring of a given year.

Historically Underserved Students Are Most Likely to Be Identified with, and Least Likely to "Remedy," a "Reading Deficiency"

For the remainder of this section, we limit our analyses to the cohort of students in 3rd grade in 2020-21. We focus on this cohort because we can follow these students' "reading deficiency" status for all three years for which we have data and because this was the first cohort subject to the retention mandate under the Read by Grade Three Law. We are thus able to follow the "reading deficiency" identification and "remedy" status of this cohort from the time they were in 1st grade through the end of their 3rd-grade year, as well as their 3rd-grade retention status.

Figure 5.2 shows the proportion of students in this cohort who were identified with a "reading deficiency" and the proportion "remedying" a "reading deficiency," both overall and by school year. Fifty-two percent of students were ever identified with a "reading deficiency" at any point between 1st and 3rd grade, and 45% of these students ever "remedied" their "reading deficiency." Identification and "remedy" rates were lower in any given year, with "remedy" rates particularly low in 2019-20. As discussed above, these lower rates may be due to pandemic-related school-building closures hindering districts' ability to administer end-of-year diagnostic assessments or because fewer students "remedied" their "reading deficiency" as a result of missed opportunities for literacy learning and intervention in spring 2020.[3]

FIGURE 5.2. Proportion of Students Identified With and Who "Remedied" a "Reading Deficiency"



Note: Data are derived from student-level administrative records for the cohort of students in 3rd grade in 2020-21. This cohort is tracked from 2018-19 to 2020-21. Students "remedied" their "reading deficiency" if they are no longer flagged as having a "reading deficiency" in the spring of a given year. For the green bars, the y-axis is the percentage of all students who were identified with a "reading deficiency." For the blue bars, the y-axis is the percentage of identified students who "remedied" their "reading deficiency."

We also show the proportion of students in various subgroups who were ever identified as having a "reading deficiency" between 2018-19 and 2020-21 and the proportion of these students who ever "remedied" their "reading deficiency" in Table 5.3. While just over half of all students in the 2020-21 3rd-grade cohort were ever identified with a "reading deficiency," three-quarters of Black students, two-thirds of Hispanic or Latino/a/x students, and two-thirds of economically disadvantaged students are ever identified as "reading deficient" during 1st-3rd grades. Similarly, students in historically underserved districts were significantly more likely to be ever identified. Lower proportions of students were identified in any given school year than in the overall three years, but the patterns are the same with historically underserved students identified at higher rates.

This pattern reverses when examining "reading deficiency" "remedy" rates by subgroup. Forty-five percent of students in the 2020-21 3rd-grade cohort identified with a "reading deficiency" "remedied" it by the end of 3rd grade. However, lower proportions of historically underserved students "remedied" their "reading deficiency" than their more advantaged peers—a pattern that persists across years. For instance, whereas only approximately 39% of Black, Hispanic or Latino/a/x, or American Indian or Alaska Native students identified with a "reading deficiency" "remedied" it in any year, 48% and 58% of White and Asian students did so, respectively.

TABLE 5.3. "Reading Deficiency" Identification and "Remedy" Rates by Subgroup		
	Proportion of Subgroup...	
	Ever Identified with a "Reading Deficiency"	Ever Identified with a "Reading Deficiency" Who "Remedied" It
All Students	**51.8%**	**45.0%**
By Student Characteristics		
Black	74.2%	39.9%
American Indian or Alaska Native	55.4%	38.4%
Asian	35.8%	57.9%
Hispanic or Latino/a/x	65.0%	38.9%
Native Hawaiian/Pacific Islander	42.6%	47.5%
Two or more races	54.0%	46.1%
White	43.9%	48.1%
Not economically disadvantaged	34.8%	54.4%
Economically disadvantaged	64.3%	41.2%
By District Characteristics		
Bottom 25% ELA in 2018-19	78.5%	35.1%
Top 25% ELA in 2018-19	37.4%	52.9%
Traditional public school district	49.5%	46.6%
Charter school district	67.8%	36.4%
Urban District	64.4%	44.2%
Suburb/town district	46.1%	46.8%
Rural district	50.7%	41.6%

Note: Data are derived from student-level administrative records for the cohort of students in 3rd grade in 2020-21. This cohort is tracked from 2018-19 to 2020-21. A student had their "reading deficiency" "remedied" if they are no longer flagged as having a "reading deficiency" in the spring of 2021.

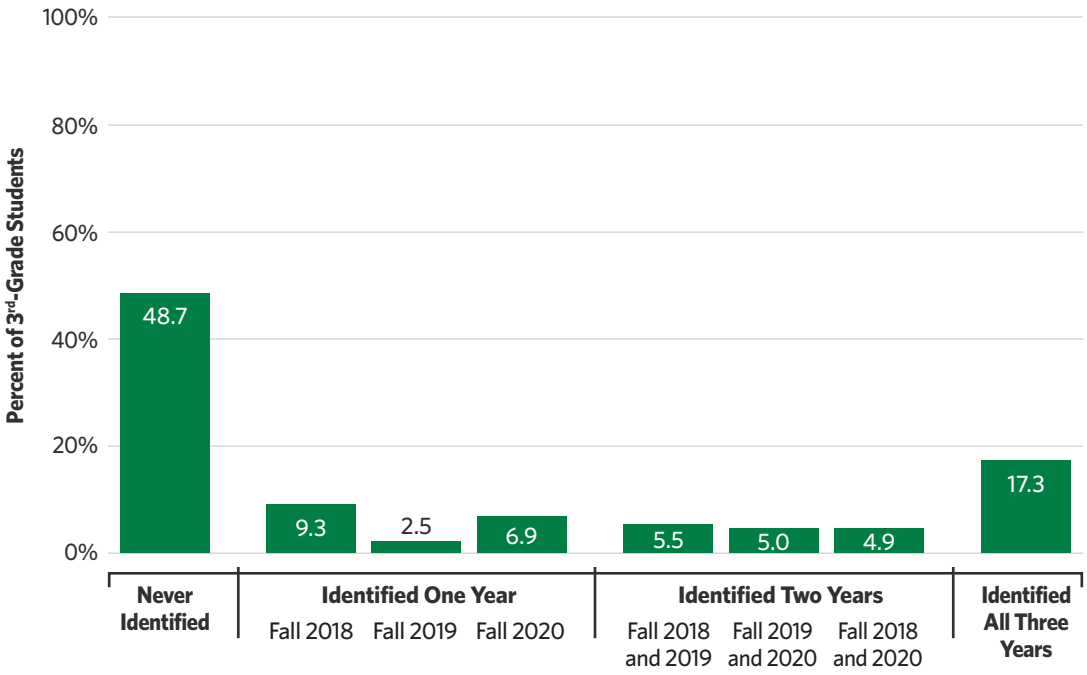
Students Moved In and Out of "Reading Deficiency" Identification Over Time, Although Historically Underserved Students are More Likely to Remain Labeled as "Reading Deficient"

We have shown that in any given year, districts identified roughly a third of the 2020-21 3rd-grade cohort as having a "reading deficiency" in the fall, but over half of students in the cohort were identified with a "reading deficiency" at least once between 2018-19 through 2020-21. This contrast implies that students move in and out of "reading deficiency" status over time. We take a closer look at the frequency with which different patterns of fall "reading deficiency" identification took place for this cohort of students from the time they were in 1st grade (2018-19) through their 3rd-grade year (2020-21) in Figure 5.3.

The x-axis of Figure 5.3 represents all of the possible patterns of fall "reading deficiency" identification. The first bar shows that, overall, 48.7% of students in this cohort were never

identified with a "reading deficiency." The remaining 51.3% were identified in at least one year. While students moved in and out of "reading deficiency" identification over time, students are most commonly identified as "reading deficient" in all three years.

FIGURE 5.3. Fall "Reading Deficiency" Patterns



Note: Data are derived from student-level administrative records for the cohort of students in 3rd grade in 2020-21. This cohort is tracked from 2018-19 to 2020-21.

Table 5.4 provides additional detail about the durations of "reading deficiency" identification of 2020-21 3rd-grade students. We see that 18.6% of students were identified in only one of the three years. Just over 15% of students were identified in two of the three years, and just over 17% were identified in all three years. The table also highlights the significant disparities in the frequency of "reading deficiency" identification patterns across subgroups, echoing the results discussed above. For instance, over a quarter of all Black students and Hispanic or Latino/a/x students were identified in all three years, compared to only 14% of White students. Economically disadvantaged students were more than twice as likely as their wealthier peers to be identified in all years, and students enrolled in districts with the highest ELA performance in 2018-19 are nearly three times as likely never to be identified with a "reading deficiency."

Overall, we show that a substantial proportion of students score below district-determined criteria for "reading deficient" during their 1st-3rd-grade years. Although few students "remedy" their "reading deficiency" within a given year, nearly half do so before the end of 3rd grade. Historically underserved students are much more likely to be identified as having a "reading deficiency" but less likely to have it "remedied" than their more advantaged peers. While many students move in and out of "reading deficiency" status between 1st and 3rd grades, historically underserved students are more likely to remain identified year after year.

TABLE 5.4. Fall "Reading Deficiency" Duration by Subgroup				
	Proportion Identified...			
	Never	1 Year	2 Years	3 Years
All Students	48.7%	18.6%	15.4%	17.3%
By Student Characteristics				
Black	26.1%	23.8%	25.0%	25.1%
American Indian or Alaska Native	46.1%	16.1%	17.8%	20.1%
Asian	64.0%	16.5%	11.4%	8.1%
Hispanic or Latino/a/x	35.0%	20.6%	18.0%	26.4%
Native Hawaiian or Pacific Islander	56.2%	19.2%	13.7%	11.0%
Two or more races	46.4%	20.5%	16.2%	16.9%
White	56.3%	16.9%	12.5%	14.4%
Not economically disadvantaged	64.9%	15.6%	10.1%	9.5%
Economically disadvantaged	36.0%	21.0%	19.5%	23.4%
By District Characteristics				
Bottom 25% ELA in 2018-19	21.7%	24.0%	26.3%	28.0%
Top 25% ELA in 2018-19	61.6%	16.7%	11.4%	10.3%
TPS	50.8%	18.2%	14.4%	16.6%
PSA	32.7%	21.8%	22.6%	22.8%
Rural	49.2%	16.4%	14.4%	20.0%
Suburb & town	54.0%	18.0%	13.7%	14.3%
Urban	36.2%	21.9%	19.9%	22.0%

Note: Data are derived from student-level administrative records for the cohort of students in 3rd grade in 2020-21. This cohort is tracked from 2018-19 to 2020-21.

STUDENTS, AND PARTICULARLY HISTORICALLY UNDERSERVED STUDENTS, WERE MORE LIKELY TO RECEIVE SUPPORTS DURING THE SCHOOL DAY

The Read by Grade Three Law mandates that school districts provide additional literacy interventions to students flagged with a "reading deficiency." While the Law specifies a range of interventions that districts can provide, districts have discretion in the number and types of interventions they provide to students identified with a "reading deficiency." Data collected by CEPI capture the timing of district-provided supports (before, during school, or after the school day, or over the summer) and type ("Read at Home" plans or other activities) of these supports. For this section, we focus on the timing of each district-provided support.

Among the 2020-21 3rd-grade students ever identified with a "reading deficiency," almost 90% received support activities during the school day, and just over 12% received support in the summer. Relatively few students received support activities before or after school. Table 5.5 shows that historically underserved student groups are less likely to receive support outside of

traditional school hours than their more advantaged peers. For instance, Black and Hispanic or Latino/a/x students were more likely to receive support during school and less likely than their White and Asian peers to receive additional support over the summer or after school. Students in urban districts also received support over the summer at a much lower rate than those in suburban or rural districts. Similarly, economically disadvantaged students were more likely to receive supports during the school day and less likely than their wealthier peers to receive supports over the summer.

TABLE 5.5. Timing of Support Activities Provided to Students With "Reading Deficiencies" by Student and District Characteristics

	Percentage Receiving Support ...			
	Before School	**During School**	**After School**	**In the Summer**
Overall	2.4%	88.9%	5.6%	12.3%
By Student Characteristics				
Black (n=28,202)	2.1%	95.4%	5.4%	7.3%
American Indian or Alaska Native (n=569)	2.5%	84.7%	5.4%	16.0%
Asian (n=2,437)	3.2%	85.2%	5.4%	14.2%
Hispanic or Latino/a/x (n=11,398)	1.2%	91.2%	5.0%	9.7%
Native Hawaiian/Pacific Islander (n=67)	0.0%	92.5%	1.5%	7.5%
Two or more races (n=5,599)	1.8%	88.8%	5.6%	11.3%
White (n=56,734)	2.8%	85.3%	5.8%	15.4%
Economically disadvantaged (n=75,090)	2.0%	91.0%	5.4%	11.0%
Not economically disadvantaged (n=29,916)	3.4%	83.4%	5.9%	15.7%
By District Characteristics				
Urban district (n=32,183)	0.5%	93.5%	3.5%	5.6%
Suburb/town district (n=51,244)	3.7%	86.6%	7.0%	15.1%
Rural district (n=20,787)	2.2%	86.7%	5.4%	16.4%

Note: Data are derived from student-level administrative records for the cohort of students in 3rd grade in 2020-21. This cohort is tracked from 2018-19 to 2020-21, and percentages reflect the timing of activities students identified with a "reading deficiency" in the 2020-21 3rd-grade cohort received between 2018-19 and 2020-21.

DISTRICTS INTEND TO RETAIN LESS THAN ONE PERCENT OF 3RD-GRADE STUDENTS

This subsection provides a brief summary of the retention outcomes for 2020-21 3rd-grade students and the initial retention decisions of districts. We refer interested readers to EPIC's preliminary retention reports for greater detail (Education Policy Innovation Collaborative, 2021a, 2021b).

M-STEP Participation Rates Were Lower Than Normal Due to the Federal Waiver of Required Participation

As mentioned earlier, the federal government waived the testing participation requirement that mandated at least 95% of students participate in the M-STEP for the state to receive federal funding. Just over 70% of 3rd-grade students took the test, and participation rates differed significantly by both student and district characteristics. White, American Indian, and Native Hawaiian/Pacific Islander students were the most likely to take the 3rd-grade ELA M-STEP, while Black students were the least likely to take the test.

The roughly 30% of 3rd-grade students who did not take the M-STEP were not eligible for retention under the Read by Grade Three Law. Student groups with the lowest participation rates historically have scored lower on the M-STEP. Thus, the overall retention eligibility rate is likely to underestimate the percentage of 3rd-grade students performing below the M-STEP cut score intended to signify scoring at least one grade level behind in literacy skills.

There Were Significant Disparities in Retention Outcomes Overall and Across Subgroups

Based on their M-STEP scores, districts promoted over 75% of tested 3rd graders to 4th grade without any recommendation for extra support. They promoted nearly 20% of tested students with additional literacy support. Just under 5% of tested students were eligible for retention because they scored 1252 or below on the 3rd-grade ELA M-STEP.

There were significant disparities in the characteristics of students who scored low enough on the 3rd-grade ELA M-STEP to be eligible for retention. In particular, Black students were far more likely both to be eligible for retention (13%) and to be promoted with support (40%) than were other students (overall 5% and 19%, respectively). Hispanic or Latino/a/x, American Indian, and students who identify as multiple races were also more likely to be eligible for retention or promotion with additional supports than their White and Asian peers. Economically disadvantaged students (8%) were four times as likely to be eligible for retention than their wealthier peers (2%).

Districts Offered Good Cause Exemption Waivers to Most Retention-Eligible Students

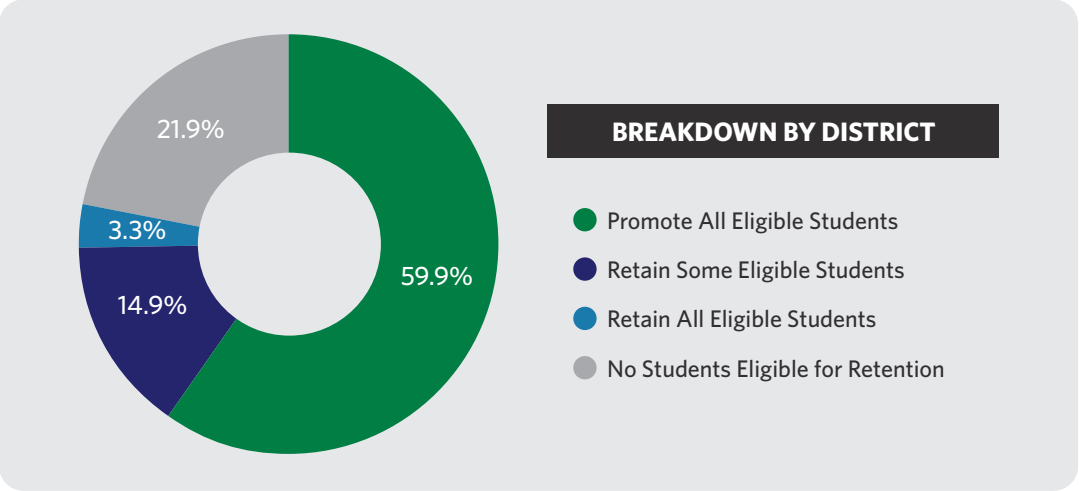
Districts across the state chose to exercise their ability to waive retention through the use of "good cause exemptions." Just over 4% of 3rd-grade students who took the M-STEP exam received a good cause exemption, preventing them from being retained. This 4% represents the vast majority (93%) of students eligible for retention based on their M-STEP score. Districts still intended to retain 0.3% of tested students and 0.2% of students overall.

Again, there are disparities in the characteristics of students who received a good cause exemption. Black students were the least likely to receive a good cause exemption. Schools still intended to retain 10% of Black students identified for retention compared to 3% of Asian students and 5% of

White and American Indian students. Wealthier students were also more likely to receive a good cause exemption than economically disadvantaged students.

As seen in Figure 5.4, almost 60% of districts with any students eligible for retention promoted all students through exemptions. Urban school districts were the least likely to promote all eligible students. Very few districts (less than 5%) retained all students eligible for retention, and these were more likely to be charter schools and small districts.

FIGURE 5.4. Breakdown of Districts by Intent to Promote All, Retain All, Promote/Retain Some Eligible Students, Overall



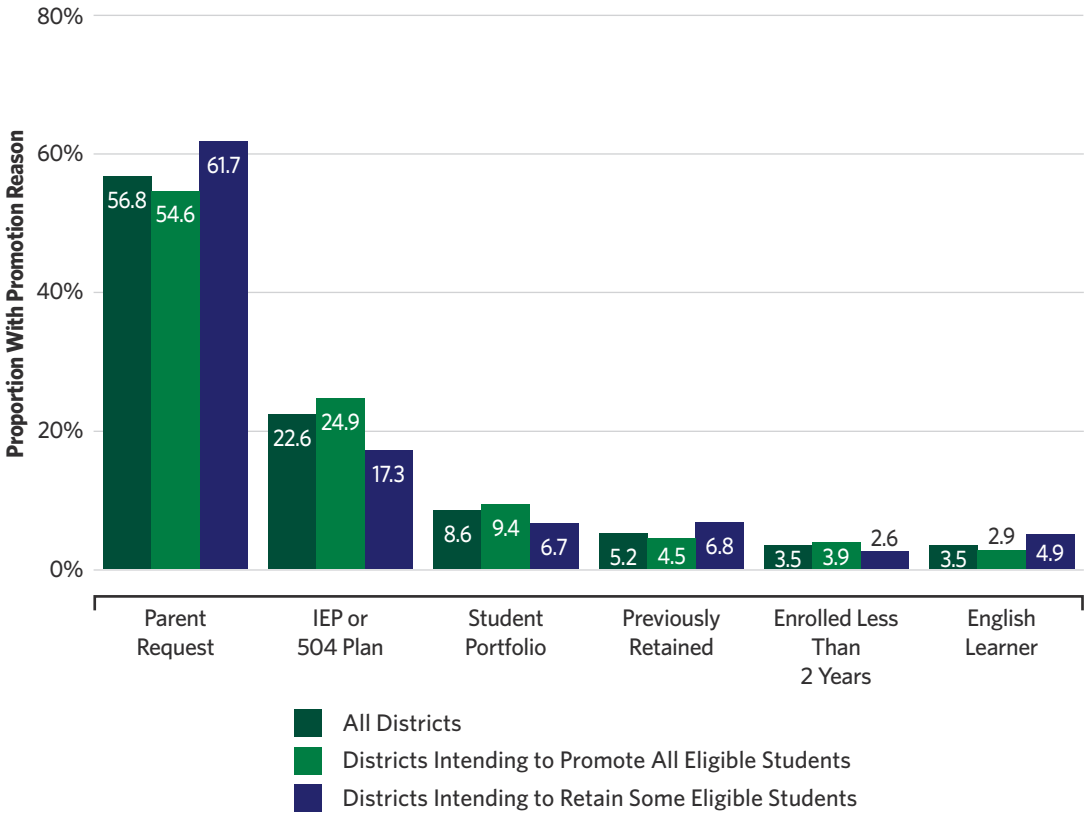
Note: These are percentages of all 766 school districts with 3rd-grade students enrolled during the spring of 2021.

Retention-eligible students could be promoted for one of six types of good cause exemptions, as laid out in Figure 5.5. The most common exemption was a parent request; over half of all retention-eligible students were promoted using this good cause exemption.

There are differences in the characteristics of students who received good cause exemptions in 2020-21. Black students were the most likely to receive a good cause exemption due to a parent request, but among the least likely to be promoted due to an IEP or a 504 Plan or due to a reason listed as "Other." Hispanic or Latino/a/x students were less likely to receive a good cause exemption due to a parental request, but more likely to receive an exemption due to an "Other" reason, behind Asian students.

