

MEPRI Study of Instructional Programs and Materials
Used in Maine Elementary Schools



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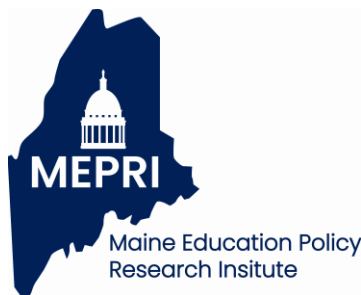
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Overview of the Study

Why was this study conducted? This study was conducted at the request of the Joint Standing Committee on Education and Cultural Affairs to explore what reading and mathematics programs and materials are used in Maine elementary schools, as well as educators' and administrators' views about those materials. Specifically, the legislature sought more insight into the quality of the reading and math instructional programs and materials Maine school districts and educators are using currently, what supports administrators and teachers feel they need to improve reading and math instruction, and what strategies districts and classroom teachers are using to help students overcome pandemic-related learning losses and support struggling students generally.

What do you need to know to put this study into context? The quality of instructional programs and materials is a component in the overall quality of teaching, which has a significant impact on student learning and achievement. Ideas about best practices change over time, as new research evidence comes to light. Recent reports have called into question past decades of practice for reading instruction, leading state and local education policymakers to focus on outlining steps needed to improve the quality of reading instruction, particularly in the early grades. Specifically, there is widespread recognition that more focus on phonics and phonemic awareness skills is needed in the earliest grades as well as more explicit instruction across all five elemental areas of reading (phonics, phonemic awareness, vocabulary, fluency and comprehension). A 2021 school survey conducted by the Maine Department of Education (MDOE, 2021) found that only 85% of schools responding to the survey indicated they had a designated reading or literacy program for K-3 grades, and only 54% had a reading program for PreK. There is no prior Maine survey data on the availability of instructional programs for math in these grades. While there has been less noticeable media or policy attention on math instruction recently, there is a similar recognition that many schools across the US have adopted programs that are not consistent with research evidence, and recommendations for a better balance of both conceptual understanding as well as procedural fluency in math for students. The development of online programs and resources (some of which are evidence-based and free of cost) for both reading and math instruction and student practice provides more opportunity for differentiation in instruction, and perhaps less costly ways to upgrade programs.

Maine schools, like others across the US, are working to assess the quality of their reading and math programs and materials, and some nonprofit organizations like EdReports provide support in that effort. However, current systems to rate the quality of instructional programs are not perfect and may have some significant limitations, which we discuss in the report. States that are working to align their instruction with evidence-based practices are seeing improvement in student achievement. This effort entails looking more closely at how future educators are trained

as well as their continued development, and support and classroom resources for teaching once they are working in schools.

What did we learn from the study? This study drew on three separate surveys of Maine teachers and administrators at the elementary grade level to explore the quality of the reading and math instructional programs and materials used currently, what supports administrators and teachers feel they need to improve instruction, and what strategies districts and classroom teachers are using to help students overcome pandemic-related learning losses and support struggling students generally. In the section that follows, we attempt to briefly summarize and highlight key findings from MEPRI's analysis of data across these three surveys. These findings are organized into three broad sub-sections: reading instructional programs, math instructional programs and strategies for supporting struggling students.

Reading Instructional Programs

Access to Instructional Reading Programs

- Most teachers (84%) in K-5 grades completing the 2023 teacher survey said their district had a published program for the grades that they teach, and 22% said they used an online reading program. And 35 teachers (14%) said their district uses a district-created program for reading alone or with other published programs.
- Some teachers (13%) in K-5 grades responding said that their district did not have a reading instructional program for the grades that they taught. For teachers who indicated they did not have a designated reading program, teachers said they used materials that they created (77%) or materials from other teachers (including online) (73%). Eleven (37%) indicated that they used published program materials.
- Teachers in K-2 grades were more likely than teachers in grades 3-5 to indicate their district created its own reading program.
- A school survey in 2021 (MDOE, 2021) indicated that 85% of schools responding had a designated reading or literacy program for K-3 grades, while only 54% of schools had a reading/ literacy program at the PreK level.

Online Reading Programs

- Just over a fifth (22%) of the K-5 teachers said their district had an online reading program, and 21% of teachers indicated that online programs were used in conjunction with a published program.
- Teachers from districts with less than 500 students were more likely to say their district had an online reading instruction program than teachers from larger districts.

Quality of Reading Programs

- Both the 2023 administrator survey and the 2021 school survey found the two most common reading programs being used in elementary grades in Maine schools were *Lucy*

Calkins Units of Study and *Fountas and Pinnell*. The non-profit group EdReports has rated both of these programs as “does not meet” indicators for quality and alignment with the Common Core State Standards since 2021 (Schwartz, 2021).

- Schools and classroom teachers indicated they often use a combination of different programs for reading, and not all are rated as meeting standards. Some programs have not been rated by EdReports. Almost half of the schools (48%) in the administrator survey used reading programs rated as not aligned with standards along with or without a non-rated curriculum. Twenty percent of administrators’ schools used only reading instructional programs rated by EdReports as meeting their indicators for quality and alignment with the Common Core State Standards.
- The use of reading programs rated as “does not meet” standards was higher in the Southern (53%) and Western (65%) counties than the Central (38%) or Northern (30%) counties of Maine.
- A third (32%) of the administrators responding to the survey thought their schools were using an evidence-based reading program what was rated by EdReports as not meeting standards.
- Across grades K-5, 46% of the teachers said they were dissatisfied with the quality of their district-specified reading program while 42% were satisfied. Teachers who said they always or most of the time use their district’s program were more likely to be satisfied with the quality of the program.

Effort to Adopt New Reading Programs

- A majority of teachers (58%) in grades K-5 said their district had adopted new materials for the grades that they teach in the past three years.
- Most teachers (72%) at K-2 level reported that their districts had adopted new reading materials for their grade in the past three years (since 2020).
- A majority of teachers (57%) in grades K-5 indicating their district had adopted a new program said it was a different instructional program from the previous one (e.g., different publisher, program).
- Respondents from remote rural areas (75%) were more likely than teachers in other settings to say that their district had adopted a different reading program.
- Over a third of teachers (36%) in grades K-5 said their district is considering adopting a new instructional program for the grades that they teach.
- Half of teachers (49%) in districts that did not adopt new reading instructional materials said that their district is considering a change.
- A quarter of teachers (26%) in districts that adopted new reading materials or programs in the past three years think their district is considering changing reading programs in the next few years.

Use of Instructional Reading Programs

- A majority of teachers (79%) in grades K-5 said they always (29%) or most of the time (40%) use their district-selected reading program for instruction (this includes published, district-created and online programs).
- Teachers were more likely to indicate they use the district-designated reading program when it was a published program (71%) or the district had a combination of published program and online program (76%) than other types of programs.
- Most K-2 teachers (71%) use their district instructional reading program for phonics instruction. Teachers from more urban settings were more likely to use that program for phonics than teachers in other settings.
- Most teachers in grades K-5 indicated they also use materials other than their district selected program to provide reading instruction. They use materials from other teachers (including online) (78%), materials that they created (74%) and published materials other than district selected ones (45%).
- About a third (31%) of teachers in grades K-5 in districts with an instructional reading program used that program but at a lower level than the grades they teach.

Training on Reading Programs

- Half of the teachers in grades K-5 said their training to use their district-designated reading program was adequate.
- Fewer teachers in districts that used both a published and online program (38%) felt their training to use the reading program was adequate.
- Teachers in districts that had adopted a new instructional program in the past three years (54%) were more likely than teachers in districts without a new program (45%) to feel their training to use their program was adequate.
- Teachers who felt their training was adequate (74%) were more likely than teachers who felt their training was inadequate (62%) to say they use the program always or most of the time.
- When teachers felt their training was adequate, 63% were satisfied with the quality of the program.
- When teachers felt their training was inadequate, 67% were dissatisfied with the quality of the instructional program.

Suggestions for Improving Quality of Reading Programs Teachers who reported that they were dissatisfied or neutral (58%) about the quality of their district's reading instructional program were asked what needs to be changed to improve your district's reading program.

- The majority of comments from teachers at all grade levels, indicated the recommendation that their district should drop the *Lucy Calkins* reading program or other non-evidenced-based program they had been using and adopt a program in line with

research evidence (the science of reading), and/ or increase attention to phonics and decoding skills in these early grades.

- Grade three and above teachers also indicated a need for a more comprehensive reading program that includes all components of reading as well as writing and spelling.
- Teachers suggested a need for more variety in reading materials (topics, genres) to increase student interest and engagement in reading.
- Some teachers felt their reading program expected a higher level of reading skill than their students have, and they wanted more flexibility to differentiate instruction.
- Some teachers felt their program was too time-consuming and/ or there was not enough time in the day to fully use the program.

Math Instructional Programs

Access to Instructional Math Programs

- Almost all teachers (99%) in K-5 grades completing the 2023 survey said that their district had a math instructional program for the grades that they teach, which is higher than for the reading programs.
- Most teachers (95%) said their district uses a published math program, and most teachers (66%) reported that their district only used a published program, which is also higher than for the reading programs.
- Only five teachers (2%) said their district uses a district-created math program alone or with other published programs for instruction, which is far less than for reading.

Online Math Programs

- Almost a third (31%) of the K-5 teachers said their district had an online math program, and 29% of teachers indicated that online programs were used in conjunction with a published program, which indicates higher use of online math programs than reading programs. Half of teachers (50%) in remote rural areas reported their district had an online program.
- Twenty-eight percent of teachers say their district uses either Eureka or Illustrative Math. Districts have an option to purchase upgraded versions of these online programs that include print versions and professional development. Just over half (54%) of the teachers in a city school said their district used one of these programs.
- About a quarter of teachers (23%) said they have never heard of either of these programs. Awareness of these programs is lowest in districts with less than 500 students where 38% of teachers have never heard of them.
- Regular and occasional use of Zearn (a free, evidence-based online math platform designed to work with Eureka) is low (15%). However, teachers in districts using Eureka or Illustrative Math programs are much more likely to use Zearn. Zearn was most frequently mentioned as being used for math practice or as a supplement by teachers who use it.

- Most teachers (63%) have never heard of Zearn. Awareness of this program is especially low in small districts.

Quality of Math Programs

- As with the reading programs, we found that schools use a variety of math instructional programs. Some of these have been independently rated and others have not. Some have been rated by EdReports as meeting standards while others are rated as partially meeting or not meeting standards.
- The administrators' most commonly listed math instructional programs were all rated by EdReports as meeting their indicators of quality and alignment with the Common Core State Standards for Math: EveryDay Math (21%), Envision (14%), Eureka (13%), and Illustrative Math (12%).
- Almost nine of ten schools (89%) only use math programs that are rated by EdReports as meeting standards.
- A majority (65%) of the responding K-5 teachers were satisfied with the quality of their district's math instructional program, which is higher than for reading.
- A high percentage of suburban teachers (85%) were satisfied with the quality of their district math program.
- When a district had recently adopted a new math program, there was greater teacher satisfaction with the quality of the program (74%) than there was in districts that had not recently adopted a new program (53%).

Effort to Adopt New Math Programs

- Just over half (56%) of the K-5 teachers responding to the survey reported that their district has adopted a new math program for the grades that they teach in the past in the past three years (since 2020).
- Of those teachers reporting a change, most (79%) reported that their district adopted a program from a different publisher.
- Most teachers (83%) felt their district was not looking to adopt a new math curriculum for the grades that they teach.
- A third of teachers who said that their district has not adopted a new program since 2020, believe that their district will adopt a new curriculum in the next few years.

Use of Instructional Math Programs

- Most teachers (91%) reported they always (57%) or most of the time (34%) use their district-selected math program for instruction (this includes published and online programs). These rates are significantly higher than the reported use of reading programs by teachers.

Training on Reading Programs

- Most teachers indicated their training on their district math program was extremely (22%) or somewhat (41%) adequate. The ratings are much higher than for training on reading programs.
- The highest percentage of teachers who felt their training was adequate was in the group whose district used a published curriculum (68%).
- Just over half of teachers (53%) in districts who used a published and an online program felt their training was adequate.
- The teachers whose districts had recently adopted a new math program were more likely to feel their training was adequate (70%) than were teachers in districts that had not recently adopted a new program (53%).
- About half of the teachers in remote rural areas (48%) felt their training to use the district math program was somewhat inadequate or extremely inadequate.