Students in urban districts were more likely to receive good cause exemptions by parent request. In contrast, students in small districts were less likely to receive good cause exemptions by parent request. Charter schools were much less likely to promote retention-eligible students via good cause exemptions than were TPSs, and districts in suburbs and towns were more likely to provide good cause exemptions. Students in fully in-person districts were the most likely to receive a good cause exemption relative to other modalities. Even though no fully remote districts retained all eligible students, students in those districts were the most likely to be retained.

FIGURE 5.5. Types of Good Cause Exemptions Granted In 2021



Note: These are percentages of retention-eligible 3rd-grade students who districts intend to promote. Summing all bars of the same color together will equal 100%. However, the percentages shown may not sum to exactly 100% due to rounding.

STUDENTS LABELED AS "READING DEFICIENT" ARE MORE LIKELY TO BE IDENTIFIED FOR RETENTION

This subsection examines whether being identified as having a "reading deficiency" predicts students' likelihood of being retained. If the Law is implemented as intended, there should be a correlation between "reading deficiency" and eventual retention because districts would have identified all students at risk of retention in 3rd grade in earlier years. While many would have received sufficient support to avoid retention in 3rd grade, some students would likely continue to struggle with literacy and be eligible for retention. However, it is possible that districts used their autonomy in identifying students with a "reading deficiency" to flag fewer students for interventions than may have needed supports to achieve a promotion-eligible M-STEP score in 3rd grade. This is because interventions can be expensive, and resource constraints (i.e., money, staffing shortages) may make providing individualized or small group instruction challenging. Thus, districts may assess the number of students they could plausibly support based on their constraints and identify that number of students as having a "reading deficiency."

As we show below, there is a strong relationship between patterns of "reading deficiency" identification and retention outcomes. However, there is variation in the difference between actual and predicted levels of retention eligibility across school district subgroups. Districts with higher proportions of economically disadvantaged students and lower prior ELA performance had systematically more retention-eligible students than predicted by their students' "reading deficiency" status and other characteristics.

Students Identified as Having a "Reading Deficiency" Are More Likely to Be Eligible for Retention and to Be Retained

Longer Duration and More Recent "Reading Deficiency" Identification Are Associated With Being Identified for Retention, Promoted With Supports, and Retained in 3rd Grade

As shown in Figure 5.3 and again in Table 5.6, many students moved in and out of "reading deficiency" status prior to 3rd grade and just over half of 2020-21 3rd-grade students were classified as having a "reading deficiency" at least once between 2018-19 and 2020-21.

Table 5.6 also shows the Read by Grade Three Law retention outcomes for 3rd-grade students in 2020-21 by their fall "reading deficiency" identification patterns. Column 2 shows that students whose district never identified them as having a "reading deficiency" were somewhat more likely to participate in the 2020-21 3rd-grade ELA M-STEP assessment than were those identified in at least one year. However, we do not find evidence that students with a more recent identification of "reading deficiency" were less likely to participate in the M-STEP. This result suggests that the lack of participation may be more attributable to factors like a district's instructional modality and less about an attempt to avoid retention by not taking the assessment.

The final four columns of Table 5.6 show the M-STEP performance and retention outcomes of students who participated in the 2020-21 3rd-grade ELA M-STEP. We use the term "retention outcomes" to encompass 1) being identified for promotion but with required literacy supports (scoring between a 1253 and 1272 on the 3rd-grade ELA M-STEP); 2) being identified as eligible for retention (scoring a 1252 or below); and 3) being retained. We see a clear relationship between the frequency and recency of "reading deficiency" identification and M-STEP and retention outcomes. Students ever identified as having a "reading deficiency" are less likely to score 1272 or above and qualify for unconditional promotion. In contrast, ever-identified students are more likely to qualify for promotion with support (scoring between a 1253 and 1272), be retention eligible (scoring a 1252 or below), and have their district intend to retain them than never-identified students.

Furthermore, Table 5.6 suggests a positive correlation between years and recency of fall "reading deficiency" identification and retention outcomes. Students identified as having a "reading deficiency" for a longer duration or just before the 2020-21 ELA M-STEP were more likely to have worse retention outcomes. For instance, students identified twice were more likely to qualify for promotion with support and retention and were more likely to be retained than students identified only once. This pattern extends to students identified three times relative to those identified twice. Finally, among groups of students identified the same number of times, students identified as having a "reading deficiency" in 2020-21, the fall of their 3rd-grade year, were more likely to perform poorly on the M-STEP, be eligible for retention, and be retained than those identified less recently. Together, these results suggest that "reading deficiency" identification patterns are associated with M-STEP performance and retention outcomes.

TABLE 5.6. Fall "Reading Deficiency" Patterns and Retention Outcomes								
"Reading Deficiency?"			(1)	(2)	(3)	(4)	(5)	(6)
Fall 2018	Fall 2019	Fall 2020	Occurrence Rate	M-STEP Participation Rate	Score 1272 or above Rate	Score 1253 to 1271 Rate	Retention Eligibility Rate	Intent to Retain Rate
Never Identified								
No	No	No	48.7%	78.4%	92.0%	7.1%	0.9%	4.6%
Ever Identified								
At Least 1 Year			51.3%	66.8%	59.9%	31.5%	8.6%	3.5%
Identified 1 Year								
Yes	No	No	9.3%	65.5%	77.2%	18.8%	4.1%	3.5%
No	Yes	No	2.5%	66.8%	72.5%	22.0%	5.6%	7.1%
No	No	Yes	6.9%	72.8%	67.9%	26.1%	6.0%	6.1%
Identified 2 Years								
Yes	Yes	No	5.5%	60.3%	69.2%	24.9%	5.9%	8.3%
No	Yes	Yes	5.0%	70.9%	54.5%	36.4%	9.1%	5.7%
Yes	No	Yes	4.9%	60.3%	51.5%	37.4%	11.1%	6.3%
Identified 3 Years								
Yes	Yes	Yes	17.3%	67.9%	46.8%	40.7%	12.5%	7.8%

Note: Data are derived from student-level administrative records for the cohort of students in 3rd grade in 2020-21. This cohort is tracked from 2018-19 to 2020-21. Columns (1) and (2) include all students enrolled in 3rd grade in 2020-21, Columns (3) through (5), include only students who participated in the 2020-21 3rd-grade ELA M-STEP, and Column (6) includes only students who are retention-eligible under the Law.

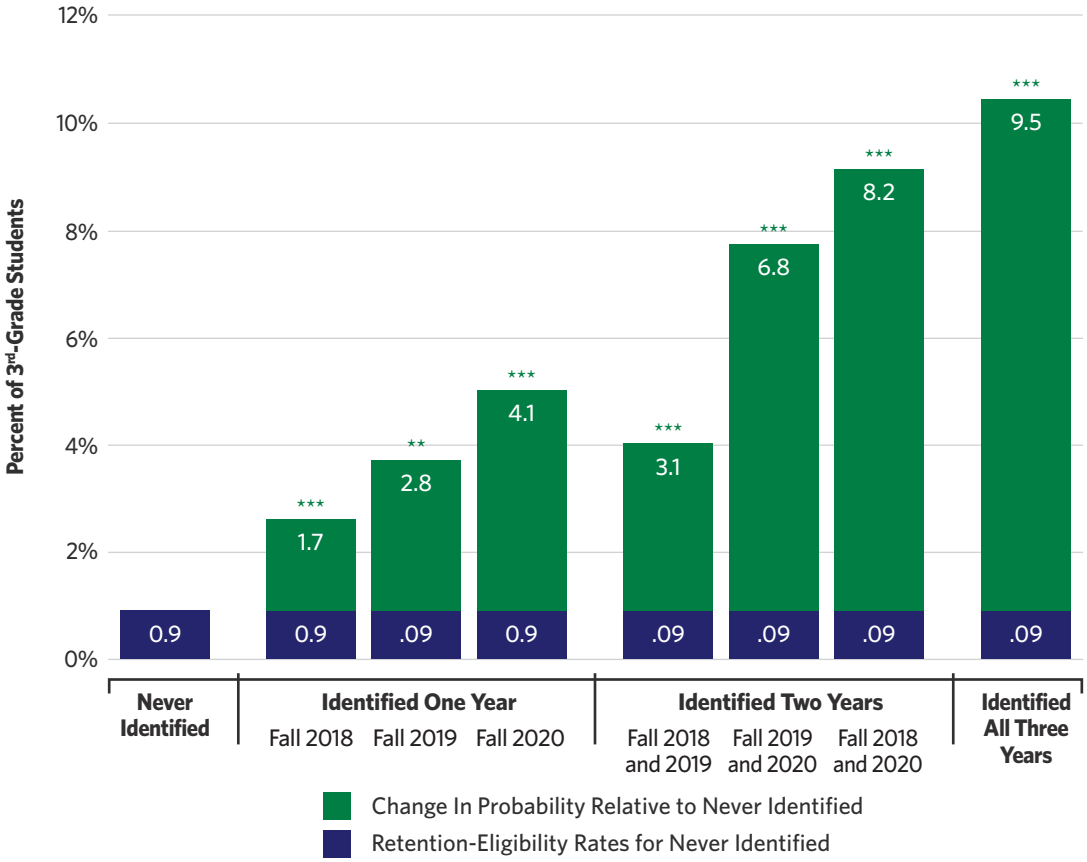
"Reading Deficiency" Continues to Predict Retention Outcomes After Controlling for Other Factors

While Table 5.6 shows a clear correlation between "reading deficiency" patterns and retention outcomes, it is possible that these relationships are attributable to correlations between student, school, and district characteristics associated with the relevant outcomes. As described in Section Two, we use regression analyses to understand whether the relationships between "reading deficiency" identification patterns and M-STEP and retention outcomes persist once we account for the confounding influence of other student, school, and district characteristics.

We show our full regression results in Appendix C.1. In Figure 5.6, we highlight the estimated relationships of interest—those between fall "reading deficiency" patterns and retention eligibility. The figure shows the baseline retention-eligibility rates for students who were never identified as having a "reading deficiency" in blue. Controlling for other factors, 0.9% of 3rd-grade students who are never identified as "reading deficient" are eventually eligible for retention. The green bars provide the regression estimate of how much *more likely* students are to be "retention eligible" given their various fall "reading deficiency" patterns after controlling for a variety of student characteristics and all constant school characteristics. For example, the second bar from the left indicates that students who were only identified as "reading deficient in fall 2018 were 1.7 percentage points more likely to be retention-eligible (green bar) than never-identified students (blue bar), and the total retention-eligibility rate for this group was 2.6% (blue bar plus green bar).

Figure 5.6 clearly shows a strong relationship between fall "reading deficiency" patterns and retention eligibility even after controlling for other confounding factors. These results are consistent with our descriptive findings in Table 5.6; students identified as having a "reading deficiency" more frequently or more recently are more likely to be eligible for retention in 3rd grade. Furthermore, students who are identified with a "reading deficiency" in all three years are nearly ten times more likely to be retention eligible than their peers who were never identified.

FIGURE 5.6. Regression Estimates: Relationship Between Fall "Reading Deficiency" Patterns and Retention Eligibility



*Note: Data are derived from student-level administrative records for the cohort of students in 3rd grade in 2020-21. This cohort is tracked from 2018-19 to 2020-21. The sample includes students who participated in the 2020-21 3rd-grade ELA M-STEP. Full regression estimates and standard errors are in Appendix C.1. The stars indicate statistical significance. + p<0.1 * p<0.05 ** p<0.01 ***p<0.001*

Some Districts Had More Retention Eligible Students Than Predicted by Fall "Reading Deficiency" Patterns

We have shown that "reading deficiency" patterns are significant predictors of student-level retention outcomes. We next examine how well these patterns predict district-level retention eligibility rates. We focus on retention eligibility over other M-STEP and retention outcomes because of the policy salience; the intent of "reading deficiency" identification is to improve

students' literacy skills enough to ensure that they are not eligible for retention under the Law. In an ideal world, students would be identified as "reading deficient" if they needed substantial help with literacy. These students would then receive necessary supports and interventions to help them improve their literacy skills, which should be reflected in higher scores—high enough to avoid being eligible for retention—on the ELA M-STEP.

However, districts may not be accurate in their assessments of struggling readers; they may identify too many or too few students as "reading deficient." The downside of under-identifying students as "reading deficient" is that too few students will receive the necessary interventions to help them improve their literacy skills by the end of the 3rd grade. As noted earlier, this might occur if districts face resource constraints that make it difficult to provide extra literacy supports to all the students who need them. If districts over-identify students as "reading deficient" in the early years, it may be that too many students will receive extra supports. This could result in an ineffective use of resources. Alternatively, it may suggest that the interventions students identified with a "reading deficiency" received effectively improved literacy skills and test performance.

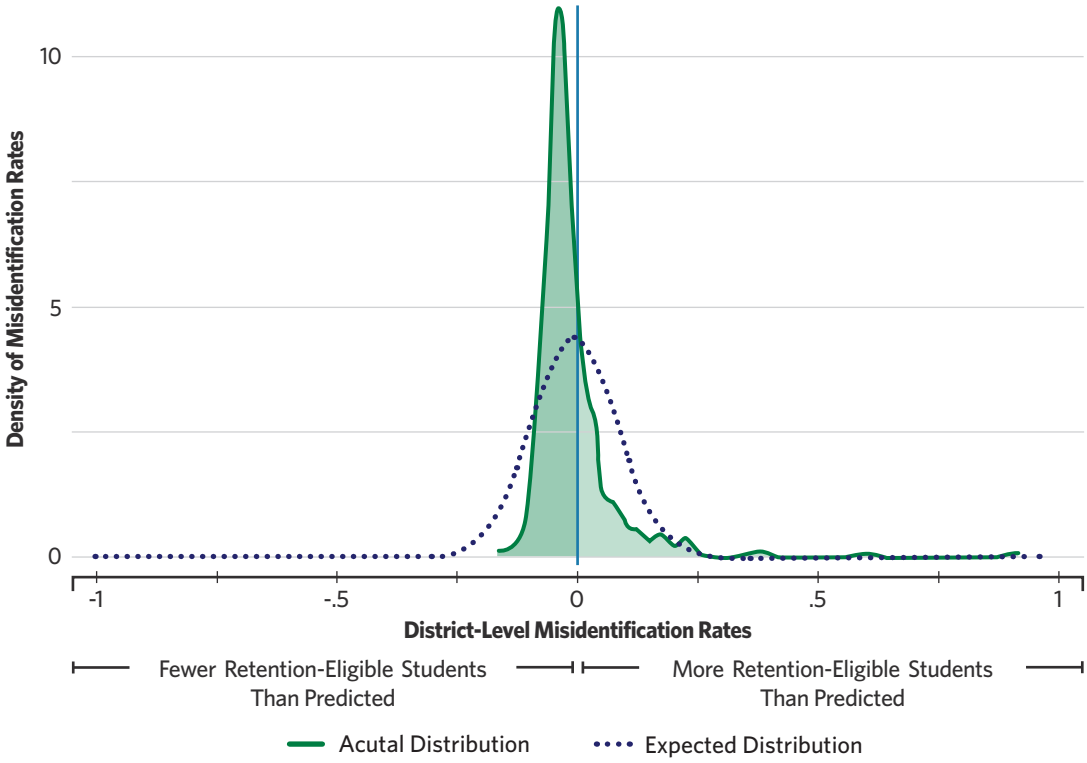
We model district-level retention eligibility rates using students' fall "reading deficiency" patterns, various student characteristics, and fixed school characteristics.[4] We take the difference between actual district-level retention eligibility rates and those predicted by the model to determine each district's misidentification rate. Positive (negative) misidentification rates indicate more (fewer) retention-eligible students than the model indicates. We say a district has over-identified students with "reading deficiencies" if their misidentification rate is negative, and they have under-identified if their misidentification rate is positive.

Districts Were More Likely to Under-Identify Than to Over-Identify Struggling Readers

Figure 5.7 shows the distribution of school district-level retention-eligibility rate misidentification rates. Again, misidentification rates are the difference between the actual retention-eligibility rate in a district and the retention-eligibility rate predicted by our model. The y-axis indicates how frequently districts have each misidentification rate given by the x-axis. Higher values on the y-axis denote a more common occurrence. The x-axis denotes where districts may have under- or over-identified students with a "reading deficiency."

While the majority of districts have small misidentification rates (tending towards over-identification), we see a noticeable long right tail of the distribution, reaching a maximum of 0.96 (meaning this district had 96 percentage points *more* retention-eligible students than our model would have predicted) compared to the minimum of -0.14 (meaning the district had 14 percentage points *fewer* retention-eligible students than the model predicted). In fact, the distribution of misidentification rates is skewed so much that it no longer resembles a normal distribution (shown by the blue dotted line). This means that while most districts were more-or-less accurately identifying students with a "reading deficiency," a significant number of school districts were more likely to under-identify students with a "reading deficiency," suggesting that "reading deficiency" identification may not be accurately identifying all students who are struggling with literacy in these districts.

FIGURE 5.7. Distribution of District-Level Misidentification Rates



Note: District-level retention-eligibility prediction errors are derived from regression model estimates in Appendix C.1, Column (4). Positive (negative) prediction errors indicate there were more (fewer) retention-eligible students than predicted. The y-axis indicates how frequently districts have each misidentification rate given by the x-axis.

Historically Underserved Districts Had Systematically More Retention-Eligible Students Than Predicted

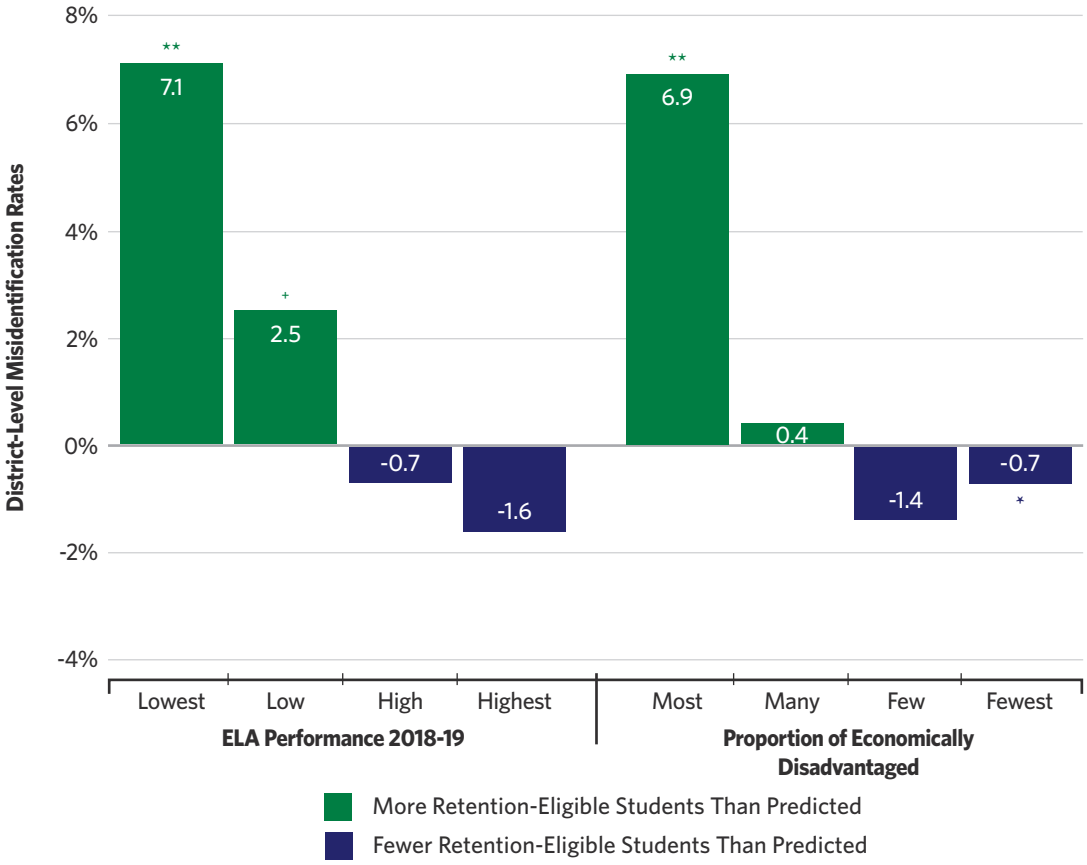
To better understand if there are any patterns associated with under-identification, we examine the characteristics of school districts with high rates of under-identification in the right tail of the distribution in Figure 5.7. To do so, we analyze the relationships between misidentification rates and school district characteristics. We provide comparisons of misidentification rates by the quartiles of various school district characteristics in Appendix C.2. In Figure 5.8 we focus on districts' prior ELA performance and the proportion of economically disadvantaged students.

Before we draw conclusions from the average misidentification rates presented in Figure 5.8, it is important to note that district characteristics are correlated. For example, districts with lower prior ELA performance are more likely to have a higher proportion of economically disadvantaged students, to be located in an urban area, and to have lower M-STEP participation rates. To understand if certain kinds of districts tend to have large positive or negative discrepancies between predicted and actual retention rates, we again use regression analyses to control for other correlated factors. Results shown in Appendix C.2 provide further evidence that historically underserved districts under-identified students with "reading deficiencies" more than their wealthier counterparts.

Figure 5.8 shows that districts with the lowest 2018-19 ELA performance and the highest proportions of economically disadvantaged students are also the most likely to have under-identified students with a "reading deficiency." Thus, these historically underserved districts tend

to have more retention-eligible students than we'd expect based on their students' retention-eligibility status, student characteristics, and fixed school characteristics.