Suggestions for Improving Quality of Reading Programs

- Teachers who were neutral or dissatisfied (36%) with the quality of their district math program were asked to share more information about what they “feel needs to be changed to improve your district’s math program.” Overwhelmingly, teachers across all grade levels expressed their frustration with their current math program being too “wordy” and expecting a higher level of reading skill than their students have. Teachers reported the low reading skills were a barrier for students to tackle some math problems.
- At the grade two and below level, teachers were also concerned about the fast pace of their math program and not having enough time to ensure students attained targeted skills.
- Some teachers felt their program should give more attention to foundational skills.
- Many teachers shared comments on the prevalence of paper worksheets and requested more manipulatives and hands-on materials, games, etc., to increase student interest and engagement in math.
- Some teachers felt their math program was too difficult for their students’ math skill level.

Supporting Struggling Students

District Practices

- The teacher survey asked about their district’s primary strategy to address COVID learning loss. Half of the responding teachers indicated their district uses a strategy of remediation (instruction and support and the child’s learning level) while 42% indicated they use acceleration (beginning the year with grade level content and adding scaffolding/support to fill in learning gaps) to support students with learning loss. Smaller districts with less than 500 students had the highest percentage of teachers (65%) saying their district strategy is remediation.

- Eight percent said their districts use a strategy of previewing/ pre-teaching (exposing students to material prior to class instruction).
- Teachers were also asked about the ways their districts supported students who struggle in math or reading. The most commonly indicated strategies were: pull-out during scheduled subject time (63%), extra instruction in class during subject time (53%) or additional subject instructional time during the day for some students (48%).
- About one in five teachers said that their district increased the math (21%) or reading (17%) instructional time for all students.
- About half the teachers said their district increased instructional time for some students through summer programs (49%). Less than a third (31%) of teachers from smaller districts with less than 500 students listed summer programs while more than half of larger district teachers mentioned summer programs.
- After school programs were only used for K-5 students in 15% of teachers' districts.

Classroom Practices for Reading

- Teachers selected up to five instructional practices that they felt were most useful to close gaps in reading. Most K-2 teachers indicated these strategies were most useful: explicit and systematic instruction in phonics and phonemic awareness, using decodable texts, having students practice targeted reading skills, and reading to students. More than half of grade 3-5 teachers indicated these strategies: having students practice targeted reading skills, sequencing instruction to build knowledge/ skills incrementally, explicit and systematic instruction in phonics and phonemic awareness, and having students work on reading fluency and accuracy.
- Over a quarter (27%) of K-2 teachers indicated sending books or resources home as among the most useful strategies.
- Teachers identified up to three grouping strategies that they felt had the most positive impact on students in their classroom who struggle with reading. The top three selected by 70% or more of teachers were: small flexible group instruction targeting a specific reading skill, in person individualized instruction, and small group instruction based on learning level.

Classroom Practices for Math

- Teachers were asked to identify up to five strategies that they had found most helpful for closing gaps in math for students in their classroom. Three strategies were selected by about half of the teachers: having students practice targeted math skills; including activities to build students' fluency in math; and explicit and systematic instruction in math concepts and skills. Several practices were identified by 30% to 40% of teachers.
- Teachers chose up to three grouping approaches that they felt had the most positive impact on students in their classroom who struggle with math. Teachers in the early grades chose similar groupings as those in the upper elementary grades. Small flexible group instruction targeting a specific skill was chosen by four out of five teachers (81%).

In person individualized instruction was chosen by two thirds of teachers (68%). Half selected small group instruction based on learning level (52%).

- Strategies that fewer teachers felt had a positive impact for students who struggle with math were: small group instruction with students of all math levels (21%) and self-paced guided instruction (16%).

What did we conclude overall from the study? We found that while a majority of K-5 teachers and schools in Maine appear to have access to a published, district-designated instructional program for reading and math, some do not. In particular, teachers at the PreK level are much less likely to have a district-designated reading program, and teachers across K-5 elementary grades are less likely to have an instructional program for reading than they are for math. Where there is no district-specified program, teachers said they create their own materials or find them from colleagues or online.

Teachers were more likely to have access to online programs for student instruction for math than for reading that were selected by their districts. More than a quarter of teachers said their districts use either Eureka or Illustrative Math, but there was much lower use of the Zearn online platform. Many teachers had not heard of Zearn, and about a quarter had not heard of Eureka or Illustrative Math. These programs offer evidence-based math instruction resources that are online and free, with additional print and other materials available for a fee.

Overall, teachers were far more satisfied with their district's math program than their reading program. The most frequently mentioned reason for dissatisfaction with the district's reading program was that it did not align with research evidence or the "science of reading." The two most frequently used reading programs are rated by EdReports as not meeting their criteria for alignment with standards, while many other programs and materials used for reading have not been independently rated. By contrast, the seven math programs used most frequently are rated as meeting the criteria of alignment with standards. Caution is needed with regard to using the ratings provided by systems (like EdReports) that evaluate instructional programs, as these systems are not perfect and may have some significant limitations. Yet, these rating systems are widely used and influential in decisions at the state and local levels across the US. Better systems are needed nationally to objectively and accurately assess the quality of published and online instructional programs for their alignment with Common Core State Standards as well as their ease of use at the classroom level, and for research evidence that particular programs are effective in promoting positive learning outcomes for students.

There were some specific suggestions to improve the quality of instructional programs from teachers, including a wider array of reading and math materials and tools to increase student interest and engagement in learning. For reading, they suggested more diverse topics and genres of reading materials for students. For math, they suggested more hands-on materials and games for concrete representations and engagement in learning and less reliance on paper worksheets. Some teachers reported their students struggle with the reading level expected in their reading or math programs, particularly ELL students and other struggling readers.

Teachers were more satisfied with the quality of their training in using their district-selected math program than they were with their reading program. Teachers who were satisfied with the quality of their instructional program were also more likely to be satisfied with their training on that program.

Half of the teachers indicated their school districts have generally adopted a strategy of remediation for students with learning loss, and 42% said their districts use the strategy of acceleration. A majority of teachers said their districts use the approach of pulling students out of their regular classes for support. A significant number of teachers were using a lower grade level of their district programs for reading and math instruction. National and professional organizations discourage the strategy of remediation and encourage acceleration. Further, pulling students out of the regular classes may make it more difficult for them to catch up.

Some teachers shared written comments that their district's efforts to address pandemic-related learning loss was helpful, but that the end of federal relief funding means their district will no longer be able to afford the staffing support to provide smaller learning groups, summer programs or other supports. Some teachers expressed frustration with the lack of staffing and other resources to support students' diverse needs in the classroom or through interventions outside the classroom, and many commented on the on-going social and behavioral challenges with students. Some teachers felt pressured in their district to move ahead with work when their students are struggling.

Teachers' views of the most effective instructional practices for reading and math were similar. They felt explicit and systematic instruction; including activities to build students' fluency in math or phonics; and having students practice targeted skills were some of the most useful strategies to help struggling students. They also identified the same three grouping strategies as the most useful to help students: small flexible group instruction targeting a specific reading skill; in person individualized instruction; and small group instruction based on learning level.

What are some potential implications for education policy and/ or practice? Based on our analysis of data from three separate surveys of teachers and/ or administrators in Maine at the elementary grade level (through grade 5), we see some broad implications for policy and practice to support the effective and more consistent use of high-quality, evidence-based reading and math instructional programs and practices in Maine schools. Related to this, we also offer some thoughts about ways to strengthen supports for students struggling with reading or math, whether from the effects of the pandemic period in education or other reasons.

Instructional Programs and Practice

- Although many districts have been upgrading their instructional programs, or plan to do so in the next three years, more work and support are needed to assist school districts in selecting, adopting and using high quality, evidence-based instructional programs and using them with fidelity, particularly in the area of reading, where a majority of schools

appear to be using non-evidence-based programs, and teachers are more dissatisfied with the quality of their reading programs. Some schools and educators have no district-designated reading program for some PK-5 grades or all grades. Some districts are trying to create their own K-2 reading program where high-quality programs exist. Supports needed include:

- More reliable and comprehensive information is needed to help states and districts identify and select high quality, evidence-based instructional programs for both published and online programs. There are few systems currently (e.g., EdReports and others) that provide rubrics or ratings for some instructional programs, and they have real limitations. Decision-makers and classroom educators need to know:
 - 1) to what extent a program aligns with Common Core State Standards and current guidance on effective instructional practices for a content area;
 - 2) the practical ease of use for a program at the classroom level (i.e., can teachers and students use the program as written or do they need guidance on how to pick and choose the best pieces?); and
 - 3) whether there is any research evidence that a specific instructional program is effective in promoting positive learning outcomes for students.
- Funding to purchase new instructional programs that are both aligned with standards and evidence-based, including both print and online programs and materials, since schools are facing increased fiscal constraints after the ending of federal relief funding.
- Training and on-going professional development for educators and administrators to ensure understanding and effective use of standards-aligned, evidence-based programs and practices, particularly in the area of reading instruction, where past practices have under-emphasized some foundational reading skills like phonics and phonemic awareness and explicit instruction. Many teachers are not satisfied with the training they received locally on their reading or math instructional program, which may indicate a need for stronger support from the state, regional collaboratives or partnering universities.
- More attention is needed at the PreK level, in particular, where educators are less likely to have a reading instruction program in their district.
- Funding or access to materials is needed to provide teachers with a wider range of materials to use to engage students in both reading and math. Teachers commented that they need reading materials on different topics and genres for their students, and that the activities and mode of learning for math (e.g., paper worksheets and overly wordy math problems) are not interesting or engaging for their students. They seek more manipulatives, games and other hands-on materials.

- Teachers would like to see their districts adopt a more comprehensive reading curriculum that covers the required areas of reading and literacy, rather than a patchwork of programs and materials.
- National data on teacher preparation programs indicate that many programs do not prepare educators on evidence-based practices for reading instruction. Maine’s teacher education programs should examine the content of their courses in reading instruction to ensure they are emphasizing effective practices for future educators.

Supports for Struggling Students

- Teachers indicated many of their students are struggling readers, and that poor reading skills are a barrier for students in their ability to do some work in math as well (i.e., reading math problems with lots of words or more advanced vocabulary). Supporting the use of high-quality instructional reading and math programs in schools, through the strategies outlined above, will help to improve students’ reading skills benefiting their readiness to learn across subject areas.
- Teachers indicated that districts are often using a strategy of remediation for students who struggle in reading or math, with pull out instructional support. Of the teachers who indicated they have a district-designated reading or math program, nearly a third said they are using that program but at a lower level than the grade they currently teach. Encouraging districts and teachers to use grade-level instruction with scaffolding and appropriate supports or interventions within class, rather than remediation, will help ensure that students don’t fall further behind.
- The on-going challenge of staffing shortages in schools, together with the ending of the federal pandemic relief funding, means that many school districts have had to halt strategies they implemented and found helpful to address learning gaps. Making staffing and the availability literacy specialists and interventionists priorities will help to improve support in the classroom. Creative strategies are also needed to attract people into Ed Tech and other roles that help with academic support and behavior management. Some schools don’t have the funding to provide summer programs to reduce learning loss. Regional approaches may be needed to pool resources.

What methods were used to conduct this study? Survey methods were used to explore the use of reading and math programs and instructional materials in Maine elementary schools and classrooms, as well as educators’ and administrators’ views about these materials. This study consisted of three separate survey sources: 1) MEPRI developed and conducted a survey of K-5 teachers in Maine, 2) MEPRI collaborated with other researchers on a survey of elementary school and district administrators, and 3) MEPRI analyzed data from a state survey of Maine schools about PK-3 reading and literacy practices.