FIGURE 5.8. Regression-Estimated Relationship Between Misidentification Rates and District Characteristics



*Note: Data are derived from student-level administrative records for the cohort of students in 3rd grade in 2020-21. This cohort is tracked from 2018-19 to 2020-21. Green bars indicate that districts have under-identified students with "reading deficiencies" on average. Blue bars indicate that districts have over-identified students with "reading deficiencies" on average. The stars represent the level of statistical significance. + p<0.1 * p<0.05 ** p<0.01 ***p<0.001*

Our results suggest that districts with lower ELA performance and higher proportions of economically disadvantaged students have systematically more retention-eligible students than predicted. This pattern indicates that historically underserved districts tended to under-identify students with "reading deficiencies" even though over 50% of 2020-21 3rd-grade students were ever identified as having a "reading deficiency."

While this could suggest that these districts are deliberately trying to under-represent the number of students with a "reading deficiency" in their districts due to resource constraints, it may also be that these historically underserved districts have unintentionally set proficiency targets that are too low relative to the ELA M-STEP proficiency standards or their "reading deficiency" assessments are misaligned with the 3rd-grade ELA M-STEP. Regardless of the reason, the systematic under-identification of students with a "reading deficiency" suggests

that too few students are receiving necessary literacy supports and districts should consider revisiting their proficiency standards for "reading deficiency" identification and that the state should make sure that the assessments allowed for the identification of "reading deficiencies" are well-aligned with the 3rd-grade ELA M-STEP.

SUMMARY

We show that roughly half of all students, and over 75% of Black students, in the 2020-21 3rd-grade cohort were identified as having a "reading deficiency" in at least one year between 2018-19 and 2020-21, and just under half of those ever-identified students "remedied" their "reading deficiency" by the end of 3rd grade. It is therefore not surprising that students who had been identified as having a "reading deficiency" are more likely to be eligible for retention and to be eventually retained. In particular, students who were identified as having a persisting "deficiency" or who were identified in the beginning of 3rd grade or in proximate years were more likely to be retention-eligible and eventually retained. The numbers of students who are actually retained, however, are quite small. While more than half of the 2020-21 3rd-grade cohort were ever-identified as having a "reading deficiency," less than 5% of students who participated in the 2020-21 3rd-grade ELA M-STEP were retention-eligible based on their scores. Districts intend to retain only 0.3% of tested 3rd-grade students.

Nonetheless, these data suggest that many Michigan students face substantial literacy challenges, and many of those students are not receiving ample support to help them sufficiently improve their literacy skills. We do not have adequate data to help us understand the specific interventions offered to students to help them improve their literacy performance. However, we know that districts most often provide support during the school day rather than before or after school or in the summer. Pandemic-related disruptions may have also affected the specific interventions offered to students.

It is also apparent that certain student groups are more likely to be identified as having a "reading deficiency," eligible for retention, and eventually retained. Historically underserved student populations were more likely to be identified and less likely to have "remedied" their "reading deficiency." Similarly, historically disadvantaged students were more likely to be retention eligible and retained than their more advantaged peers.

Even so, more districts had a higher rate of retention eligibility than predicted by their students' "reading deficiency" patterns and other characteristics than not. Districts with higher proportions of economically disadvantaged students and lower prior ELA performance had significantly higher prediction errors than their peers. Regardless of the reason for the systematic under-prediction of retention-eligibility rates, districts may want to consider revisiting their proficiency standards for "reading deficiency" and/or selecting assessments that better align with the 3rd-grade ELA M-STEP to enable more accurate identification of struggling readers.

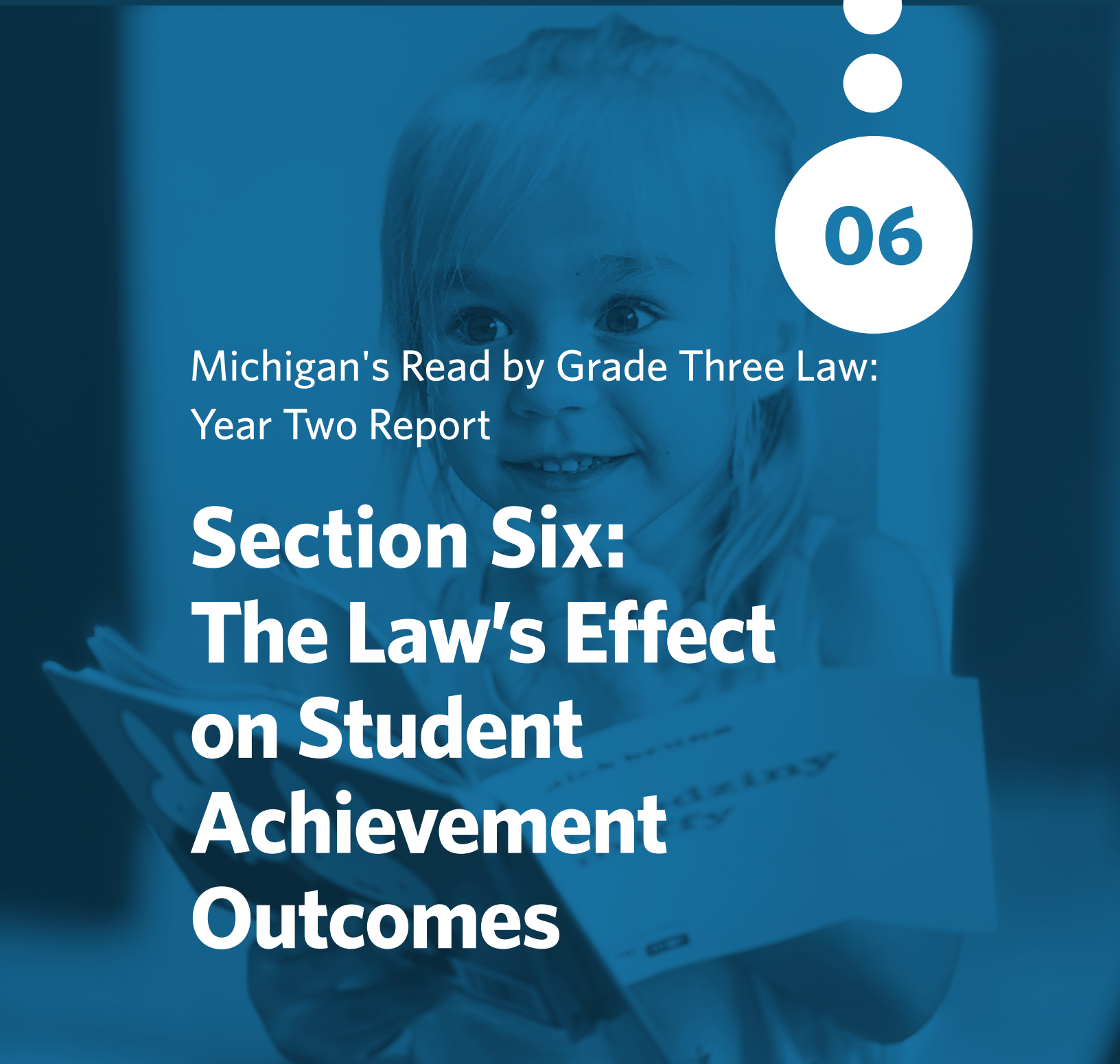
SECTION FIVE NOTES

1. Districts assess students at the beginning of the school year to identify whether they have a "reading deficiency" and again at the end of the year for whether they still have a "reading deficiency" (i.e., a continuing "reading deficiency"). If not, they are said to have "remedied" it according to the language in Read by Grade Three Law.

2. About 10,000 fewer students enrolled in kindergarten in 2020-21 than in 2018-19, and these declines were highest among Black and economically disadvantaged students (Musaddiq et al., 2021). These patterns in Michigan reflect national kindergarten enrollment declines during the pandemic, especially among historically underserved students (Goldstein & Parlapiano, 2021). As shown below, historically underserved students are more likely to be flagged as having a "reading deficiency." Hence, the lower enrollment among this group during the pandemic likely drove the decline in kindergarteners' identification rate in 2020-21.

3. We examine "reading deficiency" identification and "remedy" rates at the district level and find similar patterns. Urban districts and districts with higher proportions of historically underserved students identify higher proportions of students with a "reading deficiency," while districts with higher proportions of more advantaged students have higher "remedy" rates.

4. See Section Two for a detailed technical description of our model and methodology.



06

Michigan's Read by Grade Three Law:
Year Two Report

Section Six: The Law's Effect on Student Achievement Outcomes

Section Six:
The Law's Effect on Student Achievement Outcomes

INTRODUCTION

This section uses survey and administrative data to examine teachers' perceptions of student literacy achievement since the state passed the Read by Grade Three Law and the Law's effect on student achievement as measured by M-STEP subscores in reading, listening, writing, and research. Aside from these intended outcomes, we also examine the potential unintended effects of the Read by Grade Three Law on student retention in grades K-5, student mobility, and special education and English learner identification. Table 6.1 summarizes our main findings regarding each of these outcomes.

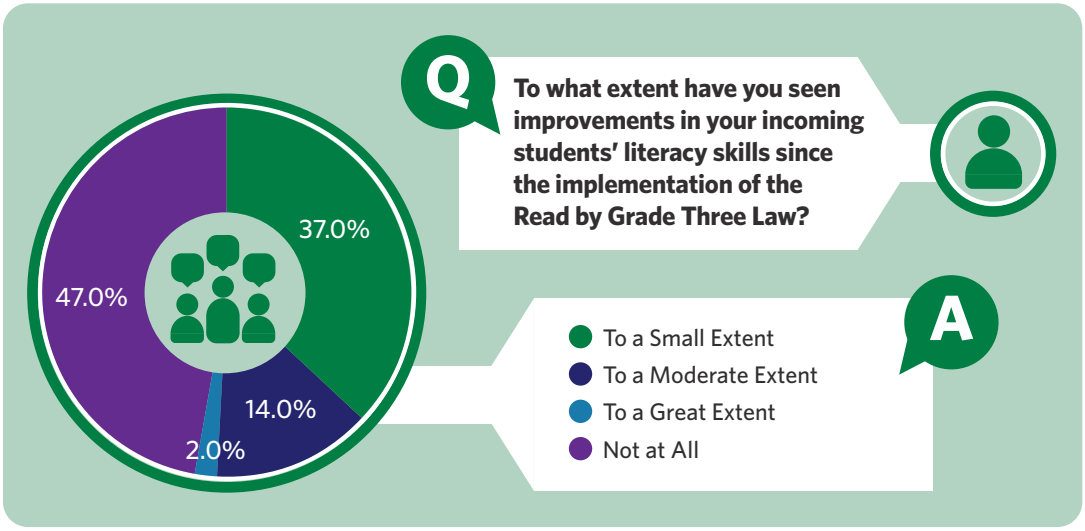
TABLE 6.1. Evidence of Effects on Student Achievement Outcomes

Teachers' perceptions of improvements in incoming students' literacy skills	Many teachers reported seeing little to no improvement in their incoming students' literacy.
2014-15—2018-19 M-STEP sub-scores: reading, listening, writing, and research	Consistent with our findings about overall ELA M-STEP performance (presented in the Year One report), 3rd-grade ELA M-STEP performance on sub-scores increased through the 2018-19 school year.
Student retention	Student retention remained stable through 2019-20.
Student mobility	Student mobility was stable until 2019-20 when there was a sharp increase in exits and a sharp decrease in out-of-district transfers. These changes are likely due to the COVID-19 pandemic and are not attributable to the Law.
Special education placement, identification, and exit	Special education placement, identification, and exit generally remained in line with pre-Law trends.
English learner classification	Other demographic and policy changes confounded our analysis of English learner classification.

MOST EDUCATORS PERCEIVED LITTLE OR NO IMPROVEMENTS IN THEIR INCOMING STUDENTS' LITERACY SKILLS

As shown in Section Four, educators used the Read by Grade Three Law's interventions and recognized their utility. If students receive literacy interventions in grades K-3, we expect students to demonstrate improved literacy skills in subsequent grade levels relative to those in grades unaffected by the Law. However, most teachers did not believe that incoming students' literacy skills had improved since the Law's passage and implementation. Figure 6.1 shows that only 16% of teachers reported a great or moderate improvement, and just over a third of teachers reported a small improvement. Forty-seven percent, a plurality, perceived no improvement at all in their incoming students' literacy skills since the passage of the Law.

FIGURE 6.1. K-3 Teacher Perceptions of Incoming Students' Literacy Skills



Source: EPIC survey of educators about the Read by Grade Three Law.

M-STEP ELA SUBSCORES SUPPORT IMPROVEMENTS IN 3RD-GRADE STUDENTS' LITERACY ACHIEVEMENT AFTER THE LAW'S PASSAGE

Teachers' perceptions of students' literacy skills are to some extent contradicted by evidence from students' ELA M-STEP scores. As shown in the Read by Grade Three: Year One Report, there was a slight increase in 3rd-grade ELA and math performance on the M-STEP following the Law's implementation relative to the downward performance trend in the years prior. In the two years

leading up to the passage of the Law, 3rd-grade M-STEP scores for both math and ELA were trending downwards. However, starting in the 2016-17 school year, 3rd-grade test scores began to level off, increasing relative to projected pre-Law trends. Due to COVID-19 and the pause in standardized testing, 2018-19 continues to be the most recent M-STEP data available at the time of writing.[1]

We further analyze M-STEP achievement trends through the 2018-19 school year by examining 3rd-5th-grade ELA M-STEP subscores. The ELA M-STEP measures students' performance on four subareas: reading, listening, writing, and research. In addition to their overall ELA scores, students receive a subscore for each claim. We would expect 3rd-grade cohorts to be immediately affected by interventions put in place in the 2016-17 school year, and for later cohorts of 3rd graders—those in 3rd grade in 2017-18 and 2018-19—to see even greater effects since they would have experienced the Law's interventions for more years.

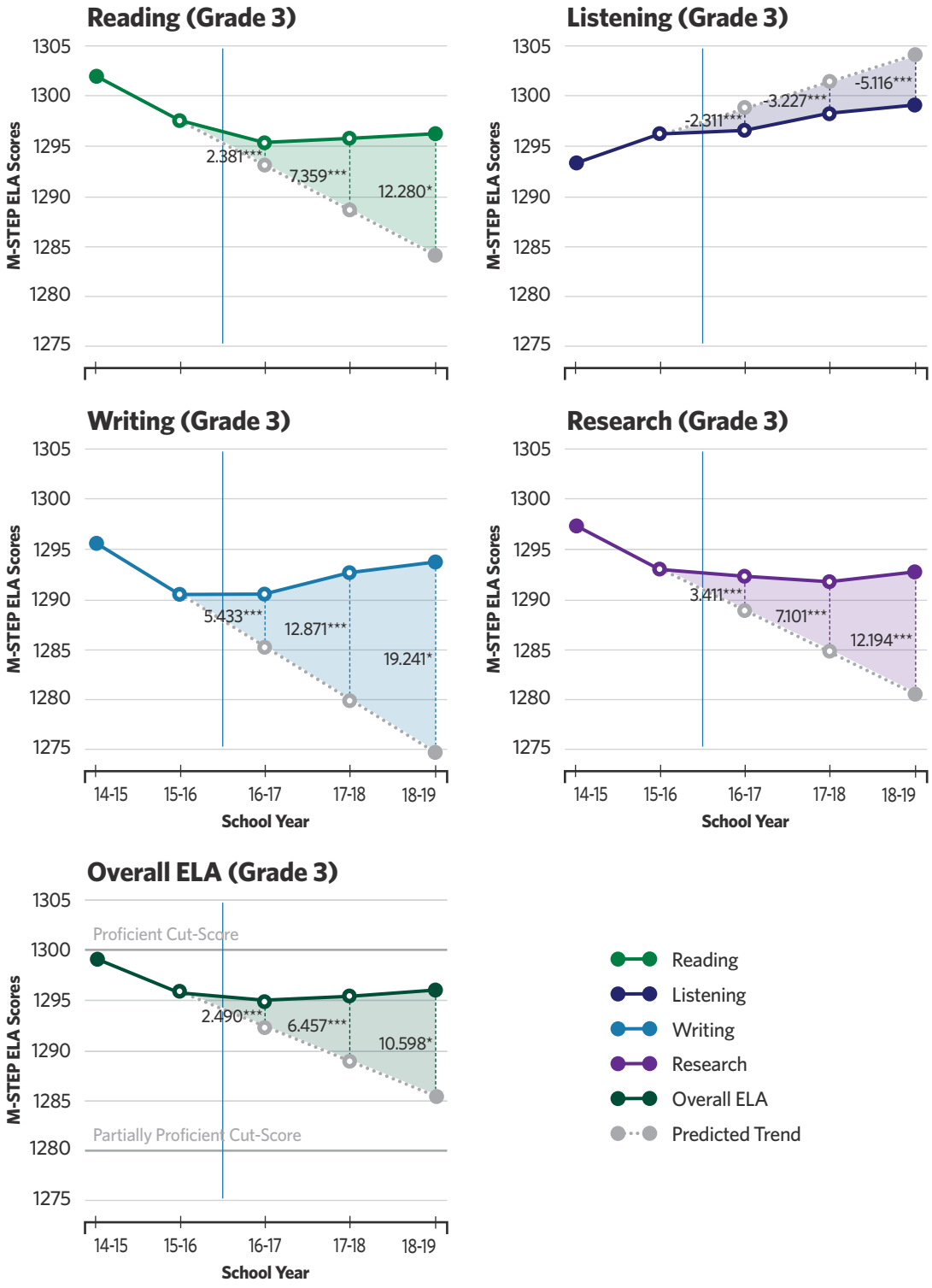
We perform an ITS analysis to quantify how ELA M-STEP subscores changed relative to their *predicted* pre-Law trends, thus helping us better understand whether shifts in scores may be related to the implementation of the Read by Grade Three Law. Since Michigan transitioned its testing program from the MEAP to the M-STEP in 2014-15, we only have two years of pre-Law M-STEP data available. Thus, our predicted pre-Law trends will be sensitive to whether ELA M-STEP subscores increased or decreased from 2014-15 to 2015-16. This caveat is significant in the 3rd and 4th grades, where MDE changed the tests slightly in 2015-16 to reduce testing time. Since testing times might change scores, this change in testing policy might increase or decrease scores in 2015-16, skewing pre-Law trends up or down.

Figure 6.2 shows that ELA subscores follow similar trends to the overall ELA score, decreasing before the Law's implementation and increasing slightly thereafter. This increase in subscores for each subsequent cohort is consistent with our expectation that 3rd-grade students in 2017-18 and 2018-19 would see greater effects due to more prolonged exposure.

We find similar trends in 4th- and 5th-grade M-STEP subscores, shown in Figure 6.3 and Figure 6.4. Because 4th-grade students only experienced the Law's interventions in the 2nd and 3rd grades, we would expect only later cohorts of students—those in 4th grade in the second and third years after the Law was passed—to be affected by the Law. Indeed, 4th-grade writing scores grew substantially after the second year of the Law's implementation. Similarly, the only 5th-grade students treated by the Law are those in the third implementation year, as these students were in the 3rd grade when the Law went into effect (and thus would have received interventions for K-3 students). We see a decline in the 5th-grade reading and research subscores for the first two years after the Law's implementation, but the decreases stop in the third year. Together, these results suggest that exposure to the Law's interventions is associated with slight increases in overall ELA and ELA subscores.

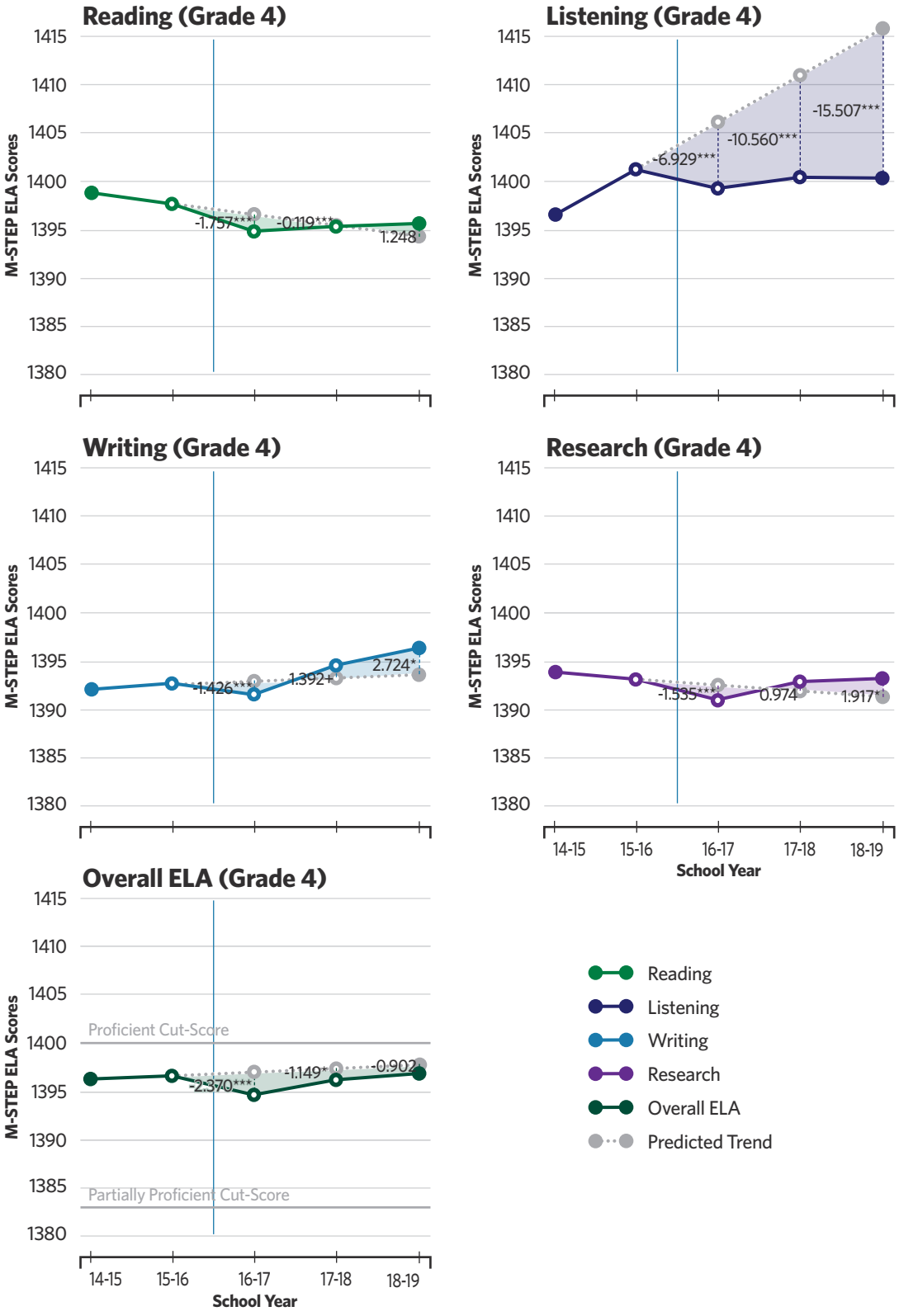
In all grades, listening subscores increased substantially in the pre-Law years, contrary to the trend seen in both the overall and other subscores. The subscore stabilizes and follows a similar trend to other claim subscores in the years following the Law's passage. This initial jump in the listening subscore may be related to changes to the ELA M-STEP in 2015-16 intended to reduce ELA testing time.

FIGURE 6.2. Changes in 3rd-Grade ELA M-STEP Subscores Relative to Pre-Law Trends



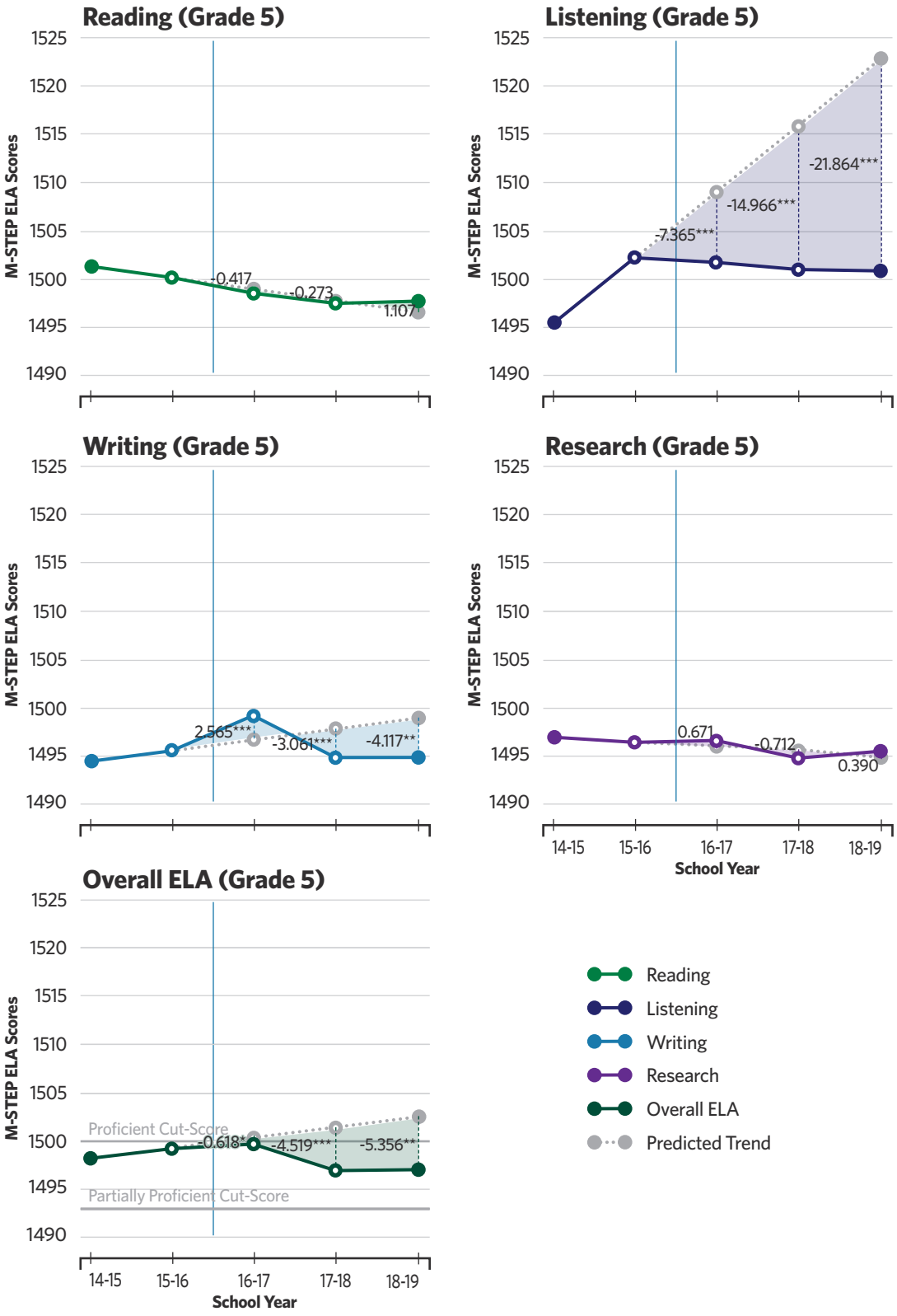
*Note: Estimates from ITS models. Full coefficient estimates can be found in Appendix D.1. Data are derived from student-level administrative records for Michigan 3rd-grade students. + p<0.1 * p<0.05 ** p<0.01 ***p<0.001*

FIGURE 6.3. Changes in 4th-Grade ELA M-STEP Subscores Relative to Pre-Law Trends



*Note: Estimates from ITS models. Full coefficient estimates can be found in Appendix D.2. Data are derived from student-level administrative records for Michigan 4th-grade students. + p<0.1 * p<0.05 ** p<0.01 ***p<0.001*

FIGURE 6.4. Changes in 5th-Grade ELA M-STEP Subscores Relative to Pre-Law Trends



*Note: Estimates from ITS models. Full coefficient estimates can be found in Appendix D.3. Data are derived from student-level administrative records for Michigan 5th-grade students. + p<0.1 * p<0.05 ** p<0.01 ***p<0.001*

Our ITS analysis of ELA M-STEP claim subscores substantiates our findings that the ELA test performance of 3rd-grade students improved relative to pre-Law trends in the years following the Read by Grade Three Law's implementation. Increases in subscores for the reading, writing, and research relative to predicted pre-Law trends appear to have driven the increase in overall ELA performance we observed in last year's report.

The ITS analysis of 4th-grade ELA M-STEP subscores shows some evidence that 4th-grade writing and research, and to a lesser extent reading, subscores increased relative to pre-Law trends for 2017-18 and 2018-19 4th-grade cohorts (who should have been affected by the Law in 2nd and/or 3rd grades). In 5th grade, we only expected the 2018-19 cohort to have experienced the Law. However, we find no evidence of significant changes in subscores relative to pre-Law trends.

STUDENT RETENTION REMAINED STABLE, EVEN THROUGH THE COVID-19 PANDEMIC

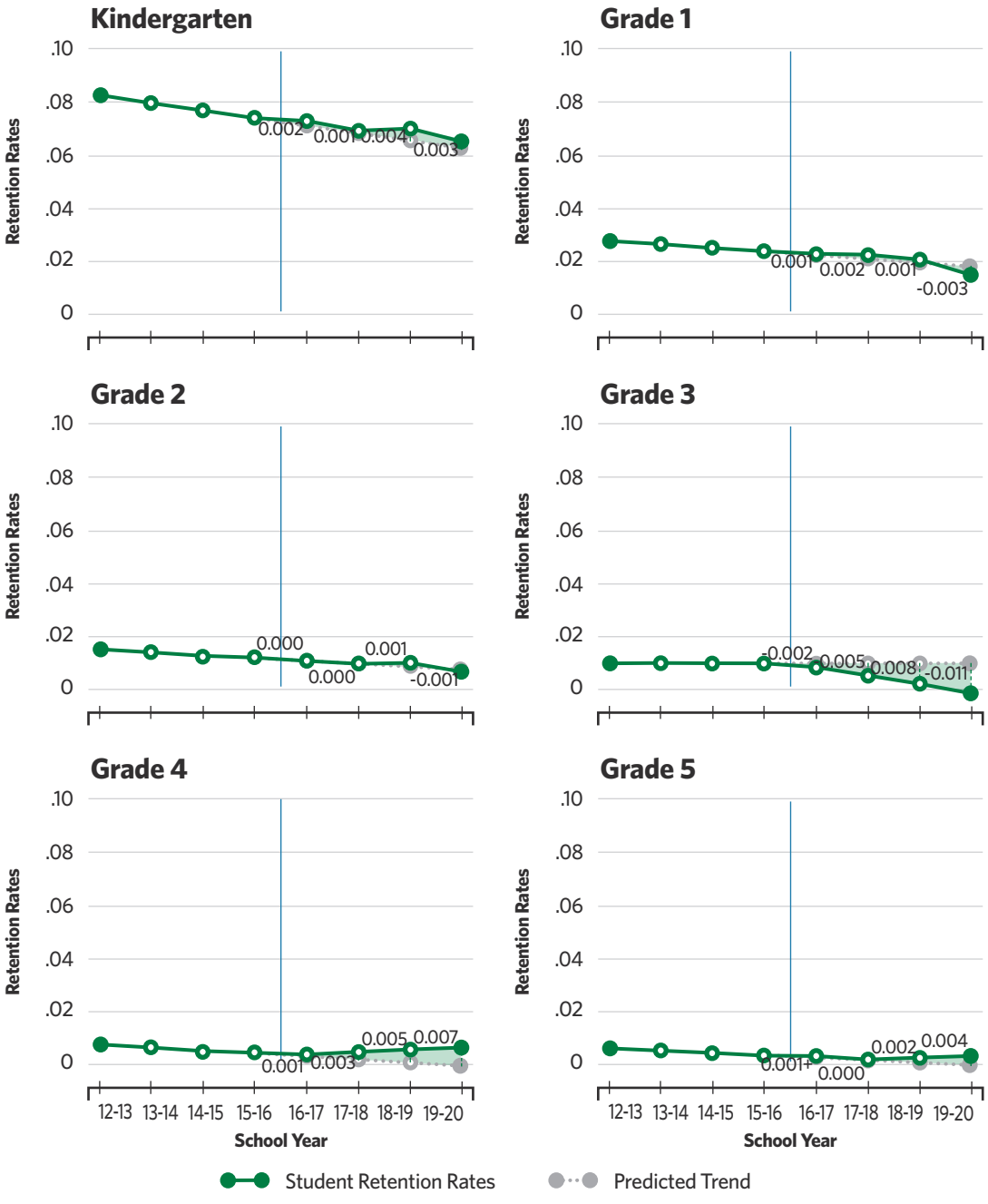
As discussed at length in Section Five, under the Read by Grade Three Law, 3rd-grade students who score a 1252 or below on the ELA M-STEP are eligible for grade retention unless granted one of the Law's good cause exemptions. We discuss retention outcomes for the 2020-21 cohort of 3rd-grade students in detail in Section Five. Still, we might also expect the Law to affect retention in other elementary grade levels not directly affected by the Read by Grade Three Law. On the one hand, improved literacy instruction and student achievement may lead to a decrease in retention in the grades before 3rd grade. On the other hand, families and schools may choose to retain students in earlier grade levels to avoid 3rd-grade retention under the Law, given that students who were previously retained in grades K-2 and received intensive literacy supports for two or more years can receive good cause exemptions. We also examine retention in 4th and 5th grade. While we wouldn't expect students to be strategically retained in these grades to avoid 3rd-grade retention, if the Law improves student achievement, we might expect to see lower retention rates in 4th and 5th grades.

We use student administrative records to identify students who repeated a grade level in each school year from 2012-13 through 2019-20—the year before the Read by Grade Three Law retention requirement went into effect. Figure 6.5 shows the retention rate at the end of each school year. For instance, for 2019-20, the retention rate is the proportion of students in the same grade level in fall 2020-21 as they were at the end of 2019-20. In last year's report, we found that retention rates remained stable over time. The exception was kindergarten: Retention in traditional (i.e., one-year) kindergarten decreased. At the same time, enrollment in Developmental Kindergarten increased—possibly because schools and districts expanded these two-year kindergarten programs to provide students more time to learn literacy or because they intended to afford students "previously retained" status that allows them to be exempt from 3rd-grade retention under the Law.[2]

We perform ITS analyses to formally test whether student retention rates significantly deviated from their pre-Law trends. The results from this analysis, shown graphically in Figure 6.5,

support our results from last year. There are no statistically significant deviations from the predicted trend line in any grade level.[3] These results suggest that educators and families are not strategically retaining students in earlier grades to avoid 3rd-grade retention under the Read by Grade Three Law.

FIGURE 6.5. Changes in Student Retention Relative to Pre-Law Trends



*Note: Estimates from ITS models. Full coefficient estimates can be found in Appendix D.4 The estimates for kindergarten include traditional (i.e., one-year) kindergarten only, and exclude Developmental Kindergarten students. Source: Student administrative records. + p<0.1 * p<0.05 ** p<0.01 ***p<0.001*

STUDENT MOBILITY PATTERNS SHIFTED DURING THE COVID-19 PANDEMIC

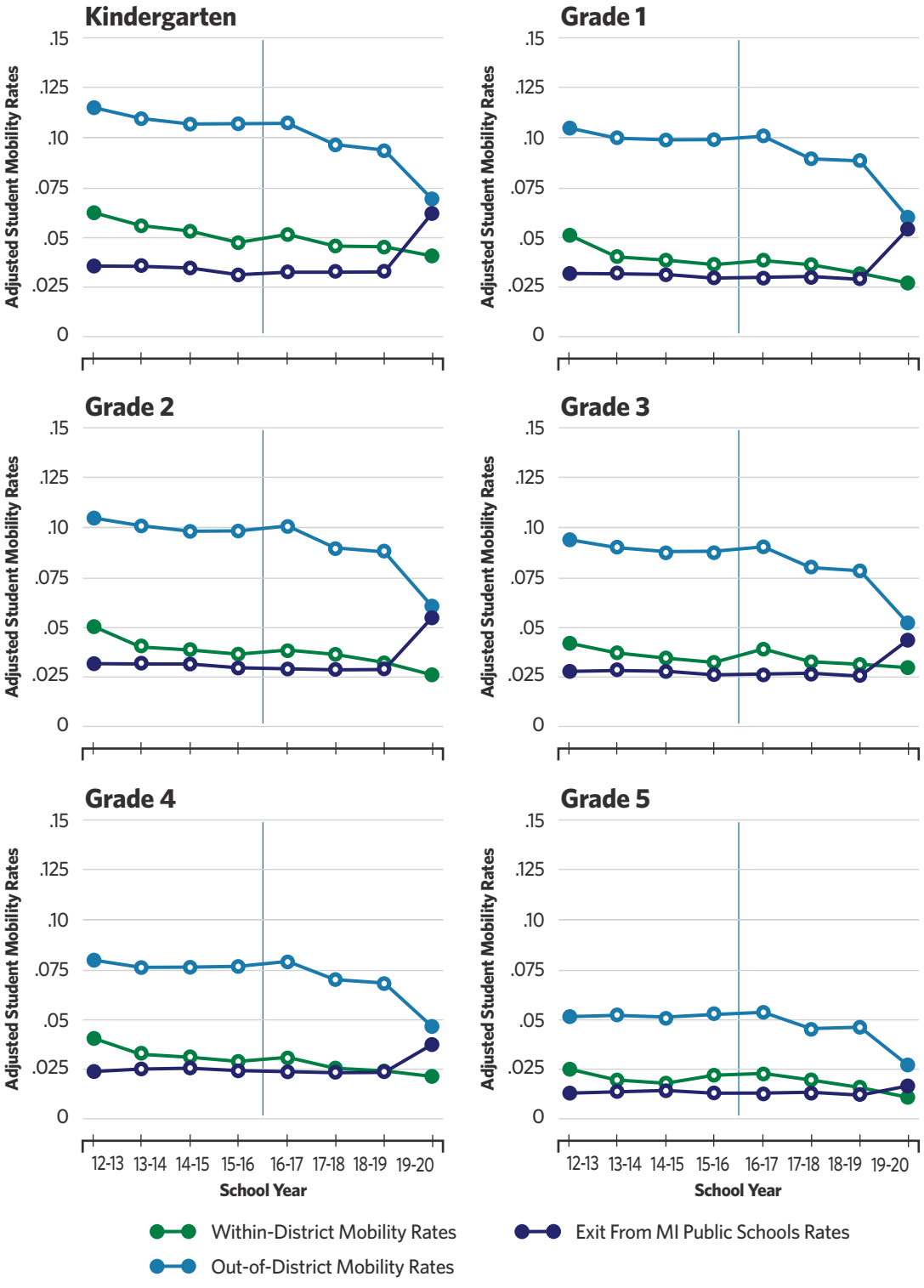
We might expect student mobility rates to change in response to the Read by Grade Three Law if, for instance, students move to schools or districts that provide more services to improve literacy skills or avoid retention. Students might also switch districts to avoid 3rd-grade retention under the Law because students who have changed districts within two years of retention and whose previous district did not provide an appropriate IRIP are eligible for a good cause exemption.

We measure mobility from the end of the listed school year. For instance, an out-of-district transfer in 2019-20 indicates that a student attended a different, out-of-district school in 2020-21 than they did in 2019-20. Thus, we compare school attendance in the displayed year to the following year. Last year, we observed that within and out-of-district mobility increased slightly above predicted levels in the first year of the Law but returned to pre-Law trend expectations in 2017-18. We extend this analysis to include 2018-19 and 2019-20 and additionally examine exits from the Michigan public school system.

Changes in student mobility patterns are quite likely due to disruptions caused by the COVID-19 pandemic.

Figure 6.6 shows adjusted trends in each of these student mobility outcomes. We see that within and out-of-district mobility and exits remain relatively stable until 2019-20 when we see a significant and sharp increase in exits from the Michigan public school system and a sharp decline in out-of-district mobility. These changes in mobility rates are substantial; before 2019-20, students in all grades were around twice as likely to transfer out of district than they were to exit; in 2019-20, the probability of these mobility outcomes is nearly identical. Since the pandemic affected 2019-20 (we measure mobility from a student's main school in 2019-20 to their main school in 2020-21), these changes in mobility patterns are quite likely due to disruptions caused by the COVID-19 pandemic. While we cannot definitively disentangle the effects of the pandemic from those of the Read by Grade Three Law, the fact that these changes do not begin until 2019-20 and that they affect all grades from K-5 (not just those affected by the Law's literacy interventions or retention policy) suggest that these changes are related to the pandemic.

FIGURE 6.6. Adjusted Trends in Student Mobility



Note: These are regression-adjusted trends. A detailed explanation and list of covariates are in Section Two.

THE CLASSIFICATION OF STUDENTS WITH DISABILITIES WAS DISRUPTED IN THE 2019-20 AND 2020-21 SCHOOL YEARS

The Read by Grade Three Law might affect the classification of students with disabilities (i.e., with an IEP or Section 504 Plan) in one of two ways. First, the Law's added continuous monitoring and assessment requirements could allow schools and districts to catch disabilities more frequently and sooner in students' trajectories, thus increasing initial identification rates and potentially decreasing exit rates in grades K-3. In addition, students with disabilities can receive a good cause exemption from 3rd-grade retention if their program coordinator decides grade promotion is in the student's best interest. Thus, an unintended consequence of the Law may be increased classification of students with disabilities.

We extend earlier analyses that tracked classification rates through 2018-19 by examining classification rates through the 2020-21 school year. Additionally, we assess changes in *identification* and *exit rates* for students with disabilities from 2013-14 to 2020-21 (see Section Two for detailed definitions of these outcomes). Classification captures all students who are provided with an IEP or 504 Plan, whereas identification measures students who were provided with an IEP or 504 Plan for the first time in a given school year. Exits occur when a student is no longer provided with an IEP or 504 Plan.