How robust are the findings? The survey responses were sufficient to draw some broad conclusions about instructional practices in the state, and the survey samples represented schools of different size from all regions of Maine. The MEPRI survey of K-5 teachers in fall 2023 was a representative sample of Maine teachers in these grade levels. A total of 279 teachers responded to the survey and the response rate was 15%. The survey of elementary school administrators in fall 2023 was sent to superintendents, curriculum coordinators principals, assistant principals and literary specialists of elementary schools and had a 14% response rate with a total of 106 completed surveys. While those two surveys had lower participation than ideal, the response rates are in the range we typically see for this type of survey. However, we cannot know what practices exist in the non-participating schools and districts. The school survey conducted by the Maine Department of Education in fall 2021 had a robust response rate of 45%.

In Maine, over half (55%) of school districts with teachers are very small and have fewer than 500 students enrolled. However, a majority of teachers (76%) in Maine work in larger districts of 1,000 or more students. In looking at who responded to these surveys, both surveys slightly over-represent teachers in very small districts (less than 500 students) and small districts (500-999 students), so the findings reported here may not be reflective of practices across the whole state. More demographic information comparing the survey samples with statewide characteristics can be found in Appendix C.

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Introduction

As part of the 2023-24 work plan, the Joint Standing Committee on Education and Cultural Affairs in the Maine State Legislature charged the Maine Education Policy Research Institute (MEPRI) with the task of exploring what reading and mathematics instructional programs and materials are used in Maine elementary schools currently, as well as educators' and administrators' views about those materials. Specifically, the legislature sought more insight into the quality of the reading and math instructional programs and materials, what supports teachers and schools need to improve their instruction, and what strategies districts and classroom teachers are using to help students overcome pandemic-related learning losses. To this end, MEPRI conducted a survey of a representative sample of Maine public school teachers in grades K-5 in fall 2023 to obtain classroom level perspectives. MEPRI also collaborated with researchers on a survey of Maine elementary school and district administrators in fall 2023 to understand school-wide practices in reading, math and intervention supports and administrators' views. Finally, MEPRI examined survey data from a school survey conducted by the Maine Department of Education (MDOE) two years prior on PK-3 reading and literacy programs and instructional practices (MDOE, 2021, 2022) to provide a more in-depth analysis of that data. While other areas of literacy such as writing and spelling are also important, this study and report focus on reading rather than broader practices in literacy.

Background

In addition to the preparation and quality of teachers in the classroom, the quality of instructional programs and strategies that teachers use to engage students in learning has a profound impact on students' learning outcomes and academic trajectory, and even more so in the early years (Hattie, 2009; ILA and NCTE, 2017). Instructional quality, which includes variables such as teacher knowledge and skills along with the materials used for instruction, accounts for about 30% of the variance in student achievement (Hattie, 2009). Ideas about best instructional practice shift over time and new research evidence prompts re-examination of traditional practices and ideas about learning and teaching. While discussion about the quality and efficacy of reading instructional programs has heated up, there has been somewhat less attention on math instruction but still some new developments and debate in that content area.

While a full discussion and review of the research literature on reading and math instruction is beyond the scope of this study, we provide some context here for the survey study we conducted.

Reading Instruction

There is strong consensus that best practice in reading instruction includes systematic and explicit instruction covering the five essential components of reading during the early elementary years, which include: phonemic awareness, phonics, fluency, vocabulary and comprehension (MDOE, 2021; National Reading Panel, 2000; The Reading League, 2023). While children in the earlier grade levels (PreK-1) need more emphasis on phonemic awareness, phonics and building vocabulary through direct instruction and practice with decodable text, the emphasis will shift more toward fluency and comprehension skills with continued attention to expand vocabulary in grades 1-3. The goal has been for all students to be proficient readers by the end of grade 3, although state and national data show we have come not close to reaching that goal (MDOE, 2021; NAEP, 2022; National Reading Panel, 2000). Nationally, NAEP data for the grade 4 reading assessment in 2022 showed that only about a third (32%) of students nationally and in Maine (31%) in the NAEP sample scored at the level of “proficient” or “above” in reading (NAEP, 2022).

Despite the research evidence that systematic and explicit instruction (i.e., direct, intentional teaching that scaffolds) and attention to all five areas of essential skills in reading are needed to produce good readers, some groups in the field of reading have advocated over the last two to three decades for a more indirect approach to reading instruction that envisioned students learning to read in large part based on visual cues from book illustrations (cueing) and visual memorization of words (whole word), an approach often referred to broadly as whole language. Those ideas heavily influenced the content and adoption of reading programs and materials (e.g., *Lucy Calkins, Fountas and Pinnell*) and widespread instructional and assessment practices in schools nationally, and resulted in considerably less attention to helping students develop the foundational skills they need to learn to read (APM, 2022; NWEA, 2021). In recent years, there has been considerable media attention nationally on the poor quality of some instructional programs and practices for early reading instruction, prompting state and local education policymakers to clarify their guidance to schools and emphasize the need for attention to explicit instruction in the five elements of reading (APM, 2022; McLaren & Martin, 2023b; Peak, 2023; Schwartz, 2023b, 2024a, 2024b, 2021). According to one report, since Mississippi passed

legislation in 2013 to improve reading instruction in that state, 31 additional states and the District of Columbia have also adopted policies around the implementation of evidence-based reading instruction (Schwartz, 2023f). National education organizations have also provided professional development resources to inform educators about the science of reading, or evidence-based reading instruction (NWEA, 2023; The Reading League, 2023). In response, many school districts in Maine and nationally have been and are currently assessing their reading programs to determine if they align with the new guidance and research evidence (Peak, 2023; McLaren & Martin, 2023b).

Early evidence from efforts in other states to align reading programs with research shows promising results. For example, in one study involving multiple low-performing schools in California, third grade student ELA scores showed a gain equivalent to a quarter of a year of learning after the state provided block grants with guidance and assistance to districts (Schwartz, 2023a). Mississippi and Tennessee have also seen improvement in reading achievement after implementing changes to align more closely with the science of reading (Olson, 2023). Similarly, teacher education programs across the US will need to examine their approach to preparing elementary grade teachers to ensure their curriculum is aligned with current research evidence to help new teachers learn effective instructional practices for reading (Olson, 2023; National Council on Teacher Quality, 2024). A recent report by the nonprofit National Center on Teacher Quality was critical of states' progress in implementing needed improvements in teacher preparation. NCTQ surveyed 693 teacher training programs in the US in 2023 and found that only 25% of the programs adequately addressed all five core components of reading, and a significant number of programs focused on instructional practices that are not based on sound research evidence (Mahnken, 2024; National Council on Teacher Quality, 2024).

It is not clear to what extent schools and educators have shifted to higher quality and evidence-based programs and practices in reading and what supports or resources they need in this effort. The MDOE survey in 2021 and the MEPRI surveys of 2023 will help shed light on these questions. In response to a legislative request (LD 138/ HP 94) in 2021, a MDOE workgroup conducted a study of early reading that included an in-depth survey of Maine schools, asking what reading or literacy programs schools were using for PK- 3 instruction. This group also conducted a review of the research on reading and examined Maine's reading assessment data trends (MDOE, 2021, 2022). No similar survey was conducted to obtain information about

math instructional programs and practices in Maine schools. This MEPRI study helps to address this gap and provides updated information on reading and math instructional programs and materials used in Maine. The MDOE reported that only 85% of schools responding to their survey indicated they had a designated reading or literacy program for K-3 and only 54% had a reading/ literacy program for PreK instruction (MDOE, 2021). This finding indicates that many schools and classroom teachers in Maine lack basic guidance and curricular materials to inform their reading instructional practice for the early grades. Where districts lack designated instructional programs in content areas, teachers must scramble to figure out how to deliver instruction and obtain materials on their own. Under LD 1526, the state legislature proposed \$4 million in funding to provide more resources for school districts to adopt evidence-based reading programs and instructional materials. However, this legislation was funded at the substantially lower level of \$200,000. Drawing on the state funding and federal ARPA funding, the MDOE is developing the process for districts to access these resources to support the implementation of evidence-based literacy education practices across the PK-12 level.

Math Instruction

In the late 1980's and early 1990's, the National Council of Teachers of Mathematics (NCTM) issued ground-breaking guidance on what students should learn and instructional practices across K-12 grades (NCTM, 1989, 1991). Nationally, there had been growing dissatisfaction with students' math achievement which indicated there would be reduced workforce readiness and ability for the US to compete internationally in areas of science and technology (National Commission on Excellence in Education, 1983). This created a call for more attention to higher-order thinking skills in the math curriculum (including mathematical reasoning, problem solving, representations, connections and communicating about math), rather than a primary focus on memorization of basic facts and computational, procedural skills (NCTM, 1989, 1991). Accordingly, in many schools across the US, math programs, instructional materials and assessment practices (particularly in the elementary and middle grades), began to shift in the 1990's to a stronger focus on conceptual understanding than procedural fluency or fact fluency. Students were and are encouraged to engage in productive struggle, try different ways of approaching problems, explain their thinking, and show their work. There is evidence that increased attention to mathematical understanding did improve student achievement. The percentage of US students scoring at the level of "proficient" or "above" in math on the NAEP

assessment increased significantly from 13% in 1990 to 42% in 2013. However, math achievement has declined since 2013. On the 2022 NAEP math assessment for grade 4, 35% of students nationally scored at the level of “proficient” or “above” while 32% of Maine students scored at this level, so more improvement is clearly needed (NAEP, 2022; NCTM, 2014). One challenge is the lack of agreement among educators over how precisely to go about achieving the best balance across the elementary grade span to develop better learning outcomes (Schwartz, 2023d).

Research from well-designed empirical studies that are vetted by panels of content experts do provide insights on instructional practices that have been shown to be effective. Current guidance builds on the earlier NCTM framework and recommends that educators: establish clear goals for learning in math instruction, incorporate opportunities for reasoning, problem solving, mathematical connections and representations, math discourse, purposeful questions and adjustment of instruction, some productive struggle and building fluency from conceptual understanding for all students (NCTM, 2014). Guidance on supporting elementary grade students who struggle in math includes the following components: systematic instruction that builds on a learning progression in an incremental way with feedback to students to address misunderstanding, clear and correct usage of mathematical language, use of concrete/ semi-concrete representations before moving to more abstract representations of math concepts, use of the number line, use of word problems to help students apply math ideas, and use of timed activities to improve math fluency (NCEE, 2021). Beyond these sound instructional practices for all students in math, some students need more targeted instruction or intervention for particular math skills. Current notions of best practice in math instruction emphasize the importance of building students’ mathematical thinking as well as their proficient use of math procedures, and this understanding is the basis of the *Common Core State Standards for Mathematics*, which has been widely adopted across the US (CCSSM, 2013; NCTM, 2014). The landscape for elementary grade math instruction is somewhat less contentious currently than for reading instruction, and there has been less policy action in that arena. However, more states are developing policies to encourage districts to use evidence-based practice in math and to provide multi-tiered systems of support (MTSS) for students (Schwartz, 2023e). EdReports is a non-profit organization that reviews and rates instructional programs on levels of alignment with evidence-based practices. That organization examined a national data sample and found that just

over a third (36%) of elementary schools and just over one fifth (22%) of middle schools in their sample had adopted exclusively high-quality math programs (Schwartz, 2023c). This finding indicates that more effort is needed to ensure that schools have access to high quality math instruction programs and teacher training to implement them effectively (NCTM, 2014).

Online Programs for Instruction

A significant development in education in recent years, across both reading and math education, is the increasing use of online programs and materials for instruction. Some schools purchase or subscribe to online programs or use free programs as a primary resource for their reading or math instruction, while other schools or individual teachers use these programs to complement their printed instructional programs. Many online programs offer some print materials for a fee. Online programs are used to provide the same instruction to all students, or to assign practice to students to work at their own level to gain mastery. Some of the online programs and materials are consistent with research evidence, while others may not be. In addition to the programs available from commercial producers and publishers, teachers also have access to a vast number of instructional materials they find online from a variety of sources, and the quality of those materials may vary substantially. While the financial cost of new adopting printed instructional programs and materials may be a barrier for some schools, more schools may shift to less expensive or free online platforms. Finally, many schools use different math textbooks or programs for students in regular education than in the special education program, and it is not known to what degree these resources may differ in terms of being up to date and in line with research evidence. How teachers view and use their district instructional programs and these additional sources of instructional materials is not known. More research is needed to gain a broader picture of the quality of both reading and math programs and instructional practices in Maine.

Two published math programs that have free online versions that teachers can use for instruction are Eureka (Great Minds 2024) and Illustrative Math (Illustrative Math 2024). In addition to modules, pacing guidelines, student workbook pages that can be printed, and assessments, these programs provide teachers with multiple ways to differentiate math education. Both programs are rated by EdReports as meeting their criteria for quality and alignment with the Common Core State Standards for Math. Zearn is another free online program for both teachers and students to use, which is also rated as consistent with standards. It is designed to

either be a stand-alone instructional program or used alongside Eureka. When using Zearn in the classroom, students and teachers do not work entirely online. Teaching guides are also available for Zearn. Zearn suggests teachers provide instruction for 15 minutes, then divide the class into half where students either work on modules within small groups or with the teacher. Zearn lessons include guided practice where students solve problems with pencil and paper. At the conclusion of the Zearn lesson, students are tested on the content (Zearn 2024). Zearn data are being used to compare educational practices such as acceleration and remediation (TNTP 2021). In Tennessee, increased frequency of Zearn use in classrooms was tied to higher scores on the state assessment (Zearn 2023). On the MEPRI teacher survey, we asked about all three of these online math programs in Maine classrooms.

There has been considerable investment in math education and the development of online math programs by large charitable foundations. The Gates Foundation recently targeted \$1.1 billion over four years with the goal of better trained math teachers, more engaging and effective math instructional materials and gaining better understanding of how to teach students math (Klein 2022).

Assessing the Quality of Instructional Programs

Currently, there are a limited number of independent sources that provide guidance to help states and local school districts evaluate the quality of instructional programs before they make costly decisions to invest time and funding in those programs. In the area of literacy education, the Reading League and Knowledge Matters Campaign (KMC) provide rubrics to help others in their review of materials. EdReports is a non-profit group that launched an online system in 2015 with funding from a variety of philanthropic donors (e.g., the Gates Foundation, Hewlett Foundation, etc.), for the purpose of helping school districts easily check if instructional programs are aligned with the Common Core State Standards (CCSS) for English language arts, mathematics, and science. This group also uses the Next Generation Science Standards (NGSS) for determining alignment with standards (EdReports, 2024; Wexler, 2024).

EdReports uses teams of trained educators and criteria to review and judge to what extent they believe a program “meets,” “partially meets,” or “does not meet” indicators of alignment with the standards. For English language arts, reviewers first examine a program’s “text quality and complexity,” and “alignment to the standards.” They then evaluate whether the content could support students in “building knowledge.” A final review considers “usability” or how “user-

friendly” a program might be for students and teachers. Only after that consideration does EdReports assign a final red, yellow or green tag to the reviewed programs. For math, the review criteria look at “focus and coherence,” “rigor and mathematical practices,” and finally “instructional supports and usability” (EdReports, 2024).

The colored indicators appear to provide a quick method for school districts to check on alignment of programs with the CCSS. However, some experts have raised concerns about the limitations, quality and accuracy of the review process provided by EdReports. One concern is that publishers can load up programs in order to hit the right indicators for a “green” rating, while still including non-evidence-based practices in their materials and presenting teachers with the burden of having to decide what to use or ignore. Some reading programs that emphasize basal readers are still rated as meeting the standards, while other programs with research evidence of effectiveness are rated in the yellow category of partially meets by EdReports. No information is provided on whether the program’s use and impact have been researched, so districts don’t know if the programs are actually effective and for which students (Wexler, 2024). The plethora of instructional programs and time-consuming process of reviewing them carefully make it difficult for any organization to keep up with this work. Ensuring high quality training and retention of reviewers are other challenges these organizations face.

Across the US, EdReports is widely used and influential in both the development of content publishers add to instructional programs and for decisions about program adoption at the state and local levels. Yet, given the serious limitations of this and other systems, better systems are needed nationally to objectively and accurately assess the quality of published and online instructional programs, not only for their alignment with the Common Core State Standards and their ease of use at the classroom level, but also for research evidence that particular programs are actually effective in promoting positive learning outcomes for students. In the meantime, caution is needed in using the rating systems or tools currently available.

Supporting Struggling Students

Nationally, the COVID-19 pandemic created disruptions in students’ educational experience and learning losses have been seen for Maine and other states (Lewis & Kuhfeld, 2023; McLaren & Martin, 2023a; Petrilli, 2023; Watson & McLaren, 2023). Some school districts used the temporary federal pandemic relief funding for schools to purchase updated reading and/ or math programs or materials. For struggling students, ESSER funds were to be

only used for accelerated tutoring, which is defined as grade-level work with scaffolding for students who are not at grade level. After the first year of the pandemic, initial research has shown that students in classrooms that took an accelerated approach struggled less and learned more than students in schools with a remediation approach (TNTP 2021). Some teachers believe that their students are not ready for grade-level work and they should “meet them where they are at,” a view that we heard from teachers’ written comments on the MEPRI teacher survey. It is unclear how schools and educators have addressed these learning losses. The 2023 MEPRI teacher survey explored how school districts have approached the task of reducing pandemic-related learning losses, what practices have been implemented generally to support students struggling in reading or math, and what additional supports educators feel are needed.

Methodology

Survey methods were used to explore the use of reading and math programs and instructional materials in Maine elementary schools and classrooms, and educators' views about these materials. The following broad research questions guided this investigation:

- What instructional programs and materials are Maine elementary schools and teachers using for K-5 reading and math, and what changes if any have school districts made in these programs recently?
- What are educators' views about the quality of their district's reading and math programs and the training they have had to implement these?
- What supports or resources do schools and educators feel they need to adopt and implement high quality, evidence-based programs and materials for reading and math instruction?
- How are teachers and their school districts supporting struggling students to address COVID-related learning losses in reading and math?

This study consisted of three separate survey sources: 1) a survey of K-5 teachers in Maine, 2) a survey of Maine elementary school and district administrators, and 3) a state survey of Maine schools on PK-3 reading and literacy practices. All surveys were conducted online and allowed respondents the opportunity to answer both fixed-choice questions and write comments on open-ended items, producing both quantitative data and text-based or qualitative data.

MEPRI developed and conducted a teacher survey in fall 2023 with a representative sample of Maine elementary teachers in grades K-5. There are about 4,723 public school teachers of reading and math for K-5 grades in Maine. An invitation to participate was emailed to 2,000 teachers with a link to the confidential online survey on the Qualtrics platform. Of those, 118 emails addresses on file with the state were not valid. By the close of the survey in late November, a total of 279 teachers of the 1,882 who received the email had completed the survey for an overall response rate of 15%. Teachers were asked about the following topics: what type of reading and math instructional programs districts are using, what online programs or platforms are used, changes made recently in programs, other resources teachers use for reading and math instruction, views about the quality of district reading and math programs, training on the reading and math programs, areas needing improvement in reading and math programs, and how districts and teachers have been addressing COVID-related learning loss.

MEPRI also collaborated with faculty members Dr. Rachel Brown-Chidsey, Assistant Professor of Educational and School Psychology from the University of Southern Maine, and Dr. Sara Flanagan, Assistant Professor of Special Education from the University of Maine, on a school survey conducted by Dr. Brown-Chidsey in fall 2023. An emailed invitation and link were sent to all 822 superintendents, curriculum coordinators principals, assistant principals and literary specialists of elementary schools. Seventy-six emails bounced back. A total of 106 (14%) administrators completed the anonymous online survey. This survey included questions on: the school's readiness to implement a multi-tiered system of supports (MTSS) for student instruction, the type of instructional materials used for tier 1 or core reading and math instruction as well as which specific published programs or materials used, the process for selecting instructional programs or materials and who is involved, and factors considered in selecting instructional programs or materials. For the purpose of this MEPRI report, we focus only on findings related to the specific reading and math programs or instructional materials that schools said they are using, and to what extent those are deemed evidence-based or not.

Finally, the MDOE conducted a school survey on PK-3 reading and literacy practices in fall 2021, in response to a request from the state legislature (MDOE, 2021, 2022). This survey had a strong response from 164 out of 363 schools with elementary grades completing a survey (45% response rate). While the department issued two reports on that survey and other efforts to investigate this topic, results for some of the survey questions were not included in those reports. MEPRI sought to provide assistance by analyzing data from one open-ended question asking schools to "list the reading or literacy programs used for universal instruction" (i.e., for all general education students). The schools indicated specific reading programs and instructional materials they were using.

For both the MDOE and administrator surveys, MEPRI examined the list of instructional programs or materials respondents had listed for broad trends. We also consulted the online EdReports platform (EdReports.org) for their ratings of quality and alignment with the Common Core State Standards. As we discussed earlier in the background section of this report, the EdReports rating system and others like it have some limitations. We present our findings from that analysis in this report.

For the teacher survey and selected questions on the administrator survey, fixed-choice responses were tabulated and the percentages of survey respondents indicating response choices

were calculated. Teachers were grouped by the grades taught: early elementary kindergarten through second grade, and older elementary grades three through five. Teachers who taught grades in both categories were grouped into another category. Districts were grouped by county into four areas: Central (Kennebec, Knox, Lincoln, Sagadahoc, and Waldo), Northern (Aroostook, Hancock, Penobscot, Piscataquis and Washington), Southern (Cumberland and York) and Western (Androscoggin, Franklin, Oxford, and Somerset). Using SAS statistical software, selected responses were compared by geographic location, district size and rural location to examine if there were any differences in response by grades taught, county, region or locality, or district size. Written comments on the survey were analyzed using standard qualitative data coding methods for thematic frequency.

Demographic Information for Teacher and Administrator Surveys

On the teacher survey, most teachers indicated they taught only one grade level. There was an almost equal distribution of grades taught with about one-fifth of teachers teaching each grade level between kindergarten and grade five. For our analysis, teachers in grades K-2 were grouped into “early elementary” and “upper elementary” for grades 3-5. There were 129 early elementary teachers (49%) responding to the survey, and 122 upper elementary teachers (46%) who responded. Thirteen teachers (5%) taught multiple grades across these two grade spans.

Teachers and administrators were asked to identify their locale and county so we could determine the geographic representativeness of the survey samples. Districts were grouped by county into four areas: Central (Kennebec, Knox, Lincoln, Sagadahoc, and Waldo), Northern (Aroostook, Hancock, Penobscot, Piscataquis and Washington), Southern (Cumberland and York) and Western (Androscoggin, Franklin, Oxford, and Somerset). On both surveys, the percentage of respondents from each region of Maine was proportional to the number of teachers or administrators in these areas as reported to NCES. The southern region of Maine has the highest percentage of teachers (34%).

In Maine, over half (55%) of school districts with teachers are very small and have fewer than 500 students enrolled, while about a third (32%) of districts have 1,000 or more students. However, a majority of teachers (76%) in Maine work in larger districts of 1,000 or more students. In looking at who responded to the teacher and administrator surveys, both surveys slightly over-represent very small districts (less than 500 students) and small districts (500-999 students), as teachers and administrators from smaller districts had a higher response rate.

Further, the overall response rates for the teacher and administrator surveys were not large. Thus, the findings reported here may not be reflective of practices across the whole state. Demographic information on the survey samples can be found in Appendix C.

Findings

In this section, we report on findings from the three survey sources by topic. Part I presents findings related to reading programs and practices from the fall 2023 elementary school administrator and teacher surveys, as well as the 2021 MDOE Survey. Part II describes the results from the fall 2023 elementary school administrator and teacher surveys related to math programs and practices in Maine. Part III describes findings from the teacher survey on how school districts are helping students who are struggling or behind academically.

Part I. Elementary School Reading Instructional Programs and Practices

MDOE Fall 2021 School Survey

MEPRI analyzed written comments on a school survey conducted by the MDOE in fall 2021, which asked schools to list the “reading or literacy programs used for universal instruction” (i.e., for all general education students) at that time. For the purpose of this report, we focus only on the reading programs and materials listed by schools and do not include programs or materials focused on writing or spelling instruction. While there was high participation in the survey overall from 45% of the schools with elementary grades, fewer schools (35% of the responding schools) answered this open-ended question on the survey.