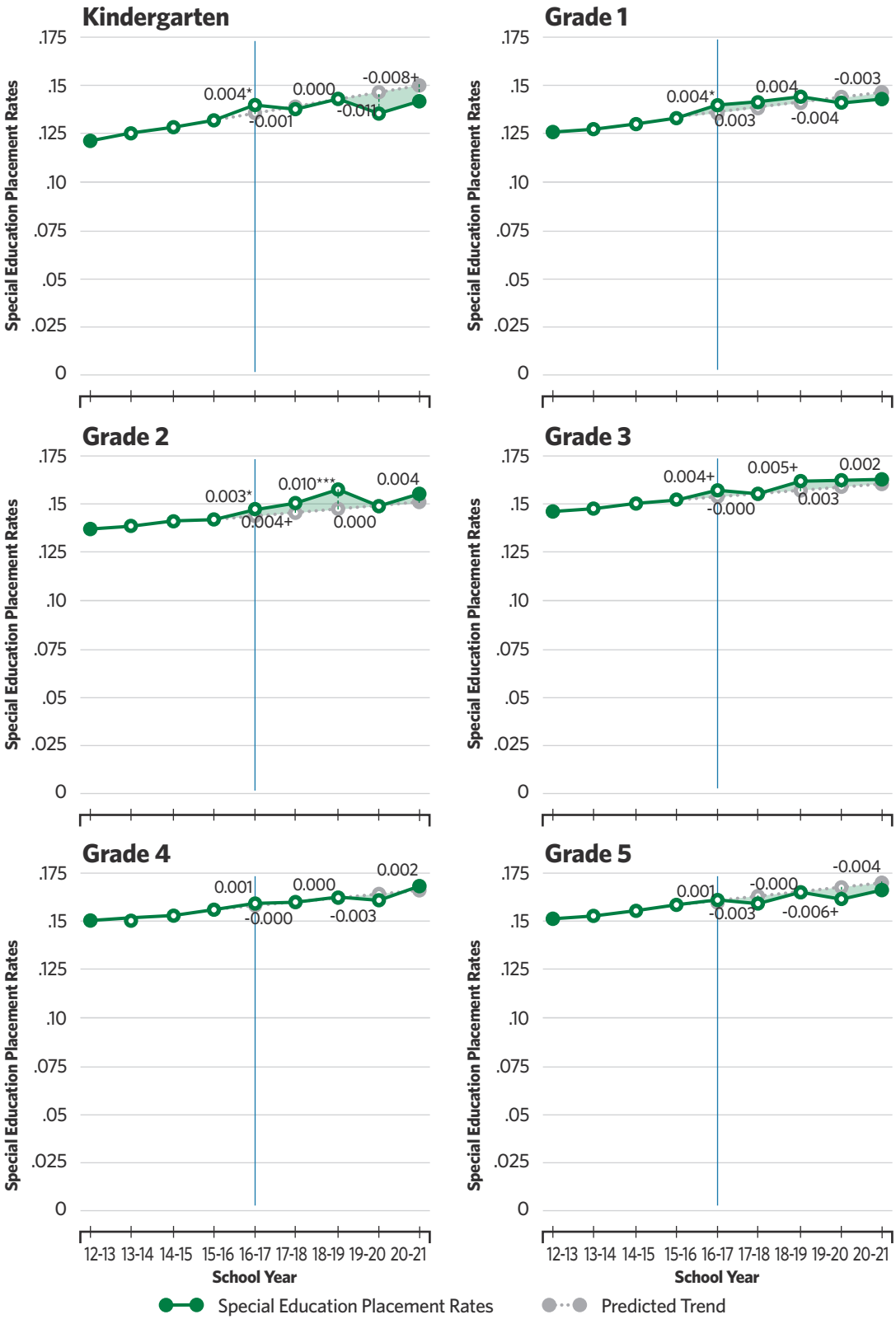
We measure identification and exit from a given year to the next year. For example, we say a student was identified as a student with a disability in 2019-20 if they were not classified as a student with a disability in 2019-20, but they were classified in 2020-21. We can only determine identification and exits through 2019-20 for this reason. Furthermore, the COVID-19 pandemic would have potentially affected identification and exit rates in both 2018-19 and 2019-20. Since classification is measured using data from just one year, we can determine classification rates through 2020-21. Classification rates would have potentially been affected by the pandemic in 2019-20 and 2020-21.

We perform ITS analyses to quantify the observed changes in classification, identification, and exit trends following the Law's implementation relative to expectations based on pre-Law trends. We present these estimates in Figure 6.7 and Figure 6.8. The ITS estimates indicate that classification rates of students with disabilities in 2020-21 were in line with pre-Law trends across all grades. However, in most grades, there was a notable dip in classification for special education services in the 2019-20 school year.

Figure 6.8 shows both initial identification (green lines) and exits (blue lines) for students with disabilities. In all grades, identification rates of students with disabilities were close to the predicted trends in every year except for 2018-19, when identification rates fell significantly below expectations before returning to the predicted trend line in the following year.

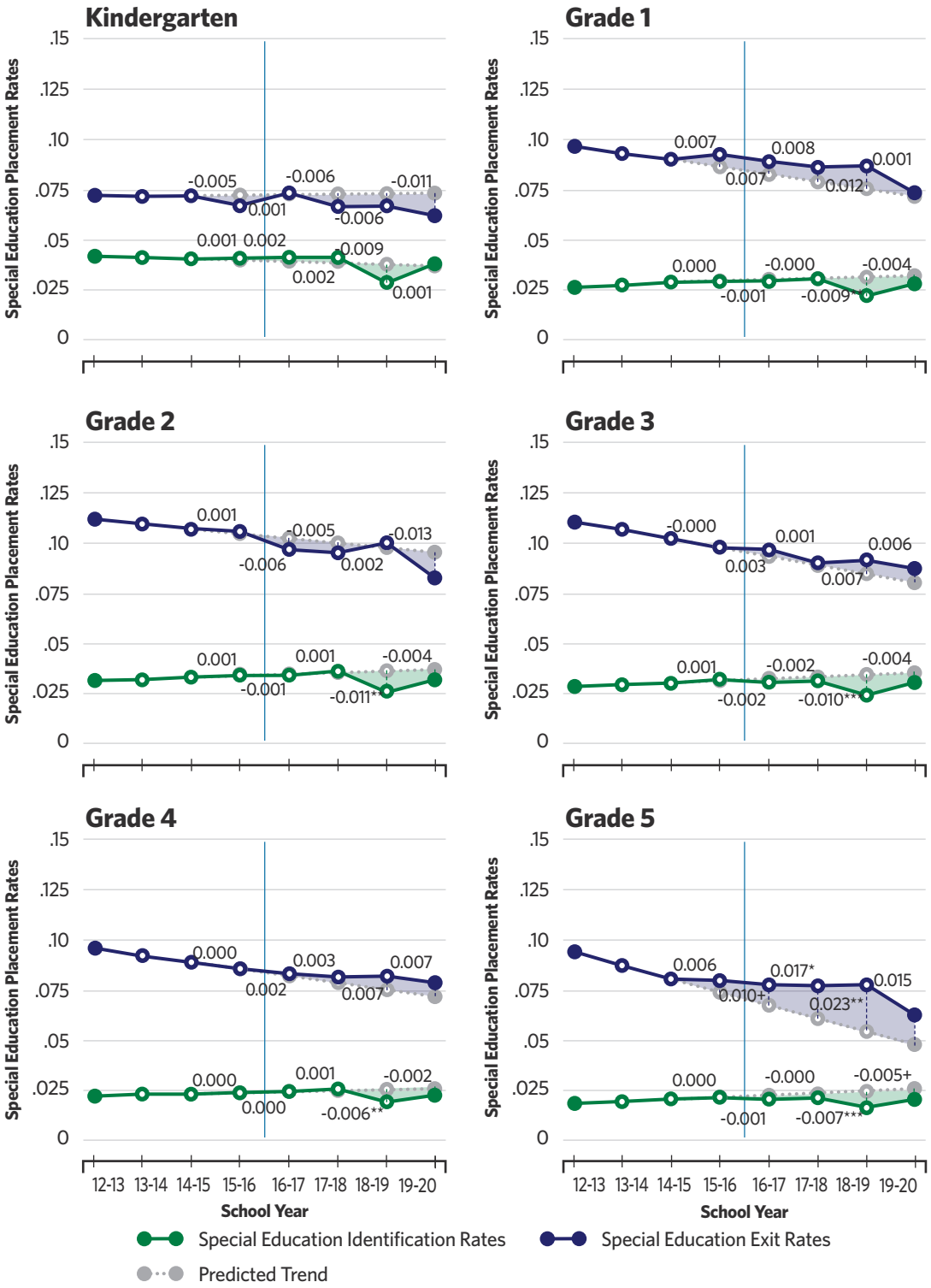
Exit rates also were not significantly different from the pre-Law trend in K-4 in all years. However, in 5th grade, exit rates were significantly above pre-Law trends from 2016-17 through 2018-19 until they dropped sharply to the predicted level in 2019-20. Notably, we see decreases in exit rates in the 2019-20 school year relative to 2018-19 for students with disabilities in 1st, 2nd, and 5th grades.

FIGURE 6.7. Changes in Students With Disabilities Classification Relative to Pre-Law Trends



*Note: Estimates from ITS models. Full coefficient estimates can be found in Appendix D.5 Source: Student administrative records. + p<0.1 * p<0.05 ** p<0.01 ***p<0.001*

FIGURE 6.8. Changes in Students With Disabilities Identification and Exit Relative to Pre-Law Trends



*Note: Estimates from ITS models. Full coefficient estimates can be found in Appendix D.6. Source: Student administrative records. + p<0.1 * p<0.05 ** p<0.01 ***p<0.001*

In all, overall classification, identification, and exit rates for students with disabilities were, for the most part, in line with expected pre-Law trends. However, there were some notable fluctuations in the 2019-20 school year, when exit rates dipped relative to the year prior. This may have been a result of a truncated school year, diminishing the ability of educators to assess students' preparedness to exit from special education services. In addition, we find that there were small increases in overall classification rates for students with disabilities in the 2020-21 school year relative to the year prior. This may be related to the diminished exit rates in the year before.

ENGLISH LEARNER CLASSIFICATION RATES WERE CONFOUNDED BY OTHER POLICY CHANGES

Although the Read by Grade Three Law does not focus interventions specifically on English learners, we might expect the proportion of students classified as English learners to change because of the Law. An intentional focus of the Law is on providing improved literacy instruction and intensive support to students who are struggling with literacy. English learners may benefit from this emphasis on literacy, which may lead to a faster rate of English language acquisition. As such, since the implementation of the Read by Grade Three Law, English learners may become more likely to exit English learner status and be reclassified as fluent English proficient. Conversely, the Law provides exemptions to its 3rd-grade retention requirement for English learners with fewer than three years of English language instruction. An unintended consequence of the Law may be an incentive for schools to attempt to classify more students as English learners who are on the margin of being identified as English learners based on their English language proficiency screener scores or keep students on the margin of being exited from English learner status classified as English learners for a longer period.

However, our ability to disentangle whether any changes detected in English learner classification rates are linked to the implementation of the Read by Grade Three Law is hampered by several factors that may threaten the internal validity of our analysis. First, President Donald Trump took office in January 2017, the year following the initial implementation of the Law. President Trump's immigration policies had a chilling effect on immigration rates, particularly from certain countries (e.g., suspending immigration from countries with high Muslim populations including Iran, Iraq, Libya, Somalia, Sudan, Syria, and Yemen in January 2017) and in terms of refugee resettlement (Barrett, 2021). Michigan has a substantial Muslim population; the city of Dearborn has the largest Muslim population per capita of any American city, and Arabic is the second most common home language of English learners in the state (Spanish is first). Second, there have been several English learner identification/reclassification policies and assessment changes in Michigan in recent years. For example, in 2017, the WIDA ACCESS 2.0 English language proficiency assessment underwent major scoring changes resulting in a new scoring scale that reduced the number of students who qualified to exit English learner status. In addition, in 2019, the state shifted the English learner exit policy such that English learner students in grades 3-12 who met objective reclassification assessment criteria were automatically exited from English learner status and programming. The was a marked difference from earlier policy, which relied on districts to manually assess and change the English learner status of individual students.

These demographic and policy changes arguably played a prominent role in shaping English learner classification rates in Michigan at the same time the Read by Grade Three Law was being implemented. As a result, we do not provide analyses of changes in English learner classification rates over the years before and after the Read by Grade Three Law.

SUMMARY

Last year we provided evidence that overall 3rd-grade ELA M-STEP performance increased following the passage of the Read by Grade Three Law through 2018-19, relative to declining achievement trends before the Law. We substantiate these results by examining ELA M-STEP subscores, finding similar patterns for three of the four subscores. Our extended analysis of the Law's effects on other student outcomes appears to be confounded by the COVID-19 pandemic. While we found that K-5 retention and students with disabilities classification, identification, and exit rates remained stable despite the pandemic, there were significant shifts in student mobility rates consistent with the effects of COVID-19-related disruptions.

SECTION SIX NOTES

1. Testing resumed in Michigan in 2020-21. EPIC did not have 2020-21 M-STEP scores in time to include in the report. We intend to include analyses of these scores in future reports.

2. Developmental Kindergarten programs are two-year kindergarten programs (also called "Young 5's" or "Begindergarten"). Developmental Kindergarten programs and traditional kindergarten programs are considered the same for state funding. Their classes usually follow a similar curriculum to traditional kindergarten, but at a slower pace and spread over two years.

3. The kindergarten sample in the results presented in Figure 6.5 does not include students enrolled in Developmental Kindergarten programs. Developmental Kindergarten enrollment (relative to enrollment in traditional kindergarten) declined in 2020-21 relative to its previously increasing trend. This decline is likely due at least in part to the COVID-19 pandemic, as total enrollment in any type of kindergarten declined sharply in 2020-21 (see Section Five for a full discussion of this).

Special Section C: How the Media Continued to Cover the Read by Grade Three Law

During 2020-21, we continued to track how the popular and trade press covered the Read by Grade Three Law and early literacy in Michigan.[1] We collected 107 articles between December 2020 (when we stopped collecting articles for inclusion in our first report) and August 2021, for an average of 11.9 articles per month. As Figure C.1 shows, this represents a decrease in media attention to early literacy and to the Law; in the 16 months between August 2019 and December 2020, we collected 299 articles, or 16.6 articles per month, on average.

FIGURE C.1. Number of Articles Per Month Published About Early Literacy in Michigan, including the Read by Grade Three Law: August 2019 Through August 2021

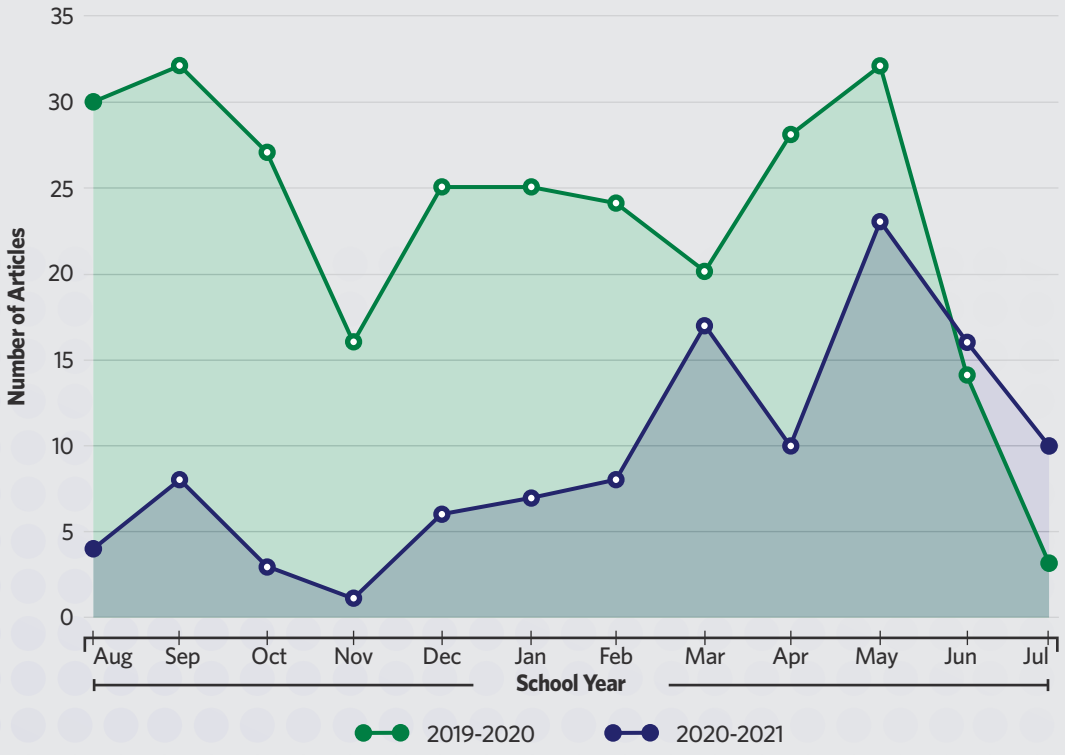
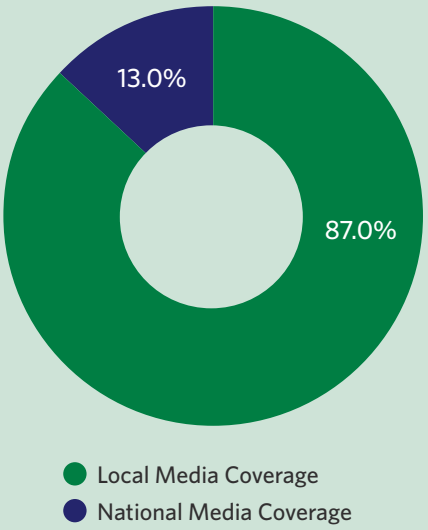


FIGURE C.2. Local vs. National Outlets' Coverage of Early Literacy and the Read by Grade Three Law in Michigan, December 2020 Through August 2021



Source: EPIC tracking of media coverage of early literacy and the Read by Grade Three Law.

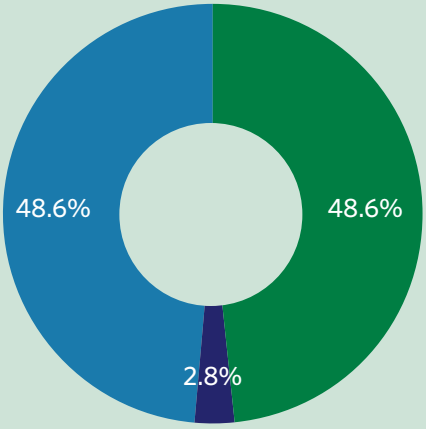
The conversation surrounding early literacy and the Read by Grade Three Law in Michigan shifted over the last nine months. From August 2019 through November 2020, media coverage focused heavily on explaining the Law and its different components. This is likely because lawmakers intended for the full Law—including the retention of 3rd-grade students who scored a 1252 or lower on the ELA M-STEP—to go into effect for the first time in the 2019-20 school year. The COVID-19 pandemic changed the conversation around education throughout the 2020-21 and into the 2021-22 school years such that the media often covered pandemic-related changes to the provision of education. This likely reduced the overall volume of articles specific to early literacy or the Read by Grade Three Law.

Like last year, coverage of early literacy in Michigan and the Read by Grade Three Law came mostly from local outlets. As shown in Figure C.2, local news outlets published 93 of the 107 articles (87%), while national news outlets published the other 14 (13%). Education trade media (e.g., Chalkbeat, Education Week) published 23 (21%) of the articles. In the 18 months prior, education trade media accounted for just 11% of total coverage.

The media have shifted their coverage to focus more on the Read by Grade Three Law than on early literacy in general. As seen in Figure C.3, since December 2020, 55 articles (52%) provided direct coverage of the Read by Grade Three Law (as opposed to early literacy more generally). This is a 18% increase in direct coverage of the Read by Grade Three Law (from 34% between August 2019 and November 2020 to 52% between December 2020 and August 2021). This may be for two reasons. First, the coverage of Detroit's "Right to Literacy" case, which did not involve the Law but centered on inequities in both opportunities to learn and literacy outcomes, contributed a large volume of articles during the 2019-20 school year; we collected 59 articles about the Right to Literacy Case in total and 44 in a one-month span between April 23, 2020 and May 25, 2020. Second, the intensifying awareness of and debates over the implementation of the retention component of the Law contributed to the increased media attention to the Law itself. It may be that increased data collection and reporting about the Law contributed to the uptick in media coverage about the Law relative to early literacy in general; at the end of our collection period (August 2021), news outlets published six articles that summarized and cited EPIC reports on 3rd graders' 2021 ELA M-STEP results and implications for retention under the Read by Grade Three Law. Even ignoring these articles focused on EPIC's report, however, there would have been a 10 percentage point increase in the number of articles centered on the Law relative to the previous reporting cycle.

Figure C.3 also shows that the vast majority of articles about the Read by Grade Three Law reported news about the Law; just three (3%) were opinion pieces—all which reflected the authors' negative views of the Law. State Representative (and former teacher) Nate Shannon wrote one of the opinion pieces to criticize the retention component of the Law, saying, "We should simply remove the retention requirement and move on and begin looking for ways to lift our students up rather than hold them down." (Shannon, 2021). Pamela Good, the founder and CEO of Beyond Basics, wrote the other opinion piece, arguing that additional assessments and tutoring would be a better solution than the ones outlined in the Law currently (Good, 2021). State Superintendent Michael Rice and President of the State Board of Education Casandra Ulbrich wrote the third and advocated for expanded access to pre-K instead of retaining 3rd-grade students (Rice & Ulbrich, 2021). The relatively low proportion of opinion pieces contrasts with the last reporting cycle, when more than 20% of the articles were opinion pieces focused on the Law.

FIGURE C.3. Breakdown of Articles About Early Literacy in Michigan and the Read by Grade Three Law, December 2020 Through August 2021



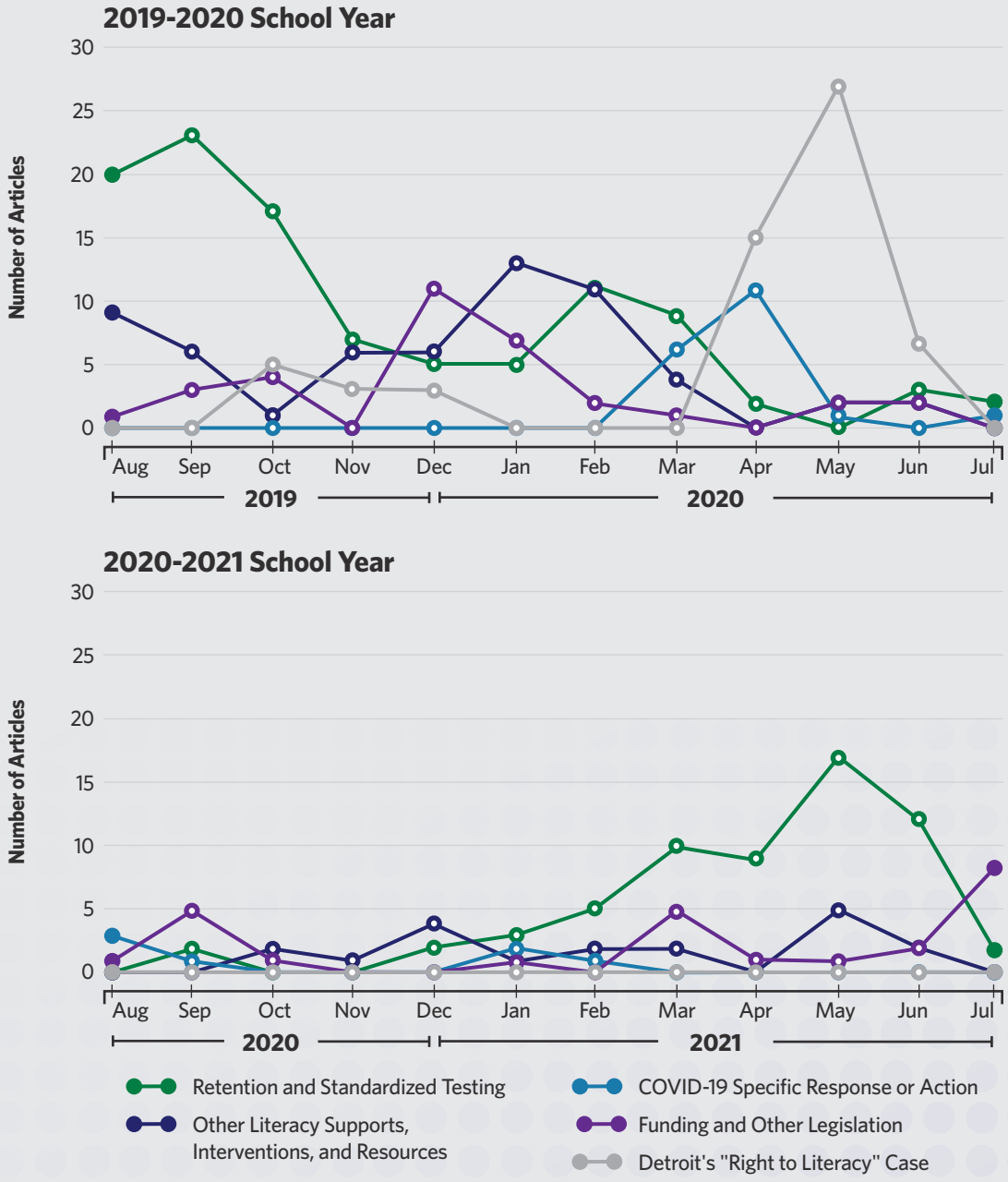
Source: EPIC tracking of media coverage of early literacy and the Read by Grade Three Law. EPIC collected 52 news articles about the Law, three opinion pieces about the Law, and 52 articles about early literacy in general.

Figure C.4 outlines how media attention to the Read by Grade Three Law and early literacy in Michigan varied over the course of the 2019-20 and 2020-21 school years. In late January 2021, MDE and the State Board of Education requested a federal waiver from state assessment requirements. This action received coverage from the end of January through the beginning of April (Higgins, 2021a; Higgins, 2021b). In April 2021, the U.S. Department of Education denied the waiver request, but did agree to waive the 95% student participation requirement. Media outlets documented the back-and-forth between MDE and the U.S. Department of Education and attempted to explain the potential effects of the U.S. Department of Education's decision for Michigan schools and students.

In March 2021, eight articles (47% of March's total) covered the retention component of the Read by Grade Three Law as the M-STEP testing administration window approached. Given that retention was waived in 2020, 2021 was slated to be the first year that retention would take effect. Several bills introduced in the Michigan state legislature attempted to waive the retention component of the Law for the 2020-21 school year. A bill introduced by State Senator Jon Bumstead of Newago proposing to delay retention until 4th grade for this year's 3rd graders received the most coverage, especially in May 2021, which coincided with the end of the school year and the administration of the M-STEP. None of the bills passed committee review, and CEPI sent retention letters to families of students who

didn't meet the threshold required on the M-STEP in June. Media coverage then focused on these retention letters, including the steps families could take if they received a letter. Many district administrators went on the record to voice their opposition to retention during this time, indicating they would approve almost any good cause exemption that families submitted. Detroit Public Schools' Superintendent Nickolai Vitti said, "We have no intention of retaining students solely based on your third grade test, on the M-STEP, or on any test, for that matter," (Ahmed, 2021).

FIGURE C.4. Percentage of All Articles by Month Based on General Topic, August 2019 Through August 2021



Note: Five categories determined by main topic in an article. Many articles touched on more than one category, but the main story has been identified for each one. Other Literacy Supports, Interventions, and Resources includes but is not limited to articles that highlighted resources for families, information about literacy coaches in schools, and legislation focused on school libraries. Source: EPIC tracking of media coverage of early literacy and the Read by Grade Three Law.

Figure C.4 also identifies how media coverage shifted drastically in July 2021 to focus on the new education funding package approved by Michigan's House and Senate. Governor Gretchen Whitmer's veto of a reading scholarship program for K-5 students also received heavy coverage, as House Republicans voiced their disapproval with her veto decision. Nine articles surrounding the new funding bills and Governor Whitmer's veto were published during the month of July alone.

The retention element of the Law continued to receive the most prominent and consistent coverage throughout the 2020-21 school year. In addition, many articles discussed the pandemic's effects on the Read by Grade Three Law (57% of articles about the Law reported on the COVID-19 pandemic). The administration of the M-STEP and the additional funding for education (both through COVID-19 pandemic relief and Michigan's education funding bills) also received attention, with clear spikes in coverage coinciding with noteworthy bills and decisions.

While the volume of articles covering general early literacy in Michigan, including the Read by Grade Three Law among other topics, declined from December 2020 to August 2021 relative to August 2019 to November 2020, the proportion of articles focused on the Law increased in that same timespan. The prevalence of opinion pieces written about the law decreased immensely from December 2020 to August 2021 while media outlets published many news articles about the first year of retention amidst the pandemic.

SPECIAL SECTION C NOTES

1. To do this, we created Google Alerts for phrases associated with the Law specifically and early literacy policy generally. Phrases we looked for included, "early literacy," "literacy policy," "literacy retention," "RBG3," "Read by Grade Three," and "third grade reading."

07

Michigan's Read by Grade Three Law:
Year Two Report

Section Seven: Key Takeaways and Policy Implications

Section Seven: Key Takeaways and Policy Implications

This report is the second in our multi-year evaluation of the implementation and efficacy of Michigan's Read by Grade Three Law. This evaluation includes analyses of interviews with state-level stakeholders; surveys of teachers, principals, district superintendents, and literacy coaches; and student and teacher administrative records. The objectives of this second report are to provide an update on the continued implementation of the Read by Grade Three Law and its early efficacy in improving early literacy outcomes for Michigan students, as well as how the COVID-19 pandemic has affected implementation. In this final section, we outline key takeaways and consider the implications of these results for future policymaking.

KEY TAKEAWAYS

One-Half of Students Are Identified as Having a "Reading Deficiency" at Some Point Before the End of 3rd Grade, With Approximately One-Third Identified in Each Year K-3

Lawmakers intended the "reading deficiency" designation to signal K-3 students who need substantial supports and interventions to improve their literacy and help them avoid retention in the 3rd grade. A stunning 52% of Michigan students are identified as "reading deficient" at some point in their K-3 trajectory, with approximately 33% identified in each year. Seventeen percent

of students are identified in all three grades 1st-3rd. These rates are far higher for Black, Hispanic or Latino/a/x, and economically disadvantaged students and for students in urban districts, charter schools, and districts that were the lowest-performing before the pandemic. Moreover, there is broad variation across districts; some districts—often those serving historically marginalized students—identify a large portion of students as having a "reading deficiency" while others tend to have few students identified as "reading deficient."

Under One-Half of Students Identified With a "Reading Deficiency" Have It "Remedied" Prior to the End of 3rd Grade

Fifty-two percent of students were ever identified with a "reading deficiency" at any point between 1st and 3rd grade, and 45% of these students' "reading deficiencies" were ever "remedied." Identification and "remedy" rates were lower in any given year, with "remedy" rates particularly low in 2019-20. Black, Hispanic or Latino/a/x, and economically disadvantaged students are less likely than their White or Asian and wealthier peers to have their "deficiencies" "remedied," as are students in lower-performing and charter districts.

In Many Districts, There Appears to Be a Lack of Alignment Between "Reading Deficiency" Measures Based on District Assessments and Eventual Retention Eligibility Based on State M-STEP Scores

There is a strong relationship between patterns of "reading deficiency" identification and retention outcomes. In most districts, students identified as having a "reading deficiency" in the early grades are the same students who eventually struggle on the 3rd-grade ELA M-STEP and score low enough to be eligible for retention. However, there is a subset of districts in which more students are eligible for retention in 3rd grade than predicted by students' "reading deficiency" rates and other relevant characteristics. In particular, districts with higher proportions of economically disadvantaged students and lower prior ELA performance had systematically more retention-eligible students than predicted by their students' "reading deficiency" status and other characteristics.

While it may be that these districts intentionally flag too few students as in need of extra supports (having a "reading deficiency") because providing such interventions and supports is resource-intensive, it may also be that these historically underserved districts have unintentionally set proficiency targets that are too low relative to the ELA M-STEP proficiency standards, or their "reading deficiency" assessments are misaligned with the 3rd-grade ELA M-STEP. Regardless, this kind of systematic under-identification of students who require intervention suggests that too few students are receiving necessary literacy supports, especially in historically low-performing districts with high proportions of economically disadvantaged students.

Relatively Few Students Were Eligible for Retention at the End of 2020-21, and Districts Planned to Retain Even Fewer. However, There Were Significant Disparities Across Groups of Students

Just under 5% of tested students were eligible for retention because they scored 1252 or below on the 3rd-grade ELA M-STEP. However, districts provided most retention-eligible students with good cause exemptions, and districts intended to retain only 0.3% of tested students.

There were significant disparities in the characteristics of students who scored low enough on the 3rd-grade ELA M-STEP to be eligible for retention. A far higher proportion of Black, Hispanic or Latino/a/x, American Indian, and economically disadvantaged students were more likely to be retention-eligible than their White, Asian, and wealthier peers. Similarly, districts intended to retain higher proportions of retention-eligible Black, Hispanic or Latino/a/x, and economically disadvantaged students.

Although students identified as having a "reading deficiency" are supposed to receive supports and interventions that will improve their literacy practice by the end of 3rd grade, this is not always the case. Students with "reading deficiencies" are more likely to be identified for retention. In particular, students identified as having a "reading deficiency" more often or were identified more recently before the end of 3rd grade are more likely to be eligible for retention in 3rd grade. Students identified with a "reading deficiency" in all three years are nearly ten times more likely to score at or below 1252 on the 3rd-grade ELA M-STEP and therefore be eligible for retention than their peers who were never identified.

Educators Report Spending Less Time on Instruction During the 2020-21 School Year

Kindergarten through 3rd-grade teachers reported spending two fewer hours on literacy instruction per week during the 2020-21 school year than in the year prior. This disparity would constitute approximately 80 fewer hours of literacy instruction over the course of the year (assuming 40 weeks of instruction per year). Teachers who were instructing their students remotely spent even less time on literacy instruction. Many teachers also report spending less time on other subject areas; nearly one-quarter of teachers say they spent less time on literacy and math instruction. Over a third of teachers reported decreasing instructional time spent on science and social studies.

Given the importance of instructional time for student learning, this reduction could have substantial negative effects on student literacy in Michigan, particularly for students who were learning remotely. Moreover, teachers in urban districts and districts serving high proportions of non-White students were more likely to report decreased instructional time, suggesting potential inequitable effects of lost instructional time.

The Pandemic Made it Difficult for K-3 Teachers to Provide Literacy Instruction and Interventions, Especially Those Teaching Remotely

Educators reported that the COVID-19 pandemic substantially affected their ability to provide instruction and necessary interventions to help improve student literacy. While this was true for all K-3 teachers, those teaching remotely were particularly likely to report challenges. In particular, teachers and principals reported difficulties identifying students learning remotely who needed extra supports. They reported that developing and administering IRIPs remotely was difficult and that providing one-on-one or small group instruction was challenging both remotely and in person, given necessary safety precautions like masking and social distancing. The consistent differences between teachers working with students remotely relative to in-person raise substantial concerns about inequitable learning opportunities and outcomes for students who were learning remotely during the 2020-21 school year.

K-3 Teachers Believed Professional Development Helped Them Improve Their Practice. However, Teachers Received Less—and Wanted More—Literacy Professional Development During the 2020-21 School Year

Compared to 2019-20, in 2020-21 teachers reported receiving less one-on-one literacy coaching and other literacy professional development intended to help them improve their literacy instruction. In particular, teachers said they received far less coaching from the ISD Early Literacy Coaches provided under the Read by Grade Three Law. Literacy coaches reported many challenges administering support during the year, largely resulting from shifting roles and priorities and changed modes of interaction (i.e., to remote settings) resulting from the pandemic.

Despite limited access to literacy professional development, teachers continued to report that the professional development they received positively affected their instructional practice. Most teachers want more one-on-one literacy coaching regardless of whether they have already received it. They continue to want more support in several areas, especially to help them differentiate instruction and address students' literacy needs.

Educators Continued to Perceive Many of the Read by Grade Three Law's Supports as Effective, but Fiscal and Human Capital Constraints Continued to Hinder Implementation

The far majority of K-3 teachers believed that most of the supports outlined in the Law are useful to improve student literacy. In particular, 70% or more K-3 teachers reported that ongoing progress monitoring assessments, targeted small group literacy instruction, daily targeted one-on-one literacy instruction, increased time on literacy instruction, and evidence-based literacy interventions were useful practices to improve student literacy. Approximately one-third of

teachers felt that "Read at Home" plans and summer reading camps were useful in 2020-21, a slight increase over the year prior. Although state and district leaders remain optimistic about the usefulness of IRIPs, educators were less convinced of their utility.

However, state-level stakeholders and educators believe that the Law is underfunded and that more resources are needed both for early literacy in general and to support the Law's required supports and interventions. It is not just that more money is required; educators continued to report the need for more literacy-focused personnel. This need was especially the case for teachers in traditionally-underserved districts, again pointing to concerns about inequitable resources to support student literacy across the state.

Educators also reported insufficient time in the school day and year to implement necessary literacy interventions. Moreover, literacy coaches felt that they did not have enough time to meet with, observe, and work with teachers who needed support.

ELA M-STEP Scores and Subscores From Before the Pandemic Suggest Moderate Improvements in Students' ELA Achievement Relative to the Period Before the Law's Passage. However, Most Teachers Do Not Believe the Law Has Effectively Improved Students' Literacy Skills

Given pandemic-related disruptions to M-STEP administration, there were no test scores available from the 2019-20 school year, and test scores from the spring of 2021 are difficult to incorporate into our models given the lower participation rates (approximately 70%) and wide variation in participation rates across schools and districts. Prior to the pandemic, ELA M-STEP scores through 2018-19 suggest that 3rd-5th-grade student ELA performance improved after implementing the Law relative to decreasing trends before 2016-17. This result is true for overall M-STEP scores and for the four subscores (reading, listening, writing, and research). However, teachers were not convinced of these improvements. By the end of the 2020-21 school year, 16% of teachers reported a great or moderate improvement in their incoming students' literacy skills since the implementation of the Law. In contrast, over a third of teachers reported only a small improvement, and 47% perceived no improvement at all.

POLICY IMPLICATIONS

Continue to Improve Tier I Literacy Instruction so That Fewer Students Require Intervention

The fact that over half of Michigan 3rd-grade students are at some point identified as having a "reading deficiency" in grades K-3 suggests that there is still much work to be done to improve core Tier I—general classroom—literacy instruction. The fact that Black, Hispanic or Latino/a/x, and economically disadvantaged students are even more likely to be labeled as "reading deficient"

suggests that there is an even greater need for improvements in classrooms, schools, and districts teaching these historically marginalized populations. Currently, core literacy instruction in Michigan is not meeting many students' literacy needs, particularly traditionally underserved students. This is even more the case in the wake of the pandemic. The state and districts should continue to focus on improving educators' literacy instruction practices and skills, particularly for educators serving these specific student populations.

Evaluate District Assessments and Procedures for Identifying Students in Need of Extra Literacy Supports and Help Districts Align Local and State Assessments and Achievement Expectations

Many districts under-identify students with "reading deficiencies" such that many students who are eventually eligible for retention did not receive the necessary intervention and supports to succeed in grades K-3. The state and districts should work together to better align local assessments with literacy expectations based on the state summative tests (M-STEPs) and help them put into place procedures to ensure that students at risk of eventual retention are provided with necessary supports in K-3.

Provide Additional Funding for Literacy Professional Development and Other Literacy Resources

In line with the implications above, state policymakers should increase funding to bolster efforts to improve early literacy throughout Michigan. Educators reported receiving less literacy professional development—including one-on-one literacy coaching and other literacy professional development—during the 2020-21 school year. While the pandemic has exacerbated the need for more literacy supports, educators also described the need for more professional development and literacy resources before the pandemic (Strunk et al., 2021). Funding can be allocated to literacy coaches, and to additional non-coaching literacy professional development on evidence-based literacy practices such as the *Literacy Essentials* and supports for teachers to help them differentiate instruction and meet the needs of special populations of students.

Of course, it is difficult to find a sufficient number of qualified literacy coaches and other literacy specialists, as well as elementary educators who are versed in evidence-based literacy practices. This has long been the case, but it is especially dire now as staffing shortages have been exacerbated in Michigan (as in states across the country) during the pandemic. The state should also consider allocating additional funding to help bolster pipelines to recruit, train, and retain necessary personnel.

In addition, given that over half of students are identified as having a "reading deficiency" before the end of 3rd grade, the state should allocate money to districts to provide *all* students with instruction and (if necessary) interventions to improve their literacy. This need goes beyond money for professional development. It includes funding for curricula, improved assessments,

more staff (teachers and literacy specialists) to implement literacy instruction and interventions, and more time in the school day and year for literacy instruction. Given that traditionally underserved districts and districts with the most historically marginalized populations have the highest proportions of students with "reading deficiencies" and who are eventually retention-eligible, the state should target additional resources to help these districts improve early student literacy.

Focus on Meeting Students' Literacy Needs and Helping Students Recover from Missed Learning Opportunities

Much of the policy debate around the Read by Grade Three Law and literacy in Michigan has focused on the efficacy of retention (see Special Section C: Media). However, while 5% of tested 3rd-grade students were eligible for retention, districts only intended to retain 0.3% of tested students. This disparity may be because educators disagree with the value of retention as an intervention to improve literacy (see Year One Report, Strunk et al., 2021), but it also is likely a result of the substantial turmoil caused by the COVID-19 pandemic. Educators report spending substantially less time on literacy (and other) instruction during the 2020-21 school year, and teachers report difficulties implementing effective literacy instruction and interventions during the pandemic. These challenges were exacerbated in historically low-performing and urban districts, districts that operated remotely during the 2020-21 school year, and districts that served greater proportions of economically disadvantaged, Black, and Hispanic or Latino/a/x students. Rather than focusing on retention as a method for improving student literacy and centering debate about the wisdom of retaining students in 3rd grade based on their M-STEP scores, education policymakers should instead focus on meeting students' literacy needs and accelerating learning to help students recover from missed learning opportunities.

KEY TERMS

1. **35(a)4 Funding:** 35(a)4 is a grant the Michigan legislature established and the Michigan Department of Education (MDE) administers to provide ISD Early Literacy Coaches. ISDs must apply for the funding and, before to the 2019-20 fiscal year, had to provide matching funds for at least 50% of the grant amount awarded to support the cost of the literacy coach.
2. **AFT (American Federation of Teachers):** A union of public education professionals that advocates high-quality public education, healthcare, and public services for students and their families.
3. **CEPI (Center for Educational Performance and Information):** The Center for Educational Performance and Information collects and manages Michigan's educational administrative data such as records on the state's teachers, students, and facilities.
4. **Charter School/Public School Academy (PSA):** A publicly funded, independently operated public school which is not regulated by a traditional public school district.
5. **Developmental Kindergarten:** Also referred as "Young 5s" or "Begindergarten," these are planned two-year programs intended to provide students additional time and support to develop academically, socially, and emotionally.
6. **EEM (Educational Entity Master):** Is a repository that contains numbers and basic contact information regarding educational systems in the state of Michigan. Information exists for public schools, nonpublic schools, intermediate schools districts, and institutions of higher education.
7. **ELTF (Early Literacy Task Force):** A committee formed by the General Education Leadership Network (GELN) to provide instructional, coaching, and school-level guidance for practitioners and educational stakeholders.
8. **GELN (General Education Leadership Network):** An organization of educational leaders, affiliated with the Michigan Association of Intermediate School Administrators (MAISA).
9. **Good cause exemptions:** Good cause exemptions are a provision in the Read by Grade Three Law whereby a student can be promoted if they meet one of the following exemptions: an Individualized Education Program (IEP) or Section 504 Plan; limited English proficiency, having received less than three years of instruction in an English learner (EL) program; received intensive reading intervention for two or more years, and been previously retained in kindergarten, first, or second grade; been enrolled in their current school for less than two years and there is evidence that the student was not given an appropriate Individual Reading Improvement Plan (IRIP) by their previous school district; or if their parent or legal guardian has requested a good cause exemption within 30 days after receiving retention notification from the Center for Educational Performance and Information (CEPI), and the superintendent determines that the good cause exemption is in the best interest of the pupil.
10. **IEP (Individualized Education Program):** An Individualized Education Program (IEP) is a written document for students with disabilities ages three through 25 that outlines the student's educational needs and goals and any programs and services the Intermediate School District (ISD) and/or its member district will provide to help the student make educational progress.
11. **IRIP (Individual Reading Improvement Plan):** As defined by Michigan's Read by Grade Three Law, an IRIP should be provided to K-3 students within 30 days of being identified as having a "reading deficiency." The teacher, principal, and parent/guardian (as well as any other relevant school personnel) should create the IRIP and outline the reading intervention services that the student should receive until they no longer have a "reading deficiency."
12. **ISD/RESA (Intermediate School District/Regional Educational Service Agency):** In Michigan, ISDs/RESAs are educational entities that operate between the Michigan Department of Education and local education agencies, often serving the local education agencies within a given county. Local education agencies can receive a range of services through their ISD.
13. **ISD (Intermediate School District) Early Literacy Coach:** An ISD Early Literacy Coach is funded at least in part through the 35a(4) Early Literacy Coach Grant. Responsibilities outlined under the Read by Grade Three Law include providing initial and ongoing professional development to teachers on the five major reading components, administering and analyzing instructional assessments, providing differentiated instruction and intensive intervention, using progress monitoring, and identifying and addressing "reading deficiency" as well as coaching and mentoring colleagues, modeling effective instructional strategies, and working with teachers to apply evidence-based reading strategies and programs.
14. **ITS (Interrupted Time Series) Analysis:** A statistical analysis method that involves tracking data on an outcome before and after an intervention to compare what actually happened after the intervention to what would have been expected based on the pre-intervention trend.
15. **Literacy Specialist/Interventionist:** Individuals who work to improve literacy achievement in schools and districts by serving in various roles, including as coaches.