A total of 58 of the 164 schools completing the survey named the reading program or materials they use in grades PreK up to grade 3. Schools listed 90 programs by name (including commercially produced printed publications, online platforms, and some teacher-developed materials), although several of those are actually part of the same broad program. The most frequently mentioned reading program for grades K-3 (from 43 to 58 schools) was *Lucy Calkins Units of Study for Reading*, followed by the *Lucy Calkins Units of Study for Phonics* across the same grades (from 1 to 23 schools, depending on the grade level, with the majority in grades 1 and 2). The second most frequently mentioned reading program was *Fountas and Pinnell Classroom* (from 8-25 schools) across grades K-3. The non-profit organization EdReports reviewed and rated both of these programs as “does not meet” their indicators for quality and alignment with the Common Core State Standards (CCSS).

Only nine of the reading programs listed by Maine schools were rated by EdReports as meeting indicators of quality and alignment with the standards. The majority of programs and materials listed by a few schools (54 programs) have not been rated by EdReports. For PreK, far fewer schools mentioned the use of any reading program at all—only 17 schools listed some type of program, and the majority were unrated. Some of the programs listed were in the category of “partially meets” indicators of quality and alignment with standards according to EdReports. It was also interesting to note that within single schools, numerous different reading programs and materials were listed, indicating a high degree of variation across classrooms.

These findings indicate that, as of two years ago, many schools in Maine were using reading programs and materials that are either not rated or rated as not aligned with standards. Far fewer schools were using reading programs rated as meeting standards, and many either were not using a specific program in PreK or did not have a PreK education program. However, caution is needed in drawing conclusions from the open-ended survey item as not every school provided a response.

Fall 2023 Administrator Survey

On the fall 2023 survey of school and district administrators conducted by Brown-Chidsey and Flanagan, many schools reported using more than one reading program. EdReports was consulted to investigate the ratings of each reported program. Some programs listed included intervention programs, on-line tutoring programs or games. There were also lesser known programs that had not been evaluated by EdReports. The most recent EdReports rating for these programs was used. Consistent with our findings from the MDOE’s school survey of fall 2021, the most frequently listed reading programs on the fall 2023 administrator survey were *Lucy Calkins Units of Study* (36%, n=29) and *Fountas & Pinnell* (16%, n=13), both rated by EdReports as “does not meet” indicators for quality and alignment with the Common Core State Standards since 2021 (EdReports, 2024; Schwartz, 2021). Two other reading programs were listed by 10% or more of the administrators and have not been rated by EdReports. Reading programs or materials listed by administrators are shown in Table 1 along with their current rating by EdReports (meets, partially meets, or does not meet their indicators for quality and alignment with the CCSS).

Table 1. Reading Programs Listed by Maine Schools in 2023

Instructional Program	EdReports Rating	%	n=
Lucy Calkins Units of Study	Does not meet	36%	29
Fountas & Pinnell	Does not meet	16%	13
Heggerty Phonemic Awareness	Not rated	13%	10
University of Florida Literacy Institute	*Not rated	10%	8
Collaborative Classroom	Partially meets	9%	7
EL Education	Meets standards	6%	5
Foundations	Partially meets	6%	5
Literacy Footprints	Not rated	6%	5
Core Knowledge Language Arts	Meets standards	5%	4
From Phonics to Reading	Meets standards	5%	4
My View	Meets standards	4%	3
Wonders	Meets standards	4%	3
Jolly Phonics	Does not meet	4%	3
Reading Street	Does not meet	4%	3
Words Their Way	**Not rated	4%	3
Leveled Literacy Intervention	*Not rated	4%	3
Into Reading	Meets standards	3%	2
Wit and Wisdom	Meets standards	3%	2
Journeys	Does not meet	3%	2
Foundations A-Z	Meets standards	1%	1
Flyleaf	Not rated	1%	1
Half-pint Readers	Not rated	1%	1
i-Ready Reading	Not rated	1%	1
Literary process	Not rated	1%	1
Orton Gillingham	Not rated	1%	1
Reading Simplified	Not rated	1%	1
Sound Sensible	Not rated	1%	1
Spire	Not rated	1%	1
Total		100%	80

*Some other reviews show it is evidence-based.

**Some other reviews show it is not evidence-based.

Since several administrators reported their school is using more than one reading program, a combined rating system was created by MEPRI to analyze the information schools provided. For example, if a school used a program that meets standards and a program that partially meets standards or a non-rated program, their combined reading program was assigned to the *meets* standards category. Twenty percent of schools (n=16) were in this category. When a school used a program that partially meets standards and a non-rated program, their combined

reading program was assigned to the *partially meets* category (11%, n=9). If a school used a program that meets standards and a program that does not meet standards, their combined reading program was classified as using a *combination* of meets and does not meet standards. Six schools (8%) used a combination of programs that meet and don't meet alignment with standards. Almost half of the schools (48%, n=38) used programs that don't meet standards with or without a non-rated program. A few of these schools use non-rated programs that could be consistent with standards and research evidence, such as the program developed by the University of Florida Literary Institute (UFLI). The use of programs that do not meet standards was higher in the Southern (53%, n=16) and Western (65%, n=11) counties than the Central (38%, n=5) or Northern (30%, n=6) counties. There was little variation in the use of programs that don't meet standards based on district size. About a quarter of districts with less than 500 students (24%, n=6), used programs that were not rated.

Administrators were asked for their perception of what type of materials their district used for reading instruction. Four answer choices were provided. The choices were: evidenced-based program; published reading program; combination of materials from multiple published programs; and teacher-created materials. Administrators most commonly reported using a combination of published programs (42%, n=41) or an evidence-based program (39%, n=38). Ten percent (n=10) said they used a published program. Eight percent (n=8) relied on teacher created materials. A third of those school administrators who thought their schools were using an evidence-based program (32%, n=12), were using one that EdReports rated as not aligned with standards. An additional 19% (n=7) were using one that EdReports rated as only partially meeting standards. In other words, over half of the schools who said they are using an evidenced-based program are using one that EdReports rated as not fully aligned with standards. All results are in Table 6.

Table 2. Summary Evaluation of Schools' Reading Program Quality

	Meets	Partially Meets	Combination	Partial Combination	Not Evidence	Not Rated	Total
Evidence-based published reading program	30% 11	19% 7	5% 2	5% 2	32% 12	8% 3	100% 37
Published reading program	0% 0	10% 1	0% 0	0% 0	80% 8	10% 1	100% 10
Combination of materials from multiple published programs	13% 4	3% 1	13% 4	0% 0	55% 17	16% 5	100% 31
Teacher-created materials	50% 1	0% 0	0% 0	0% 0	50% 1	0% 0	100% 2
Total	20% 16	11% 9	8% 6	3% 2	48% 38	11% 9	100% 80

Fall 2023 Teacher Survey

District Reading Programs. On the teacher survey, respondents were not asked to name their district's reading program. They were asked to indicate the formats of their district's reading program for the grades they teach. Choices were: a published program, online program for students, or district-created materials. They also were given the option of "none." Most teachers (84%, n=204) who took the survey said their district had a published reading program for the grades that they teach. Just over half of the teachers (56%, n=138) only identified a published program. Twenty-two percent of teachers (n=53) indicated an online program for reading. All but three of these teachers used the online program alongside a published program. Use of an online program was similar between teachers of early grade levels (K-2) and older elementary grades (3-5). There was no difference between city, suburban, small town and remote rural teachers' reports of a district online program. Teachers from districts with less than 500 students (30%, n=11) were more likely to say their district had an online reading instruction program. District-created programs were noted by fifteen percent of teachers (n=36). Teachers from districts with less than 500 students (8%, n=3) were less likely to report their district had created a program. There were more kindergarten to grade two teachers (17%, n=21) who said their district had created a reading program for the grades that they teach than third to fifth grade

teachers (11%, n=11). There were 31 teachers (13%) who said that their district did not have a reading instructional program for the grades that they teach. These teachers taught all grade levels between kindergarten and grade five.

Table 3. Format of District Reading Programs

	%	n=
Published program	56%	138
Published program, Online program for students	17%	41
Published program, Online program for students, District-created program	4%	9
Published program, District-created program	6%	16
District-created program	4%	10
Online program for students, District-created program	0%	1
Online program for students	1%	2
None	13%	31
Total	100%	248

A total of 31 teachers (13%) indicated that they did not have a district instructional program for reading, and they were asked what materials they used for reading instruction. Most indicated that they used materials that they created (77%, n=23) or materials from other teachers (including online) (73%, n=22). Eleven (37%) indicated that they used published program materials. Three additional teachers wrote in the name of a published program under “other.” Three teachers (10%) said that their district did not have an instructional program for reading and that they used a previous district instructional program.

The 207 teachers that indicated that they had a district provided program were asked what additional materials they used. Percentages of teachers that reported using materials from other teachers (including online) (78%, n=162), materials that they created (74%, n=153) and published materials other than district selected ones (45%, n=94) were similar to percentages of teachers in districts that did not have an instructional reading program. Thirty-one percent of teachers (n=65) in districts with an instructional program used the current instructional program but at a lower level than specified for the grades they teach. A quarter of teachers (25%, n=52) that had an instructional program used a previous instructional program.

Phonics Instruction. Teachers that taught students in kindergarten through grade two were asked what instructional materials they use for phonics instruction. They could select multiple

options. Most (71%, n=83) selected their district instructional reading program. There was a distinct difference in the percentage of city teachers (94%, n=17) small town (65%, n=33) and remote rural teachers (47%, n=9) using their district’s instructional program for phonics instruction. Small town teachers were more likely than other teachers to use materials from other teachers (45%, n=23) and materials they created (43%, n=22) for phonics instruction. Remote rural teachers reported higher usage of materials from other teachers (37%, n=7) and published program materials other than district selected ones (32%, n=6).

Table 4. Teachers’ Use of Instructional Materials for Phonics Instruction.

	City		Suburban		Small town		Remote rural		Total	
District's published program	94%	17	87%	13	65%	33	47%	9	71%	83
Materials from other teachers (including online)	22%	4	33%	5	45%	23	37%	7	37%	43
Materials that I created	22%	4	27%	4	43%	22	21%	4	32%	37
Published program materials other than district selected ones	6%	1	7%	1	20%	10	32%	6	19%	22
Current instructional program at a lower grade level	17%	3	13%	2	12%	6	16%	3	14%	16
District's online program	6%	1	13%	2	14%	7	16%	3	13%	15
Previous district instructional programs	0%	0	13%	2	8%	4	11%	2	8%	9
Other	0%	0	7%	1	6%	3	0%	0	4%	5
Total	100%	18	100%	15	100%	51	100%	19	100%	117

Recent Change in District Reading Program. To explore if districts are updating their reading programs, teachers were asked if their district had adopted updated or new reading programs or instructional materials for the grades that they teach within the past three years (since 2020). Most teachers in kindergarten to grade two (72%, n=74) reported that their districts had adopted new reading programs or materials for their grade. Over-all 58% of teachers said their district had adopted new programs or materials for the grades that they teach. Teachers in districts with less than 500 students (47%, n=15) and remote rural schools (50%, n=16) were less likely than

teachers in districts with 1,000 or more students (59%, n=67) and city or suburban locations (62%, n=39) to say their districts had adopted new reading programs or materials.

Table 5. Adoption of New Reading Programs/ Materials by Grade Level

	Yes	No	Total
Early elementary, K-2	72% 74	28% 29	100% 103
Older elementary, 3-5	42% 36	58% 49	100% 85
Combination of early and older grades	40% 4	60% 6	100% 10
Total	58% 114	42% 84	100% 198

Teachers that reported their districts had adopted new instructional materials or a new reading program for their grade level were asked to identify the changes made. Most (57%, n=64) said that their district had adopted a different instructional program. Respondents from remote rural areas (75%, n=12) were more likely than other teachers to say that their district had adopted a different instructional program. The remote rural teachers (13%, n=2) were less likely than other teachers to report that their district had adopted a supplemental program.

Table 6. Changes in Reading Program by Locale

	City and Suburb		Small Town		Remote Rural		Total	
Selected a different instructional program	58%	22	51%	25	75%	12	57%	64
Supplemented existing programs	34%	13	27%	13	13%	2	28%	31
Adopted an updated version of the previous instructional program (same publisher)	18%	7	31%	15	19%	3	24%	27
Other	8%	3	8%	4	13%	2	8%	9
Total	100%	38	100%	49	100%	16	100%	112

Teachers in the lower elementary grades (31%, n=22) were more likely than teachers in the upper elementary grades (11%, n=4) to report that their district adopted an updated version of the previous program from the same publisher. There was no significant difference by grade

level in teachers that reported their district adopted supplementary material for the grade levels that they teach.

Table 7. Changes Made in Instructional Program by Grade Span Taught

	Early elementary K-2	Upper elementary 3-5	Total
Selected a different instructional program	53% 38	67% 24	57% 64
Supplemented existing programs	28% 20	31% 11	28% 31
Adopted an updated version of the previous instructional program (same publisher)	31% 22	11% 4	24% 27
Other	10% 7	3% 1	8% 9
	100% 72	100% 36	100% 112

Just over a third of teachers (36%, n=70) indicated that their district is considering adopting a new instructional program for the grades that they teach. Half of the teachers in districts that did not adopt new reading instructional materials (49%, n=41) say that their district is considering a change. A quarter of teachers (26%, n=28) in districts that adopted new reading materials or programs in the past three years said that their district is considering changing reading instructional programs in the next few years.

Table 8. Districts Considering Changing Materials by Recent Adoption of New Materials

	Considering changing programs	Not considering changing programs	Total
Recently adopted new materials	26% 28	74% 81	100% 109
Did not adopt new materials	49% 41	51% 42	100% 83
Total	36% 69	64% 123	100% 192

Teachers’ Use of District Reading Programs. About seven out of ten teachers always (29%, n=62) or most of the time (40%, n=85) used their district selected programs for reading

instruction. Frequent usage was more often seen in districts with published programs (71%, n=97) or in districts that had a combination of published program and online program (76%, n=37).

Table 9. Teachers’ Use of District Reading Program by Format

	Always	Most of the time	About half the time	Sometimes	Never	Total
Published	30% 41	41% 56	15% 20	13% 17	1% 2	100% 136
Published, Online	31% 15	45% 22	12% 6	8% 4	4% 2	100% 49
Published, District-created	38% 6	25% 4	13% 2	19% 3	6% 1	100% 16
District-created	0% 0	33% 3	22% 2	33% 3	11% 1	100% 9
Online	0% 0	0% 0	0% 0	50% 1	50% 1	100% 2
Total	29% 62	40% 85	14% 30	13% 28	3% 7	100% 212

Perceived Quality of District Reading Program. Less than half of the teachers (42%, n=87) were satisfied with the quality of their district’s reading instructional program. Teachers in kindergarten through second grade (50%, n=54) were more likely than teachers in third through fifth grade (31%, n=27) to be satisfied with the reading program for the grades that they teach. When a district had adopted a new program in the past three years, 55% of teachers (n=63) were satisfied with the program. When a district did not adopt a new program in the past three years, just a quarter of the teachers (26%, n=22) were satisfied with the quality of the program, and 60% (n=50) were dissatisfied with the quality of the program. Even though some teachers were not satisfied with the quality of their district’s reading program, they continued to use it. Over half of teachers (56%, n=53) who reported they were dissatisfied with the quality of their district’s reading instructional program used it *always* or *most of the time*. Among teachers that reported always using their district program, over a quarter were dissatisfied (28%, n=17).

Table 10. Teachers' Use and Satisfaction with District Reading Program.

Levels of Use	Satisfied	Neutral	Dissatisfied	Total
Always	62% 37	10% 6	28% 17	100% 60
Most of the time	45% 37	12% 10	43% 36	100% 83
About half the time	23% 7	17% 5	60% 18	100% 30
Sometimes	15% 4	7% 2	78% 21	100% 27
Never	29% 2	29% 2	43% 3	100% 7
Total	42% 87	12% 25	46% 95	100% 207

Training on District Reading Program. Half of the teachers (50%, n=101) felt their training to use their district's instructional reading program was adequate. Fewer teachers in districts that used both a published and online program (38%, n=17) felt their training to use the instructional program was adequate. Teachers in districts that had adopted a new instructional program in the past three years (54%, n=61) were more likely than teachers in districts without a new program (45%, n=38) to feel their training to use the program was adequate. City teachers (54%, n=28) were more likely than suburban (39%, n=14) and remote rural teachers (39%, n=13) to feel that their training was adequate. Similar percentages of city (44%, n=23) and remote rural teachers (39%, n=13) felt their training was inadequate. Northern Maine teachers (46%, n=18) had the highest percentage of teachers that felt their training was inadequate.

Table 11. Perceived Adequacy of Training by Type of District Reading Program

	Adequate	Neutral	Inadequate	Total
Published	50% 66	18% 24	31% 41	100% 131
Published, Online	38% 17	24% 11	38% 17	100% 45
Published, District-created	69% 11	6% 1	25% 4	100% 16
District	56% 5	0% 0	44% 4	100% 9
Online	100% 2	0% 0	0% 0	100% 2
Total	50% 101	18% 36	33% 66	100% 203

Teachers who felt their training was adequate (74%, n=75) were more likely than teachers who felt their training was inadequate (62%, n=41) to use the program *always* or *most of the time*. There was a parallel between teachers feeling their training to use the reading program and their perception of the quality of the reading program. When teachers felt their training was adequate, 63% (n=64) were satisfied with the quality of the program but 30% (n=30) were dissatisfied with the quality of the program. When teachers felt their training was inadequate to use the reading instructional program, 17% (n=11) were satisfied with the quality of the instructional program and 67% (n=44) were dissatisfied with the quality of the instructional program.

Desired Changes in Instructional Program. Teachers who reported that they were dissatisfied or neutral (n=120, 58%) about the quality of their district’s reading instructional program were shown an open-ended question asking them to share more information about what they *feel needs to be changed to improve your district’s reading program*. A total of 47 teachers who teach reading in grades two or below and 54 teachers who teach reading in grades three and above wrote comments on this question. Teachers often shared quite lengthy comments, critiquing the limitations of their district’s reading program. A few indicated their district was transitioning to a new program, but most did not. Most of the comments from teachers at all grade levels focused on the need for adoption of a research-based reading program, while grade three and above

teachers also indicated a need for a more comprehensive reading program and more variety in materials to increase student interest and engagement in reading.

The vast majority of teachers' comments (20 comments from grade two or below teachers and 16 comments from grade three and above teachers), indicated the recommendation that their district should drop the *Lucy Calkins* reading program or other program they had been using and adopt a program in line with research evidence (the science of reading), and/ or increase attention to phonics and decoding skills in these early grades. Some representative comments from grade two or below teachers included:

We need to use a SOR type of program. We use [Lucy Calkins] Units of Study. It is not effective or teacher friendly.

They need to find a program that aligns with current research on how children best learn to read, a program that we can trust and that supports new teachers who may not have experiences to know where gaps are in our current literacy program.

It does not take into consideration child development and that students at this grade level need consistent and repetitive phonics/decoding/foundational skills and fluency skills before critically analyzing books through an intense reading comprehension program.

Phonics is taught in a sporadic way, with mechanics lessons sprinkled in randomly. My students need a cohesive, repetitive program that builds upon skills over time.

Our current program has a very weak phonics component. Phonics is the basis of kindergarten literacy.

Less guesswork + more decoding!

Similar comments from grade three and above teachers on the need for an evidence-based reading program across the elementary grades included:

We need to have a program that is researched-based. One that is appropriate for the developmental age of the students.

We use Units of Study by Lucy Calkins and it doesn't actually teach students how to read.

Remove Units of Study as it doesn't align with best practices or science of reading.

A program that incorporates the science of reading and expectations in reading and writing that are appropriate for the grade level.

A less frequent theme for grade three and above teachers was the need for a comprehensive literacy program that includes all components of reading as well as writing and spelling.

A full literacy curriculum that includes writing and phonics. Student workbooks included.

Program needs to include spelling, vocabulary and phonics developmental skills for kids to be fluent readers.

A full literacy curriculum that includes writing and phonics. Student workbooks included. something that is more inclusive to reading, writing, spelling, and phonics.

We need a more cohesive program that incorporates ELA as a whole.

Another theme in teachers' written comments was the idea that their district's reading program was too difficult for some students or most students, and that a more suitable program or differentiation is needed for reading instruction. Three teachers in grade two or below shared these comments:

I think that the program that our district uses is really intended for students who are ready to read. We have a number of students that are not meeting grade level and the students have a hard time connecting to it.

I feel that we need something less intense for our grade level. First graders are learning to read and need something that goes at their pace.

Program does not address diverse student needs, is time-consuming, and overwhelming.

The lack of a good fit with students' current reading needs was a frequent theme for grade three and above teachers. Six teachers indicated their reading programs were too difficult for their struggling readers, sometimes a majority of their class, and they wanted more flexibility in meeting students' individual reading needs.

We need a program that students can relate to and is on their academic level.

The program does not meet all students' needs. I teach third grade but have students that come in reading at K, 1 or 2 reading level.

The current program is not practical for the public which we serve. It assumes students are well above where they are. It's not meeting the needs of 90% of the students.

Some of the reading content is not easily accessible to all students, specifically those who receive academic support in reading.

We have a higher Title 1 program than other districts. The program we currently have is too complicated and challenging for my students.

One teacher at grade two or below suggested that the use of online resources in addition to the district-adopted reading program would be helpful to support differentiation in classroom reading instruction: "Our reading program does not have an online component which I believe would make the program easier to navigate and enable easier access to differentiated resources within the program."

A frequent theme for grade three and above teachers was the view that school districts need more variety in reading materials, genres, etc., to increase student interest and engagement in reading. Six teachers wrote comments about this.

Having a wide range of interesting books to accommodate each reading level books.

There is no balance of genres-we focus on nonfiction in my grade level (per the district) and the students become disengaged.

The kids need to be able to read what they want, within reason. The child that cannot read Harry Potter should be gently nudged to read books that are just right for them.

It's monotonous and the kids are not engaged.

A few teachers expressed frustration in their comments about how time-consuming their reading programs were. Two teachers in grade two or below felt their district's reading program took too much time. One teacher felt more integration of reading and writing skills in instruction would be more efficient: "Our reading program needs to be clear, concise, and time effective. We cannot spend 60 minutes on reading, writing, and phonics individually."

Four teachers at grade three or above also felt their current reading program took too much time.

It's complicated, jumps all over the place, too time consuming - 90 minutes daily for general instruction, recommended an additional 60 minutes/day for small groups and targeted skill work.

It assumes that we have hours more time than we actually do for reading instruction and is not clear or straightforward to use.

I also feel that the curriculum is meant for a 90 minute reading instruction block - but my school is only able to fit in 60 minutes.

One teacher at grade four said teachers spend too much time searching for supplemental materials: "Most of our instruction requires teachers to spend HOURS gathering supplemental materials to meet the state standards."

Two teachers wrote about the need for more training or professional development in literacy, and these were at grade 2 or below. They commented: "Teachers should have ongoing

training in understanding the components of structured literacy,” and “We also need to have professional development that is consistent with research based best practices.”

Two teachers in grades two or below said their districts do not have a specific instructional program for reading, and described how teachers must figure out how to fill this gap. One of the teachers wrote:

We have no program - teachers pull from everywhere including “Teachers Pay Teachers.” Nothing is vetted. There are huge holes and no consistency. As a result, we have way too many kids needing intervention.

Part II. Elementary School Math Instructional Programs and Practices Fall 2023 Administrator Survey

School administrators were asked to identify their district’s selected math program by name. A few identified additional instructional programs that they used. Some of the math programs are online programs used for primary or supplemental instruction. EdReports rates programs as “meets,” “partially meets,” or “does not meet” their indicators for quality and alignment with the Common Core State Standards. Some programs listed by respondents have not been rated by EdReports. Seven of the most frequently listed math instructional programs (by 9% or more of responding administrators) were all rated by Ed Reports as meeting standards.