KEY TERMS *(continued)*

16. **LPM (Linear Probability Model):** A regression model where the outcome variable is a binary variable, and one or more explanatory variables are used to predict the outcome. Explanatory variables can themselves be binary, or be continuous
17. **MAISA (Michigan Association of Intermediate School Administrators):** A professional development organization comprised of superintendents and administrators in the State of Michigan.
18. **MAPSA (Michigan Association of Public School Academies):** An organization facilitating public support for Michigan charter schools.
19. **MASA (Michigan Association of Superintendents and Administrators):** Provides technical, personal, and legal services to members, in addition to government relations services, print and digital publications, and professional development opportunities targeted toward school leaders throughout Michigan.
20. **MDE (Michigan Department of Education):** The Michigan Department of Education is Michigan's state education agency.
21. **MEA (Michigan Education Association):** An education association that provides education support to teachers, education support professionals, and higher-education employees throughout Michigan.
22. **MEAP (Michigan Educational Assessment Program):** MEAP is the Michigan Educational Assessment Program (MEAP), which was a suite of standardized assessments given to Michigan students and used by the state for school and district accountability. The MEAP was administered through the 2013-14 school year, after which it was replaced by a new assessment system.
23. **MEMSPA (Michigan Elementary and Middle School Principals Association):** A professional organization for Michigan principals.
24. **MOECS (Michigan Online Educator Certification System):** A secure web-based system that allows educators to register and create private accounts and have access to all of their certification data, apply for certificates and endorsements, and renew their certificates.
25. **M-STEP (Michigan Student Test of Educational Progress):** A suite of assessments administered to Michigan's students since spring 2015. M-STEP is the assessment that the Michigan Department of Education (MDE) uses for school and district accountability.
26. **MTSS (Multi-Tiered System of Supports):** A layered system designed to universally help students, with increasingly intensive support for those identified with additional needs.
27. **"Read at Home" Plan:** An intervention tool that can be included within a student's Individual Reading Improvement Plan (IRIP) intended to engage families in at-home literacy instruction and learning as extra educational support.
28. **Reading Deficiency:** As defined in Michigan's Read by Grade Three Law, a "reading deficiency" means scoring below grade level or being determined to be at risk of reading failure based on a screening assessment, diagnostic assessment, standardized summative assessment, or progress monitoring.
29. **Section 504 Plan:** A plan that lists the accommodations a school will provide (e.g., audiobooks, note-taking aids, extended time to complete tests) so that a student with a disability has equal access to the general education curriculum.
30. **TPS (Traditional Public School):** Traditional public school districts are special-purpose districts with geographic boundaries and a publicly elected governing board that receive public funds to operate schools.

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CREDITS

APPENDIX A. SURVEY FINAL QUESTION CODING SCHEME

COVID-19

- In-person instruction
  - COVID-19 restriction challenges (e.g., masks, social distancing)
- Lower attendance
- Lower engagement from students
- Lower engagement from families
- Made the RBG3 Law difficult to implement/ affected implementation
- Made this their hardest year in the profession
- Positive outcomes
- Remote instruction
  - Is hard
  - Is not effective

FAMILY ENGAGEMENT

- Families not engaged enough
- Schools not doing enough to support families

LITERACY INSTRUCTION

- Curriculum
  - Likes their curriculum
  - Does not like their curriculum
- Instructional methodology
  - Science of reading
- Need more resources on working with special populations
- Need more focus on child development
- Need to focus on individual student needs
- Spent more time on literacy than last year
- Spent less time on literacy than last year

LITERACY RESOURCES

- Insufficient access
- More funding needed to support literacy

RBG3 LAW INTERVENTIONS

- Assessment
  - M-STEP
  - Parents helping students with
  - Screening assessments
  - Should not happen during COVID-19
  - Takes up too much time
- Professional development
  - Is helpful
  - Is not helpful
  - Literacy Essentials
  - Not enough access to/more needed

RBG3 LAW INTERVENTIONS *(continued)*

- Literacy coaching
  - Is helpful
  - Is not helpful
  - More funding needed/not enough coaches
- IRIPs
  - Positive
  - Negative
  - Idea is good, but not helpful in practice
- "Read at Home" plans
  - Positive
  - Negative
- Retention
  - Positive
  - Negative
  - Should happen in earlier grades
  - Should not happen during pandemic
  - Should not happen at all/should be abolished
  - Not being implemented consistently

SENTIMENTS ABOUT THE RBG3 LAW

- Does not help students/is not improving students' literacy
- Does not have enough time to implement
- Imposes extra work
- Is good in theory
- Is not being implemented with fidelity
- Supports teachers

SUPPORT FOR ADMINISTRATION/DISTRICT

- Is good
- Is insufficient

TEACHING PROFESSION

- Accountability/pressure on teachers
- Leaving the profession
- Mental health/trauma/burnout
- Teachers don't get paid enough

OTHER

- Clarification about survey responses
- Feedback about survey
  - Positive
  - Negative
- General thanks for survey
- N/A; no comment
- Not familiar with RBG3 Law
- RBG3 Law does not affect me

APPENDIX B. FULL RESULTS FROM FIGURE 3.16

ITS Analysis of Changes in Trends of Teacher Mobility			
	Transfer Within District	Transfer Out of District	Exit From Profession
	(1)	(2)	(3)
Trend	-0.001	0.001**	-0.000
	(0.001)	(0.000)	(0.001)
1-year post	-0.001	0.002	-0.001
	(0.004)	(0.001)	(0.002)
2-years post	-0.003	-0.000	0.001
	(0.005)	(0.001)	(0.003)
3-years post	-0.007	-0.001	0.004
	(0.006)	(0.002)	(0.004)
4-years post	-0.007	-0.007***	0.005
	(0.007)	(0.002)	(0.005)
Asian	-0.008+	0.002	0.027*
	(0.005)	(0.004)	(0.013)
Black	0.012***	0.002	-0.037***
	(0.004)	(0.002)	(0.005)
Hispanic of any race	-0.006+	-0.001	0.002
	(0.004)	(0.003)	(0.005)
Other race(s)	-0.007	0.003	0.122***
	(0.005)	(0.003)	(0.022)
Female	-0.008***	-0.001	-0.005**
	(0.002)	(0.001)	(0.002)
Age	-0.000***	-0.000***	0.003***
	(0.000)	(0.000)	(0.000)
New teacher	0.005*	-0.001	-0.006*
	(0.002)	(0.001)	(0.003)
Master's degree and beyond	-0.002	-0.002***	-0.021***
	(0.001)	(0.001)	(0.001)
% non-White	0.035**	0.006+	0.011
	(0.011)	(0.003)	(0.008)
% economically disadvantaged	0.044***	-0.000	0.020**
	(0.011)	(0.002)	(0.006)
% English learner	-0.022*	-0.007*	-0.019***
	(0.011)	(0.003)	(0.005)
% special education	0.045+	0.000	-0.009
	(0.027)	(0.008)	(0.018)
Log (enrollment)	-0.026***	-0.002+	-0.005*
	(0.005)	(0.001)	(0.002)
Constant	0.183***	0.037***	-0.064***
	(0.029)	(0.007)	(0.014)
Observations	**22,5611**	**22,5611**	**22,5611**
R-squared	**0.025**	**0.079**	**0.046**

*Note: Robust standard errors clustered at the district level in parentheses. All models include district fixed effects. + p<0.1 * p<0.05 ** p<0.01 ***p<0.001*

APPENDIX C.1. FULL RESULTS FROM FIGURE 5.6

Regression Estimates: Relationship Between "Reading Deficiency" Identification and Retention Outcomes							
			M-STEP Participation	Promote	Promote w/ Support	Eligible for Retention	Intent to Retain
			(1)	(2)	(3)	(4)	(5)
"Reading Deficiency" Patterns:							
Fall 2018	**Fall 2019**	**Fall 2020**					
Yes	No	No	-0.013**	-0.104***	0.087***	0.017***	-0.016
			(0.005)	(0.009)	(0.008)	(0.003)	(0.034)
No	Yes	No	-0.004	-0.143***	0.115***	0.028**	0.033
			(0.008)	(0.016)	(0.013)	(0.009)	(0.033)
No	No	Yes	0.017***	-0.212***	0.171***	0.041***	0.021
			(0.005)	(0.011)	(0.009)	(0.004)	(0.030)
Yes	Yes	No	-0.035***	-0.178***	0.147***	0.031***	0.040
			(0.007)	(0.013)	(0.011)	(0.006)	(0.034)
No	Yes	Yes	-0.005	-0.331***	0.263***	0.068***	0.029
			(0.007)	(0.014)	(0.012)	(0.007)	(0.028)
Yes	No	Yes	0.008	-0.332***	0.251***	0.082***	0.043
			(0.007)	(0.014)	(0.013)	(0.008)	(0.033)
Yes	Yes	Yes	0.004	-0.399***	0.304***	0.095***	0.037
			(0.005)	(0.011)	(0.009)	(0.005)	(0.024)
Student Characteristics:							
Male			-0.003	-0.017***	0.010***	0.007***	-0.011
			(0.002)	(0.003)	(0.003)	(0.002)	(0.012)
Asian			-0.073***	0.016+	-0.019*	0.003	0.006
			(0.022)	(0.009)	(0.008)	(0.004)	(0.022)
Black			-0.085***	-0.116***	0.098***	0.018***	-0.001
			(0.009)	(0.008)	(0.008)	(0.005)	(0.021)
Hispanic or Latino/a/x			-0.030***	-0.016*	0.011	0.005	-0.003
			(0.006)	(0.007)	(0.007)	(0.004)	(0.013)
Other race(s)			-0.033***	-0.019**	0.014*	0.006	-0.020
			(0.006)	(0.007)	(0.006)	(0.004)	(0.028)
English learner			0.021**	-0.039***	0.038***	0.000	-0.045+
			(0.008)	(0.008)	(0.007)	(0.004)	(0.024)
Economically disadvantaged			-0.038***	-0.073***	0.058***	0.015***	0.011
			(0.003)	(0.004)	(0.003)	(0.002)	(0.013)
Students with disabilities			-0.057***	-0.110***	0.081***	0.029***	-0.035*
			(0.004)	(0.006)	(0.005)	(0.003)	(0.014)
Non-resident			-0.026***	0.000	0.002	-0.003	0.010
			(0.004)	(0.004)	(0.004)	(0.002)	(0.020)
N			**91,691**	**66,675**	**66,675**	**66,675**	**3,026**

*Note: Data are derived from student-level administrative records for the cohort of students in 3rd grade in 2020-21. This cohort is tracked from 2018-19 to 2020-21. Column (1) includes all students in this cohort. Columns (2) through (4) include students who participated in the 2020-21 3rd grade ELA M-STEP. Column (5) includes students who were retention-eligible under the Law. Standard errors clustered at the district level are in parentheses. + p<0.1 * p<0.05 ** p<0.01 ***p<0.001*

APPENDIX C.2. FULL RESULTS FROM FIGURE 5.8

Relationships Between Retention-Eligibility Rate Prediction Error and District Characteristics					
	Actual Retention-Eligibility Rate	Model Predicted Retention-Eligibility Rate	Prediction Error (1) – (2)	Significantly More Than Predicted?	Prediction Error Significantly Different from Reference Group?
	(1)	(2)	(3)	(4)	(5)
ELA Performance 2018-19:					
1st quartile	15.2%	8.1%	7.1%	Yes**	Yes*** (+)
2nd quartile	8.9%	6.4%	2.5%	Yes+	Yes** (+)
3rd quartile	4.3%	5.0%	-0.7%	No	-
4th quartile	2.1%	3.7%	-1.6%	No	No
Sector:					
TPS	5.1%	5.0%	0.1%	Yes*	-
PSA	10.7%	6.7%	4.0%	Yes*	No
Proportion Non-White:					
1st quartile	4.1%	4.8%	-0.7%	Yes*	No
2nd quartile	3.9%	4.6%	-0.7%	Yes*	No
3rd quartile	5.6%	5.1%	0.5%	Yes*	-
4th quartile	13.7%	7.7%	6.0%	Yes*	No
Proportion Economically Disadvantaged:					
1st quartile	2.6%	3.3%	-0.7%	Yes*	No
2nd quartile	3.4%	4.8%	-1.4%	No	No
3rd quartile	6.5%	6.1%	0.4%	No	-
4th quartile	14.9%	8.0%	6.9%	Yes*	Yes* (+)
Proportion Students With Disabilities:					
1st quartile	8.8%	6.4%	2.4%	Yes*	No
2nd quartile	5.8%	5.0%	0.8%	Yes*	No
3rd quartile	6.4%	5.3%	1.1%	Yes*	-
4th quartile	6.1%	5.5%	0.6%	Yes*	No
Proportion English Learner:					
1st quartile	7.4%	5.9%	1.5%	Yes*	No
2nd quartile	6.4%	5.3%	1.1%	Yes*	No
3rd quartile	5.5%	5.0%	0.5%	Yes+	-
4th quartile	7.4%	5.8%	1.6%	No	No
Enrollment:					
1st quartile	8.0%	5.7%	2.3%	Yes*	Yes* (+)
2nd quartile	7.5%	6.3%	1.2%	Yes*	No
3rd quartile	6.3%	5.8%	0.6%	No	-
4th quartile	5.3%	4.4%	0.9%	No	No
Urbanicity:					
Suburb & town	6.5%	5.2%	1.3%	Yes*	-
City	13.5%	7.2%	6.3%	Yes*	No
Rural	4.2%	5.2%	-1.0%	No	Yes** (-)
M-STEP Participation Rate:					
1st quartile	12.2%	6.4%	5.8%	Yes+	Yes** (+)
2nd quartile	5.9%	5.4%	0.5%	No	No
3rd quartile	4.7%	5.2%	-0.5%	No	-
4th quartile	4.5%	5.1%	-0.6%	No	No

*Note: Data are derived from student-level administrative records for the cohort of students in 3rd grade in 2020-21. This cohort is tracked from 2018-19 to 2020-21. Column (1) represents school districts' actual retention-eligibility rates in 2020-21. Column (2) shows districts' predicted retention-eligibility rate computed from the regression model in Appendix C.1, Column (4). Column (3) presents the average district-level retention-eligibility rate prediction error, equaling Column (1) minus Column (2). Column (4) indicates whether the regression-adjusted prediction errors are statistically significantly different from zero and positive, indicating an under-estimation of retention-eligibility rates. Column (5) indicates whether the regression-adjusted retention eligibility rate is for a given quartile (or subgroup) is statistically significantly different than the reference group. The reference group is indicated by a "-". Positive differences from the reference group are denoted "(+)" and negative differences are denoted "(-)". + p<0.1 * p<0.05 ** p<0.01 ***p<0.001*

APPENDIX D.1. FULL RESULTS FROM FIGURE 6.2

ITS Analysis of Changes in Trends in 3rd-Grade ELA M-STEP Subscores					
Grade 3					
	Overall	Listening	Reading	Writing	Research
	(1)	(2)	(3)	(4)	(5)
Pre-Law trend	-3.417***	2.642***	-4.486***	-5.318***	-4.149***
	(0.239)	(0.393)	(0.200)	(0.315)	(0.273)
1-year post	2.490***	-2.311***	2.381***	5.433***	3.411***
	(0.330)	(0.457)	(0.291)	(0.430)	(0.432)
2-years post	6.457***	-3.227***	7.359***	12.871***	7.101***
	(0.606)	(0.849)	(0.519)	(0.818)	(0.727)
3-years post	10.598***	-5.116***	12.280***	19.241***	12.194***
	(0.837)	(1.233)	(0.704)	(1.133)	(0.988)
Male	-3.517***	-2.337***	-3.802***	-5.411***	-2.026***
	(0.070)	(0.107)	(0.082)	(0.077)	(0.097)
Asian	6.129***	5.873***	5.437***	6.846***	7.148***
	(0.484)	(0.582)	(0.462)	(0.533)	(0.541)
Black	-9.997***	-12.606***	-9.940***	-9.698***	-11.135***
	(0.331)	(0.386)	(0.331)	(0.349)	(0.379)
Hispanic or Latino/a/x	-2.266***	-2.804***	-2.267***	-2.246***	-2.355***
	(0.262)	(0.311)	(0.265)	(0.271)	(0.335)
Other race(s)	-2.498***	-2.786***	-2.650***	-2.360***	-2.648***
	(0.186)	(0.265)	(0.200)	(0.197)	(0.241)
English learner	-7.977***	-9.898***	-8.430***	-7.265***	-8.325***
	(0.464)	(0.544)	(0.441)	(0.483)	(0.535)
Economically disadvantaged	-9.752***	-11.101***	-9.596***	-10.015***	-10.888***
	(0.188)	(0.238)	(0.187)	(0.184)	(0.221)
Special education student	-14.892***	-17.728***	-14.570***	-16.644***	-14.972***
	(0.345)	(0.393)	(0.335)	(0.367)	(0.413)
Non-resident	-0.218	-0.222	-0.222	-0.279	-0.222
	(0.152)	(0.217)	(0.146)	(0.177)	(0.193)
% non-White	-1.461	-1.861	-1.318	-1.141	-2.291
	(2.266)	(2.272)	(1.962)	(2.873)	(2.677)
% English learner	6.899***	7.966***	5.973***	7.798***	8.342***
	(1.319)	(1.833)	(1.119)	(1.673)	(1.499)
% economically disadvantaged	-2.990	-3.864+	-3.500+	-3.288	-1.067
	(2.159)	(2.178)	(1.930)	(2.532)	(2.611)
% special education	-7.999*	-7.180*	-6.458+	-9.529*	-10.852*
	(3.744)	(3.643)	(3.537)	(4.519)	(4.545)
Log (enrollment)	-1.301*	-1.454*	-1.294*	-1.336+	-1.510*
	(0.635)	(0.675)	(0.570)	(0.767)	(0.698)
School-level MEAP score change between 2012-13 and 2013-14	0.061**	0.055*	0.050*	0.081***	0.076**
	(0.021)	(0.026)	(0.020)	(0.024)	(0.027)
School-level average MEAP score between 2012-13 and 2013-14	0.451***	0.494***	0.414***	0.500***	0.526***
	(0.048)	(0.052)	(0.042)	(0.066)	(0.055)
Constant	1167.977***	1156.548***	1182.218***	1147.923***	1140.954***
	(17.869)	(19.246)	(15.863)	(23.529)	(20.659)
Observations	**49,8245**	**49,7796**	**49,7796**	**49,7796**	**49,7796**
R-squared	**0.296**	**0.190**	**0.256**	**0.256**	**0.209**
Adjusted R-squared	**0.295**	**0.189**	**0.255**	**0.255**	**0.208**

*Note: Robust standard errors clustered at the district level in parentheses. All models include district fixed effects. + p<0.1 * p<0.05 ** p<0.01 ***p<0.001*