Table 12. Math Programs Listed by Maine Schools in 2023

Instructional Program	EdReports Rating	%	n=
EveryDay Math	Meets standards	21%	18
Envision	Meets standards	14%	12
Eureka	Meets standards	13%	11
Illustrative Math	Meets standards	12%	10
Reveal Mathematics	Meets standards	11%	9
Bridges	Meets standards	9%	8
i-Ready	Meets standards	9%	8
Math in Focus, Singapore Math	Does not meet	7%	6
Investigations	Partially meets	4%	3
SanFrancisco Math	Not rated	2%	2
Fishtank Math	Meets standards	1%	1
Into Math	Meets standards	1%	1
Math Expressions	Meets standards	1%	1
Big Ideas	Partially meets	1%	1
ALEKS	Not rated	1%	1
Do the Math	Not rated	1%	1
IXL	Not rated	1%	1
Math for Today	Not rated	1%	1
Ready Math	Not rated	1%	1
Touch Math	Not rated	1%	1
Total		100%	85

Because a few administrators reported their schools are using more than one math instructional program, a combined rating system was developed and used for analysis. This is the same grouping approach as used for analyzing the reading programs. For example, if a school used a program that meets standards and a program that partially meets standards or a non-rated program, their combined math program was assigned to the *meets* standards category. This was the most common category for the indicated math programs. Almost nine of ten schools (89%, n=76) use a math program that “meets” the quality and alignment standards according to the EdReports. When a school used a math program that partially meets standards and a non-rated program, their combined math program was assigned to the *partially meets* category (2%, n=2). No schools used a *combination* of math programs that met standards and did not meet standards based on the EdReports ratings. Six schools (7%) used math programs rated as not meeting standards along with or without a non-rated math program. Four of these six schools are in Southern counties.

Administrators were given the same four choices as in the reading portion of the survey to classify their district math instructional program: evidenced-based program; published reading program; combination of materials from multiple published programs; and teacher-created materials. About a quarter of administrators (n=20, 26%) whose district used a math program rated as meeting standards did not identify it as evidenced-based. Five of the six school administrators from districts using a program that did not meet standards believed that it was evidence-based.

Table 13. Summary Evaluation of Schools' Math Program Quality

	Meets	Partially meets	Not Evidence	Not Rated	Total
Evidence-based published mathematics program	88% 49	4% 2	9% 5	0% 0	100% 56
Published mathematics program	91% 20	0% 0	5% 1	5% 1	100% 22
Combination of materials from multiple published programs	100% 6	0% 0	0% 0	0% 0	100% 6
I don't know	100% 1	0% 0	0% 0	0% 0	100% 1
Total	89% 76	2% 2	7% 6	1% 1	100% 85

Fall 2023 Teacher Survey

District Math Programs. As in the reading section on the teacher survey, teachers were asked to identify the types of math programs their district uses for the grades they teach. They could select all applicable types from the same choices as in the reading section: a published program, online program for students, or district-created materials. They also were given the option of “none.” Almost all teachers (99%, n=217) said that their district had a math instructional program for the grades that they teach. Published programs were available for 95% (n=210). Most teachers (66%, n=146) reported that their district only used a published program.

Thirty-one percent of teachers (n=69) said their district had an online math program. Online programs were used in conjunction with a published program in 29% of districts (n=64). An additional five teachers said that their district solely used an online program for the grades that they teach. Use of online math programs was higher in remote rural districts. Half of

teachers (50%, n=18) in remote rural areas reported their district had an online math program. Teachers in grades three through five (36%, n=36) were more likely to report that their district had an online math program for the grades that they teach than teachers in kindergarten through second grade (28%, n=28).

Most teachers supplemented their district’s math program with materials from other teachers (including online) (76%, n=157) and materials that they created (67%, n=139). Teachers also used published materials other than district selected ones (30%, n=62), their district’s current program at a lower grade level (27%, n=56), and their district’s previous instructional program (14%, n=30).

Table 14. Format of District Math Program

	%	n=
Published program	66%	146
Published program, Online program for students	28%	61
Published program, Online program for students, District created program	1%	3
District created program	1%	2
Online program for students	2%	5
None	1%	3
Total	100%	220

Recent Change in District Math Program. Just over half of the teachers (56%, n=118) responding to the survey reported that their district had adopted a new math program for the grades that they teach within the past in the past three years (since 2020). Suburban schools (50%, n=17) may have been less likely than city (68%, n=19), remote rural (59%, n=20) and small town schools (56%, n=56) to have adopted a new math program in the past three years.

Teachers that indicated that their district had changed programs in the last three years, were asked to select the changes that were made. Most (79%, n=93) reported that their district adopted a program from a different publisher. Seventeen percent (n=20) said their district adopted an updated version of an existing program. Just five teachers (4%) said their district supplemented the existing program. Two teachers in the early grades wrote that their district adopted a math program when there had not been one previously. Teachers in small districts (40%, n=6) were more likely than teachers in larger districts (11%, n=8) to indicate that their

district adopted an updated version of the previous math program from the same publisher. There was no difference by grade span.

Table 15. Adoption of New Math Programs by District Size

	Less 500		500-999		1000		Total	
Selected a different published instructional program	60%	9	82%	18	83%	59	79%	93
Adopted an updated version of the previous instructional program (same publisher)	40%	6	23%	5	11%	8	17%	20
Other	0%	0	5%	1	10%	7	8%	9
Supplemented existing program	13%	2	5%	1	3%	2	4%	5
	100%	15	100%	22	100%	71	100%	117

Five percent of teachers (n=6) who said their district recently adopted a new math program indicated their district is looking to change it in the coming few years. A third of teachers who said that their district has not adopted a new program since 2020 expect that their district will adopt a new program in the next few years. Most teachers (83%, n=169) said their district was not looking to adopt a new math program for the grades that they teach.

Online Instructional Programs. Teachers were asked about two evidenced-based, published programs for math instruction, Illustrative Math and Eureka, that school districts and teachers can access free of charge. Both evidenced-based programs have free materials available online, and districts have the option to purchase upgraded versions of these programs that provide additional training opportunities and that allow teachers to download and print out materials for students. Twenty-eight percent of teachers (n=59) said their district uses one of these programs. Half (54%, n=15) of the teachers that identified as being in a city school, said their district used one of these programs. An additional ten percent of teachers (n=21) say they regularly or occasionally use materials from these sites. About a quarter of teachers taking the survey (23%, n=48) said they have never heard of either of these programs. Awareness of these programs is lowest in districts with less than 500 students, where 38% of teachers (n=12) have never heard of them.

A third evidence-based program, Zearn, is also available to schools free of charge. It is an online platform for both teachers and students to use. There are resources including math lesson

plans for teachers. It is designed to stand alone or work with Eureka. Teachers indicated that regular and occasional use of Zearn is low (15%, n=32). When teachers are in a district that uses Eureka or Illustrative Math (36%, n=21), or teachers regularly or occasionally use Eureka or Illustrative Math materials (33%, n=6), the percentage of teachers who said they regularly and occasionally use Zearn is doubled. Most teachers (63%, n=135) indicated they have never heard of Zearn. Awareness of this program is especially low in small districts. Three quarters of teachers in districts with less than 500 students (75%, n=24) have never heard of it.

An open-ended question asking how teachers use materials from the free math instructional programs was presented to 43 teachers. Twenty-seven teachers were ones that regularly or occasionally said they use Zearn. Sixteen additional teachers from districts that do not have Eureka or Illustrative Math as their district text and who report using one or both of these instructional programs also received this question. A total of 15 teachers who teach math in grades two or below and 24 teachers who teach math in grades three or above wrote comments describing their use of these online materials. The largest number of comments (nine teachers from the lower grade, and eight teachers in grade three and above) indicated these online programs were used for instruction, sometimes daily. Some representative comments from grade two and below teachers included the following:

Eureka is our math program that we use daily for instruction and Zearn is used for re-teaching concepts and practice.

We use Zearn – I use it every day for whole group and small group instruction.

Our district has adopted Zearn as our math program so it is used daily in my classroom.

Teachers in grades three and above shared these comments on using these online programs for instruction:

Eureka for everyday whole group instruction.

Eureka squared is the backbone of our math program and is used almost daily. Zearn is used as a supplement for some students.

Our district transferred from Eureka to Eureka Squared last year. We have online / digital and print materials for this program.

I use the sprints and concepts from Eureka frequently to add to the Envision curriculum we currently use. Envision does not always break down the concepts or provide the scaffolding that Eureka does.

The next most frequently mentioned use for the free math instructional programs was for student math practice and reinforcing concepts or skills. Four grade two and below teachers mentioned this use, while only one grade three and above teacher did so. Grade two and below teachers commented, “I have used Zearn to enhance the daily Eureka math practice, in the past” and “I teach directly from the Eureka program and reinforce the lessons during independent math time using Zearn.” A grade three and above teacher wrote, “As supplements if I’m looking for good thinking activities or practice problems for students to use.”

Fewer teachers (from 1 to 5) described other uses for these free programs. These included using the online materials as supplemental or extension to the regular math programs, differentiation to meet students’ individual or small group learning needs, as an intervention, or assessment. Teachers mentioned using print materials from these programs, and some said they use the videos or slides for instruction, a few teachers mentioned using math games. Two teachers wrote that they feel it is too much work to prepare the materials from the free published programs for use in their instruction. One of these teachers shared, “Illustrative Math is very intense in the preparation of materials and the amount of time it takes to prep and get lessons ready.”

Teachers’ Use of District Math Programs. Ninety percent of teachers (90%, n=187) reported they use the district-selected, published math instructional program most of the time or always. Most teachers (57%, n=117) reported always using their district math program. Just four percent of teachers never or sometimes used their district math program. The few teachers that reported low usage of their district math program were disproportionately located in remote rural schools. They represented fifteen percent of rural teachers (n=4). There were no significant differences by grade levels taught, district size or area of the state.

Table 16. Teachers' Use of District Math Program by Format

	Always	Most of the time	About half the time	Sometimes	Never	Total
Published	60% 87	30% 44	4% 6	5% 7	1% 1	100% 145
Published, Online	48% 30	42% 26	6% 4	3% 2	0% 0	100% 62
Total	57% 117	34% 70	5% 10	4% 9	0% 1	100% 207

Perceived Quality of District Math Program. Sixty-five percent of teachers were satisfied with the quality of their district's selected math program. There was no significant variation in satisfaction with the quality of the math instructional program by grade levels taught. A high percentage of suburban teachers (85%, n=28) were satisfied with the quality of their district math program. When a district had recently adopted a new math program there was greater teacher satisfaction with the quality of the program (74%, n=87) than there was in districts that had not recently adopted a new program (53%, n=48). Although teachers reported very high usage of their district math program, twenty-eight percent (n=59) were dissatisfied with the quality of the math program. This included fifteen teachers who said they always used their district program.

Table 17. Teachers' Use and Satisfaction with District Math Program

Levels of Use	Satisfied	Neutral	Dissatisfied	Total
Always	81% 92	5% 6	13% 15	100% 113
Most of the time	49% 34	9% 6	42% 29	100% 69
About half the time	40% 4	10% 1	50% 5	100% 10
Sometimes	11% 1	22% 2	67% 6	100% 9
Never	0% 0	0% 0	100% 1	100% 1
Total	65% 131	7% 15	28% 56	100% 202

Training on District Math Program. Most teachers felt their training on their district’s math program was extremely (22%, n=45) or somewhat (41%, n=48) adequate. The highest percentage of teachers who felt their training was adequate was in the group whose district used a published curriculum (68%, n=94). Using an online program decreased the percentage of teachers who felt their training in the use of the program was adequate. Just over half of teachers (53%, n=33) in districts who used a published and an online program felt their training was adequate. Just one of the four teachers who said their district math program was entirely online felt their training in the use of the program was adequate. The teachers whose districts had recently adopted a new math program were more likely to feel their training was adequate (70%, n=82) than were teachers in districts that had not recently adopted a new program (53%, n=47). About half of the teachers in remote rural areas (48%, n=15) felt their training to use the district math program was somewhat inadequate or extremely inadequate.