APPENDIX D.2. FULL RESULTS FROM FIGURE 6.3

ITS Analysis of Changes in Trends in 4th-Grade ELA M-STEP Subscores					
Grade 4					
	Overall	Listening	Reading	Writing	Research
	(1)	(2)	(3)	(4)	(5)
Pre-Law trend	0.353	4.826***	-1.099***	0.330	-0.604**
	(0.228)	(0.282)	(0.279)	(0.319)	(0.232)
1-year post	-2.370***	-6.929***	-1.757***	-1.426***	-1.535***
	(0.292)	(0.356)	(0.332)	(0.396)	(0.355)
2-years post	-1.149*	-10.560***	-0.119	1.392+	0.974
	(0.561)	(0.666)	(0.633)	(0.814)	(0.608)
3-years post	-0.902	-15.507***	1.248	2.724*	1.917*
	(0.791)	(0.925)	(0.914)	(1.149)	(0.823)
Male	-3.810***	-0.370***	-3.472***	-7.011***	-2.372***
	(0.069)	(0.105)	(0.075)	(0.079)	(0.099)
Asian	7.303***	6.314***	6.691***	8.134***	8.123***
	(0.430)	(0.487)	(0.466)	(0.443)	(0.468)
Black	-10.258***	-12.336***	-10.177***	-9.638***	-11.202***
	(0.309)	(0.339)	(0.316)	(0.323)	(0.355)
Hispanic or Latino/a/x	-0.997***	-0.931**	-1.075***	-0.720*	-1.140***
	(0.274)	(0.337)	(0.290)	(0.282)	(0.325)
Other race(s)	-2.701***	-3.025***	-2.528***	-2.556***	-3.262***
	(0.190)	(0.248)	(0.194)	(0.201)	(0.262)
English learner	-12.478***	-14.396***	-12.714***	-11.645***	-13.321***
	(0.676)	(0.733)	(0.673)	(0.703)	(0.742)
Economically disadvantaged	-9.702***	-10.197***	-9.591***	-9.485***	-11.072***
	(0.186)	(0.196)	(0.179)	(0.196)	(0.229)
Special education student	-16.827***	-20.112***	-16.527***	-17.412***	-16.967***
	(0.314)	(0.315)	(0.327)	(0.299)	(0.394)
Non-resident	-0.290*	-0.200	-0.243	-0.278+	-0.459**
	(0.147)	(0.188)	(0.163)	(0.152)	(0.174)
% non-White	-1.184	-2.565	-1.958	-0.549	-0.544
	(2.050)	(1.902)	(1.779)	(2.491)	(2.471)
% English learner	9.179***	8.394***	8.412***	9.978***	10.879***
	(1.657)	(1.479)	(1.475)	(2.021)	(2.248)
% economically disadvantaged	-2.279	-2.526	-1.872	-2.047	-3.354
	(1.933)	(1.626)	(1.717)	(2.327)	(2.396)
% special education	-5.939+	-7.369*	-5.628+	-5.269	-7.515*
	(3.071)	(2.960)	(2.984)	(3.629)	(3.518)
Log (enrollment)	-1.583**	-1.830***	-1.525**	-1.617**	-1.547**
	(0.488)	(0.501)	(0.469)	(0.565)	(0.565)
School-level MEAP score change between 2012-13 and 2013-14	0.001	0.010	0.005	0.003	-0.009
	(0.019)	(0.022)	(0.018)	(0.023)	(0.023)
School-level average MEAP score between 2012-13 and 2013-14	0.452***	0.459***	0.428***	0.492***	0.475***
	(0.045)	(0.057)	(0.038)	(0.060)	(0.047)
Constant	1224.115***	1227.611***	1234.856***	1203.471***	1211.008***
	(20.980)	(25.266)	(17.625)	(26.887)	(22.574)
Observations	**50,0864**	**50,0536**	**50,0536**	**50,0536**	**50,0536**
R-squared	**0.324**	**0.231**	**0.266**	**0.286**	**0.221**
Adjusted R-squared	**0.323**	**0.229**	**0.264**	**0.285**	**0.220**

*Note: Robust standard errors clustered at the district level in parentheses. All models include district fixed effects. + p<0.1 * p<0.05 ** p<0.01 ***p<0.001*

APPENDIX D.3. FULL RESULTS FROM FIGURE 6.4

ITS Analysis of Changes in Trends in 5th-Grade ELA M-STEP Subscores					
Grade 4					
	Overall	Listening	Reading	Writing	Research
	(1)	(2)	(3)	(4)	(5)
Pre-Law trend	1.066***	6.850***	-1.196***	1.128***	-0.441
	-0.192	-0.28	-0.207	-0.257	-0.296
1-year post	-0.618*	-7.365***	-0.417	2.565***	0.671
	-0.268	-0.368	-0.303	-0.336	-0.429
2-years post	-4.519***	-14.966***	-0.273	-3.061***	-0.712
	-0.482	-0.638	-0.518	-0.606	-0.816
3-years post	-5.356***	-21.864***	1.107	-4.117***	0.39
	-0.664	-0.91	-0.729	-0.847	-1.062
Male	-4.714***	-1.825***	-4.322***	-7.075***	-4.790***
	-0.071	-0.1	-0.073	-0.078	-0.11
Asian	7.951***	7.469***	7.057***	8.679***	9.140***
	-0.425	-0.514	-0.458	-0.432	-0.46
Black	-10.776***	-11.202***	-11.237***	-10.421***	-11.754***
	-0.312	-0.372	-0.33	-0.322	-0.327
Hispanic or Latino/a/x	-0.645*	-0.351	-0.742*	-0.650*	-0.611+
	-0.299	-0.377	-0.324	-0.291	-0.348
Other race(s)	-2.853***	-2.761***	-2.791***	-2.847***	-3.308***
	-0.204	-0.26	-0.225	-0.204	-0.273
English learner	-16.370***	-18.383***	-16.662***	-16.200***	-16.763***
	-0.808	-0.894	-0.829	-0.842	-0.813
Economically disadvantaged	-9.743***	-10.549***	-9.362***	-9.796***	-10.995***
	-0.198	-0.227	-0.191	-0.202	-0.236
Special education student	-18.819***	-21.969***	-17.911***	-20.156***	-19.875***
	-0.33	-0.328	-0.327	-0.34	-0.431
Non-resident	-0.330*	-0.376*	-0.095	-0.607***	-0.352*
	-0.14	-0.181	-0.151	-0.155	-0.171
% non-White	-1.312	-2.367	-0.8	-1.31	-2.222
	-1.889	-2.052	-1.636	-2.257	-2.411
% English learner	11.001***	12.001***	9.492***	11.789***	13.977***
	-1.398	-1.701	-1.191	-1.585	-2.132
% economically disadvantaged	-2.518	-3.323+	-2.535	-2.944	-1.842
	-2.099	-1.961	-1.876	-2.483	-2.937
% special education	-6.641*	-6.590*	-4.227	-9.019**	-9.395*
	-2.999	-3.074	-2.84	-3.481	-3.715
Log (enrollment)	-1.067+	-1.229*	-0.896+	-1.156+	-1.590*
	-0.563	-0.559	-0.517	-0.652	-0.687
School-level MEAP score change between 2012-13 and 2013-14	-0.002	-0.012	-0.003	-0.009	0.012
	-0.024	-0.025	-0.023	-0.028	-0.029
School-level average MEAP score between 2012-13 and 2013-14	0.434***	0.445***	0.413***	0.461***	0.471***
	-0.055	-0.064	-0.047	-0.067	-0.067
Constant	1286.889***	1285.421***	1297.595***	1271.163***	1268.617***
	-31.321	-35.949	-26.931	-38.247	-39.166
Observations	**50,1331**	**50,1095**	**50,1095**	**50,1095**	**50,1095**
R-squared	**0.342**	**0.222**	**0.275**	**0.305**	**0.24**
Adjusted R-squared	**0.341**	**0.221**	**0.274**	**0.304**	**0.239**

*Note: Robust standard errors clustered at the district level in parentheses. All models include district fixed effects. + p<0.1 * p<0.05 ** p<0.01 ***p<0.001*

APPENDIX D.4. FULL RESULTS FROM FIGURE 6.5

ITS Analysis of Changes in Trends in Student Retention after the Law's Implementation						
	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
	(1)	(2)	(3)	(4)	(5)	(6)
Pre-Law trend	-0.003	-0.001	-0.001***	-0.000	-0.001	-0.001
	(0.0043)	(0.0010)	(0.0002)	(0.0004)	(0.0008)	(0.0011)
1-year post	0.002	0.001	0.000	-0.002	0.001	0.001+
	(0.0029)	(0.0016)	(0.0015)	(0.0019)	(0.0008)	(0.0004)
2-year post	0.001	0.002	-0.000	-0.005	0.003	0.000
	(0.0053)	(0.0021)	(0.0030)	(0.0040)	(0.0029)	(0.0009)
3-year post	0.004	0.001	0.001	-0.008	0.005	0.002
	(0.0088)	(0.0025)	(0.0038)	(0.0065)	(0.0059)	(0.0039)
4-year post	0.003	-0.003	-0.001	-0.011	0.007	0.004
	(0.0136)	(0.0037)	(0.0050)	(0.0089)	(0.0094)	(0.0086)
Male	0.018***	0.004***	0.002**	0.001*	0.001***	0.001***
	(0.0009)	(0.0007)	(0.0006)	(0.0006)	(0.0003)	(0.0004)
Asian	-0.009***	-0.002	-0.001	0.000	0.000	-0.000
	(0.0020)	(0.0012)	(0.0007)	(0.0005)	(0.0003)	(0.0004)
Black	-0.010***	0.002*	0.003***	0.002***	0.001*	0.001+
	(0.0015)	(0.0008)	(0.0006)	(0.0005)	(0.0005)	(0.0004)
Hispanic or Latino/a/x	0.002+	0.004***	0.001+	0.000	-0.001***	-0.001***
	(0.0013)	(0.0009)	(0.0005)	(0.0004)	(0.0003)	(0.0003)
Other race(s)	-0.001	0.002**	0.000	0.001	-0.000	-0.000
	(0.0014)	(0.0008)	(0.0005)	(0.0004)	(0.0003)	(0.0003)
Age (standardized within cohort)	-0.016	-0.000	0.003	0.017	-0.011	-0.014
	(0.0260)	(0.0099)	(0.0074)	(0.0128)	(0.0164)	(0.0287)
English learner	-0.004+	0.001	0.001	0.000	0.001	0.001*
	(0.0021)	(0.0013)	(0.0009)	(0.0005)	(0.0005)	(0.0005)
Economically disadvantaged	0.023***	0.013***	0.006***	0.003***	0.002***	0.002***
	(0.0012)	(0.0006)	(0.0004)	(0.0003)	(0.0003)	(0.0002)
Special education student	0.045***	0.011***	0.004***	0.002***	0.001***	0.002***
	(0.0019)	(0.0007)	(0.0005)	(0.0004)	(0.0004)	(0.0003)
Non-resident	0.004***	-0.001	-0.001	-0.000	0.000	0.000
	(0.0013)	(0.0010)	(0.0007)	(0.0005)	(0.0004)	(0.0003)
Partner school	0.003	-0.004	0.001	0.003**	0.000	-0.001
	(0.0037)	(0.0031)	(0.0023)	(0.0010)	(0.0006)	(0.0025)
% non-White	-0.027*	0.001	-0.000	0.003	0.003	0.002
	(0.0117)	(0.0075)	(0.0045)	(0.0028)	(0.0019)	(0.0016)
% English learner	0.001	-0.007	-0.000	-0.006*	-0.009**	-0.007+
	(0.0097)	(0.0059)	(0.0027)	(0.0027)	(0.0033)	(0.0038)
% economically disadvantaged	0.009	0.008	0.003	0.001	-0.000	-0.000
	(0.0133)	(0.0070)	(0.0043)	(0.0027)	(0.0021)	(0.0021)
% special education	0.008	-0.001	0.016+	0.006	0.009	0.011**
	(0.0313)	(0.0092)	(0.0090)	(0.0071)	(0.0057)	(0.0033)
Log (enrollment)	-0.024*	-0.000	-0.000	-0.000	-0.001	-0.000
	(0.0097)	(0.0020)	(0.0010)	(0.0007)	(0.0006)	(0.0006)
Constant	0.320	0.015	-0.016	-0.132	0.096	0.116
	(0.2204)	(0.0815)	(0.0580)	(0.1046)	(0.1309)	(0.2336)
Observations	**906,664**	**870,360**	**867,552**	**874,838**	**881,357**	**890,913**
R-squared	**0.061**	**0.026**	**0.020**	**0.019**	**0.017**	**0.017**
Adjusted R-squared	**0.060**	**0.025**	**0.019**	**0.018**	**0.016**	**0.016**

*Note: Robust standard errors clustered at the district level in parentheses. All models include district fixed effects. + p<0.1 * p<0.05 ** p<0.01 ***p<0.001*

APPENDIX D.5. FULL RESULTS FROM FIGURE 6.7

ITS Analysis of Changes in Trends of Students With Disabilities Classification						
	Kindergarten	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Pre-Law trend	0.004***	0.003***	0.002***	0.002***	0.002***	0.002***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
1-year post	0.004*	0.004*	0.003+	0.004*	0.001	0.001
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
2-year post	-0.002	0.003	0.004	0.000	-0.001	-0.003
	(0.003)	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)
3-year post	0.000	0.004	0.010***	0.005+	0.000	-0.000
	(0.003)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)
4-year post	-0.011*	-0.004	-0.001	0.003	-0.003	-0.006+
	(0.004)	(0.003)	(0.003)	(0.003)	(0.004)	(0.003)
Male	0.084***	0.089***	0.092***	0.091***	0.089***	0.085***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)
Asian	-0.019***	-0.031***	-0.043***	-0.053***	-0.064***	-0.073***
	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)
Black	-0.012***	-0.013***	-0.010*	-0.000	0.010*	0.015***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)
Hispanic or Latino/a/x	-0.004	-0.003	-0.004+	-0.004	-0.008*	-0.015***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Other race(s)	-0.006*	-0.006*	-0.006*	-0.003	0.001	0.005*
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
English learner	-0.042***	-0.040***	-0.041***	-0.036***	-0.013*	0.013*
	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.005)
Economically disadvantaged	0.057***	0.059***	0.067***	0.071***	0.075***	0.077***
	(0.002)	(0.003)	(0.002)	(0.003)	(0.003)	(0.003)
Non-resident	-0.013***	-0.004	0.002	0.005	0.007*	0.009*
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Partner school	0.003	-0.004	-0.006	-0.002	-0.009	-0.004
	(0.007)	(0.007)	(0.006)	(0.008)	(0.006)	(0.008)
% non-White	-0.014	-0.008	-0.016	-0.030*	-0.033+	-0.021
	(0.016)	(0.014)	(0.013)	(0.015)	(0.018)	(0.022)
% English learner	-0.028	-0.027	-0.038+	-0.051*	-0.085***	-0.108***
	(0.022)	(0.020)	(0.020)	(0.022)	(0.021)	(0.024)
% economically eisadvantaged	0.041***	0.042***	0.043***	0.046***	0.052***	0.052***
	(0.012)	(0.012)	(0.013)	(0.013)	(0.014)	(0.015)
Log (enrollment)	-0.022***	-0.028***	-0.034***	-0.037***	-0.041***	-0.042***
	(0.004)	(0.005)	(0.006)	(0.007)	(0.008)	(0.008)
Constant	0.183***	0.215***	0.257***	0.288***	0.308***	0.318***
	(0.027)	(0.034)	(0.038)	(0.041)	(0.051)	(0.052)
Observations	**953,760**	**870,566**	**867,750**	**875,020**	**881,497**	**891,009**
R-squared	**0.037**	**0.037**	**0.039**	**0.038**	**0.037**	**0.037**
Adjusted R-squared	**0.036**	**0.036**	**0.038**	**0.037**	**0.037**	**0.036**

Note: Robust standard errors clustered at district level in parentheses. $^{+}$ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

APPENDIX D.6. FULL RESULTS FROM FIGURE 6.8 - STUDENTS WITH DISABILITIES IDENTIFICATION

ITS Analysis of Changes in Trends in Students with Disabilities Identification						
	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
	(1)	(2)	(3)	(4)	(5)	(6)
Pre-Law trend	-0.001	0.001+	0.001+	0.001*	0.001	0.001*
	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
1-year post	0.001	0.000	0.001	0.001	0.000	-0.000
	(0.003)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
2-year post	0.002	-0.001	-0.001	-0.002	0.000	-0.001
	(0.004)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)
3-year post	0.002	-0.000	0.001	-0.002	0.001	-0.000
	(0.006)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
4-year post	-0.009	-0.009***	-0.011***	-0.010***	-0.006*	-0.007***
	(0.007)	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)
5-year post	0.001	-0.004	-0.005	-0.004	-0.002	-0.005+
	(0.008)	(0.003)	(0.003)	(0.003)	(0.003)	(0.002)
Male	0.019***	0.018***	0.017***	0.013***	0.009***	0.008***
	(0.001)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)
Asian	-0.003	-0.012***	-0.017***	-0.016***	-0.014***	-0.014***
	(0.005)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Black	0.008*	0.002+	0.002+	0.006***	0.008***	0.006***
	(0.004)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Hispanic or Latino/a/x	-0.000	-0.001	0.000	0.001	0.000	-0.003***
	(0.003)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Other race(s)	0.003	0.001	-0.001	0.000	0.004***	0.002*
	(0.003)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
English learner	-0.003	-0.005***	-0.009***	-0.005***	-0.000	0.005***
	(0.004)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Economically disadvantaged	0.018***	0.015***	0.019***	0.016***	0.012***	0.011***
	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Non-resident	0.002	-0.000	0.000	-0.000	0.002*	0.000
	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Partner school	0.001	0.001	-0.002	-0.003+	-0.001	-0.001
	(0.011)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
% non-White	-0.010	-0.001	-0.005	-0.010*	-0.003	0.001
	(0.012)	(0.004)	(0.004)	(0.004)	(0.004)	(0.003)
% English learner	0.022+	0.003	0.004	-0.004	-0.004	-0.009*
	(0.012)	(0.004)	(0.005)	(0.004)	(0.003)	(0.003)
% economically disadvantaged	-0.004	-0.003	-0.004	0.002	-0.004	-0.003
	(0.009)	(0.003)	(0.005)	(0.003)	(0.003)	(0.003)
Log (enrollment)	-0.003	-0.003*	-0.006***	-0.003*	-0.003*	-0.002+
	(0.003)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Constant	0.041+	0.031***	0.053***	0.035***	0.031***	0.025*
	(0.021)	(0.007)	(0.008)	(0.009)	(0.008)	(0.008)
Observations	**91,590**	**71,9695**	**71,9063**	**71,4931**	**71,7063**	**72,2409**
R-squared	**0.028**	**0.011**	**0.011**	**0.008**	**0.006**	**0.006**
Adjusted R-squared	**0.019**	**0.010**	**0.010**	**0.007**	**0.005**	**0.005**

*Note: Robust standard errors clustered at the district level in parentheses. All models include district fixed effects. + p<0.1 * p<0.05 ** p<0.01 ***p<0.001*

APPENDIX D.6. FULL RESULTS FROM FIGURE 6.8 - STUDENTS WITH DISABILITIES EXIT

ITS Analysis of Changes in Trends in Students with Disabilities Exit						
	Kindergarten	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Pre-Law trend	0.000	-0.004+	-0.002	-0.004*	-0.004+	-0.007***
	(0.004)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
1-year post	-0.005	0.007	0.001	-0.000	0.000	0.006
	(0.010)	(0.005)	(0.005)	(0.005)	(0.005)	(0.004)
2-year post	0.001	0.007	-0.006	0.003	0.002	0.010+
	(0.012)	(0.007)	(0.007)	(0.007)	(0.006)	(0.005)
3-year post	-0.006	0.008	-0.005	0.001	0.003	0.017*
	(0.016)	(0.009)	(0.009)	(0.009)	(0.008)	(0.007)
4-year post	-0.006	0.012	0.002	0.007	0.007	0.023*
	(0.019)	(0.011)	(0.011)	(0.011)	(0.010)	(0.009)
5-year post	-0.011	0.001	-0.013	0.006	0.007	0.015
	(0.022)	(0.013)	(0.013)	(0.013)	(0.011)	(0.010)
Male	-0.002	-0.016***	-0.019***	-0.012***	-0.005*	-0.001
	(0.004)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Asian	-0.020	0.006	-0.000	-0.008	-0.004	0.030***
	(0.014)	(0.008)	(0.008)	(0.007)	(0.007)	(0.007)
Black	-0.003	-0.001	-0.013***	-0.025***	-0.016***	-0.021***
	(0.007)	(0.003)	(0.004)	(0.003)	(0.003)	(0.002)
Hispanic or Latino/a/x	0.008	-0.000	-0.003	-0.005	-0.007*	0.002
	(0.008)	(0.004)	(0.004)	(0.004)	(0.003)	(0.003)
Other race(s)	-0.003	-0.007+	-0.003	-0.009*	-0.009*	-0.009*
	(0.007)	(0.004)	(0.004)	(0.004)	(0.004)	(0.003)
English learner	-0.007	-0.014***	-0.016***	-0.003	-0.016***	-0.029***
	(0.009)	(0.004)	(0.004)	(0.005)	(0.004)	(0.004)
Economically disadvantaged	-0.021***	-0.022***	-0.026***	-0.022***	-0.029***	-0.030***
	(0.005)	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)
Non-resident	-0.005	-0.003	-0.007+	-0.005	-0.005	-0.006+
	(0.005)	(0.004)	(0.004)	(0.004)	(0.003)	(0.003)
Partner school	0.002	-0.015+	-0.001	-0.004	-0.001	0.007
	(0.017)	(0.009)	(0.007)	(0.007)	(0.006)	(0.005)
% non-White	0.026	0.007	0.016	0.026*	0.019	0.011
	(0.030)	(0.017)	(0.016)	(0.013)	(0.017)	(0.014)
% English learner	-0.018	0.005	0.028*	0.007	0.036*	0.017+
	(0.033)	(0.014)	(0.013)	(0.012)	(0.013)	(0.009)
% economically disadvantaged	-0.030	-0.016	-0.005	-0.015	-0.021	-0.024*
	(0.028)	(0.015)	(0.012)	(0.013)	(0.015)	(0.011)
Log (enrollment)	0.003	0.012*	0.012*	0.014*	0.009*	0.007+
	(0.009)	(0.005)	(0.004)	(0.005)	(0.004)	(0.004)
Constant	0.079	0.047+	0.063*	0.044	0.065*	0.072*
	(0.060)	(0.028)	(0.028)	(0.030)	(0.030)	(0.025)
Observations	**22,357**	**10,3245**	**111,128**	**120,963**	**129,171**	**132,919**
R-squared	**0.052**	**0.031**	**0.026**	**0.024**	**0.020**	**0.022**
Adjusted R-squared	**0.021**	**0.023**	**0.019**	**0.017**	**0.013**	**0.016**

*Note: Robust standard errors clustered at the district level in parentheses. All models include district fixed effects. + p<0.1 * p<0.05 ** p<0.01 ***p<0.001*

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