Table 18. Perceived Training Adequacy by Type of District Math Program

	Adequate	Neutral	Inadequate	Total
Published	68% 94	11% 15	21% 29	100% 138
Published, Online	53% 33	16% 10	31% 19	100% 62
District	50% 1	0% 0	50% 1	100% 2
Online	25% 1	25% 1	50% 2	100% 4
Total	63% 129	13% 26	25% 51	100% 206

When teachers felt their training on their district math program was inadequate, they were slightly less likely to use the district program and were significantly more likely to be dissatisfied with the quality of the instructional program. When teachers believed their training on the district program was adequate, 94% (n=42) used the program *always* or *most of the time*. When the teachers felt their training was neither adequate nor inadequate, 84% (n=21) used the program *always* or *most of the time* and eight percent used the program *sometimes* or *never*. When teachers thought their training on the district program was inadequate, the percentage using the

program *always* or *most of the time* fell to 80% (n=37) and the percentage using the program *sometimes* or *never* rose to 11% (n=5). When teachers saw their training on the program as extremely adequate, 86% (n=38) were satisfied with the quality of the program and 11% (n=5) were dissatisfied with the program. At the other extreme when teachers felt their training was somewhat inadequate, satisfaction with the quality of the program was 57% (n=17) and dissatisfaction was 37% (n=11). When training was viewed as extremely inadequate, 29% (n=6) were satisfied with the quality of the program. Two-thirds of those whose training was seen as extremely inadequate (67%, n=14) were dissatisfied with the quality of the program.

Desired Changes in the District Math Program. Teachers who were neutral or dissatisfied (36%, n=75) with the quality of their district math program were asked to share more information about what they “feel needs to be changed to improve your district’s math program.” A total of 37 teachers who completed the survey and teach math in grades two or below and 26 teachers who teach math in grades three and above wrote comments on this question. Several teachers wrote that they did not like their current math program. A few teachers indicated that their district has recently adopted a new program or is piloting a new program. Overwhelmingly, teachers across all grade levels expressed their frustration with their current math program being too “wordy” and expecting a higher level of reading skill than their students have. Teachers in grade three and above had few recurring suggestions or complaints other than that, while teachers in grade two and below shared several suggestions for improving their district’s math program and instruction.

Nine grade two and below teachers and ten grade three and above teachers described how their current math program is too word-based and “overwhelming” or not “child-friendly” for students. They commented on how students struggle with the word-heavy problems, particularly for emerging readers at all grade levels. Some representative comments about this problem included the following:

We are piloting Reveal Math. It is way too wordy for first graders. As teachers, we have to read the questions to them.

The program is heavy with word problems and many of the students are struggling to read.

Program is extremely text heavy for students- makes it inaccessible for emergent readers.

The language used to describe the topics and vocabulary used in the questions should be at grade level.

A program that is less literacy based, more kid friendly.

It's too difficult for our ELL students.

At the grade two and below level, teachers (7) were also concerned about the fast pace of their math program and not having enough time to ensure students attained targeted skills.

The math program my district doesn't allow time for the kids to build solid foundational skills.

I often feel like when we try to follow the instruction time listed for each activity that I am rushed and that my students are not learning the material.

This is a one size fits all program, eureka squared, that is very rigorous and fast paced. It does not allow for time to build skills.

More hands on, more engaging, more math "talks", more real-world application, more realistic practice and foundational skills building.

Teachers in the early grades (K-2) felt their math program could be improved with more emphasis on foundational skills than abstract concepts in their math program (7 teachers), less use of paper workbooks or worksheets (6) which they said do not engage students, and more materials for concrete, hands-on learning in math as well as play-based math learning for younger children (11 teachers). A few teachers suggested more math games and other fun activities would be helpful in math.

It needs to be more concrete and teach number sense.

[A math program] One that incorporates strong math foundational skills early on.

We need more support with foundational skills and computation.

Less worksheets and more relevant hands-on work.

Students need more hands-on activities and games to engage them.

More hands-on and play-based approach for lower grades. No worksheets for pre-K and K students.

There are no math games. There is no emphasis on addition/subtraction math fact fluency. It is boring and based on workbooks, not manipulatives or visually based.

Everyday math is too abstract and is very challenging for the majority of my kids.

Some grade two and below teachers (5) felt their math program is too hard for their students' math levels, and four teachers said more differentiation is needed to assist students at their own level, including through flexible small groups. One teacher wrote, "This is our first year of implementation. It is completely overwhelming and currently above most of our students' heads." Another teacher commented, "[A math program] One that allows differentiation and flexibility when we need to go slower with a concept or faster."

Part III. Supporting Struggling Students in Reading and Math

Fall 2023 Teacher Survey

Teachers were given two general questions on how their district supports struggling students, including those with COVID learning loss. The first question asked about the district's primary strategy to address COVID learning loss. Half of the respondents (50%, n=109) selected remediation (instruction and support and the child's learning level). The next most common strategy was acceleration (beginning the year with grade level content and adding scaffolding/support to fill in learning gaps) (42%, n=90). Eight percent (n=18) selected

previewing / pre-teaching (exposing students to material prior to class instruction). Smaller districts with less than 500 students had the highest percentage of teachers (65%, n=24) saying their district strategy is remediation. Fourteen of the seventeen teachers who said their districts' primary strategy is previewing are in large districts. None of the teachers who chose previewing are in small districts.

Table 19. District Size and Primary Strategy to Help Struggling Students

	Remediation	Acceleration	Previewing	Total
1000 or more students	45% 61	44% 60	10% 14	100% 135
501-999 students	55% 23	38% 16	7% 3	100% 42
less than 500 students	65% 24	35% 13	0% 0	100% 37
Total	50% 108	42% 89	8% 17	100% 214

On a second question, teachers could select all the ways they believed that their districts supported students who struggle in math or reading. The most common choice was pull out during scheduled subject time (63%, n=133), followed by extra instruction in class during subject time (53%, n=112). About half of the teachers indicated their districts increased instructional time for some students through summer programs (49%, n=104) or provided additional subject instructional time during the day for some students (48%, n=102). After school programs were not used for K-5 students in most districts. Only 15% (n=32) of teachers indicated that their district used this strategy. About one in five teachers said that their district increased the math (21%, n=45) or reading (17%, n=35) instructional time for all students. Less than a third (31%, n=11) of teachers from smaller districts with less than 500 students listed summer programs while more than half of larger district teachers mentioned summer programs. Teachers from larger districts (12%, n=16) were less likely than teachers from smaller districts to list after school programs.

**Table 20. How Districts Support Students who Struggle in Math or Reading
by District Size**

	less than 500 students		500-999 students		1000 or more students		Total	
Pull out during scheduled subject time	69%	25	56%	23	63%	82	63%	133
Extra instruction in class during subject time (support from Ed Tech or teacher)	53%	19	61%	25	50%	66	53%	112
Summer programs	31%	11	61%	25	51%	67	49%	104
Additional subject instructional time during the school day for some students	42%	15	46%	19	52%	68	48%	102
Longer math instructional time during the school day for all students	17%	6	24%	10	21%	28	21%	45
Longer reading instructional time during the school day for all students	19%	7	22%	9	14%	18	17%	35
After school support or programs	19%	7	22%	9	12%	16	15%	32
Total	100%	36	100%	41	100%	131	100%	212

The survey also gave teachers the opportunity to share their views about their “district’s experience in addressing COVID-19 learning losses” through written comments on an open-ended question. A total of 33 teachers who teach in grades two or below and 34 teachers who teach in grades three or above wrote comments on this question. Some of the comments were expansive and expressed strong concerns about the lack of time and resources to continue to provide the supports teachers feel many of their students need to catch up academically. Most of the teachers indicated their district had been working to address students’ learning losses. However, they cited the end of federal relief funds to schools as the primary reason their schools were no longer providing some of the supports they found helpful during the pandemic, which allowed them to use smaller instructional groups, tutoring, or targeted support. One teacher mentioned their district had offered a summer program to help kids catch up. Some representative comments were:

For a few years our district implemented classrooms that catered to students with learning losses. These were smaller class sizes and had a Title 1 education technician with them for half a day.

We were able to hire additional RTI teachers with COVID or other grant money, I'm not sure. But this extra interventionist has been extremely helpful to close the gap with struggling students.

While I think the intent was there, I believe all of these services have stopped due to funding. I feel having more staff to provide more in class, small group and tailored instruction would be helpful though I understand staffing is a struggle across the state at this time.

The district hired certified teachers as interventionists for math and reading for 21-22 and 22-23. I believe this is the last year for COVID funds. So those programs will end in K-6 in June '24. They were very helpful.

Several teachers (11) indicated that their district did not have any specific plan or strategy on how to address students' learning losses, and they felt pressured to maintain the normal pace of instruction despite having many kids one or two years behind academically.

My school really didn't have a plan for remediation for lost learning.

I have no awareness of anything that has been put in place to address learning loss.

They want to do something, but are having difficulty making anything happen due to the cost of staffing and decision making. I pursue support programs and support materials on my own.

I don't feel that our district specifically had a plan for addressing these losses. We simply moved on and, as individual teachers, try to fill in the gaps.

We needed additional Ed tech support during the pandemic and targeted instruction with more special education support at the time.

There was talk of a tutoring program, but nothing really came of it.

I feel like we are not addressing it at all. It is like it never happened and we are to just make up deficits as we go. We are expected to move at a regular pace like we did pre-COVID. It is the thought that they will just naturally "get it" eventually.

It does not feel as if my district is doing anything to specifically address COVID-19 learning losses. The overall feel is that we are just expected to keep moving forward with the lessons as intended.

Teachers are feeling so much pressure these days to move through content quickly, yet we have to be able to fill in these gaps at the same time.

We are going to continue to have students performing "below grade level" if we do not adjust our expectations for those most affected.

One teacher commented that it's not very useful to keep thinking about "learning losses" and schools just need to adjust to provide the right instruction for students' needs.

I feel strongly that we need to move away from the "learning loss" language and focus our attention on meeting students where they are. We had no control over the past and I think the learning loss language set teachers and students up for failure. We can't get the time back we lost during COVID-- we need to focus on what is in front of us and support students from there.

Many teachers (14) also cited the on-going challenge with student behavior and social skill development since the pandemic. Teachers cited the lack of parental supports at home to help address these issues.

Behaviors were such an issue after remote/hybrid learning that we were drowning in behavior issues. My belief is that students in my district were affected by the loss of education during the pandemic but are also impacted by lack of parental support.

As a veteran teacher first grade teacher we are no longer dealing with COVID 19 learning losses, but rather a whole new type of learner and lack of family support/parenting which vastly affects instructional choices. This is compounded by increasing student behaviors that impact ALL instruction.

Kids' COVID losses include academic losses but as important, their social development is way behind.

There have been significant differences and deficits in social interaction as well as academic performance.

I feel that my school deals with more behavior due to covid than being able to focus on the content.

Another frequent theme across many of the teachers' comments (12) was a plea for more staffing to provide in-class supports for students and teachers, both academically and for managing student behaviors, for both general education and special education students. Teachers said having more adults in the room and Ed Techs, as well as interventionists, literacy specialists and special education staff, is a critical need in their schools currently.

We need more in-class support to help teachers with the kids that are still behind.

We need more adults to help in the classroom, especially in the younger grades. We need smaller class sizes.

We do not have the staff to provide adequate services to students.

We need more interventionists to support differentiated groups in classrooms at ALL grade levels (not just the younger grades)!

In general, there needs to be more support for the students without IEPs and 504s that are experiencing learning losses associated with COVID-19.

I am extremely overwhelmed with the MTSS model of data collection and attempting to fill the gaps in a regular classroom with no ed. tech. support, no additional resources for meeting the diverse needs, while also trying to maintain quality experiences for students who are "on-level." I feel as though teachers are being expected to do everything from a-z and it's impossible.

Only two teachers indicated that some schools were continuing to fund the additional staff positions created during the pandemic to help with in-classroom instruction or interventions for students.

We have a former teacher in a new program called CIS (COVID Impact Services) that works with students for math and reading support. We initially paid with COVID funds and now fund as a position.

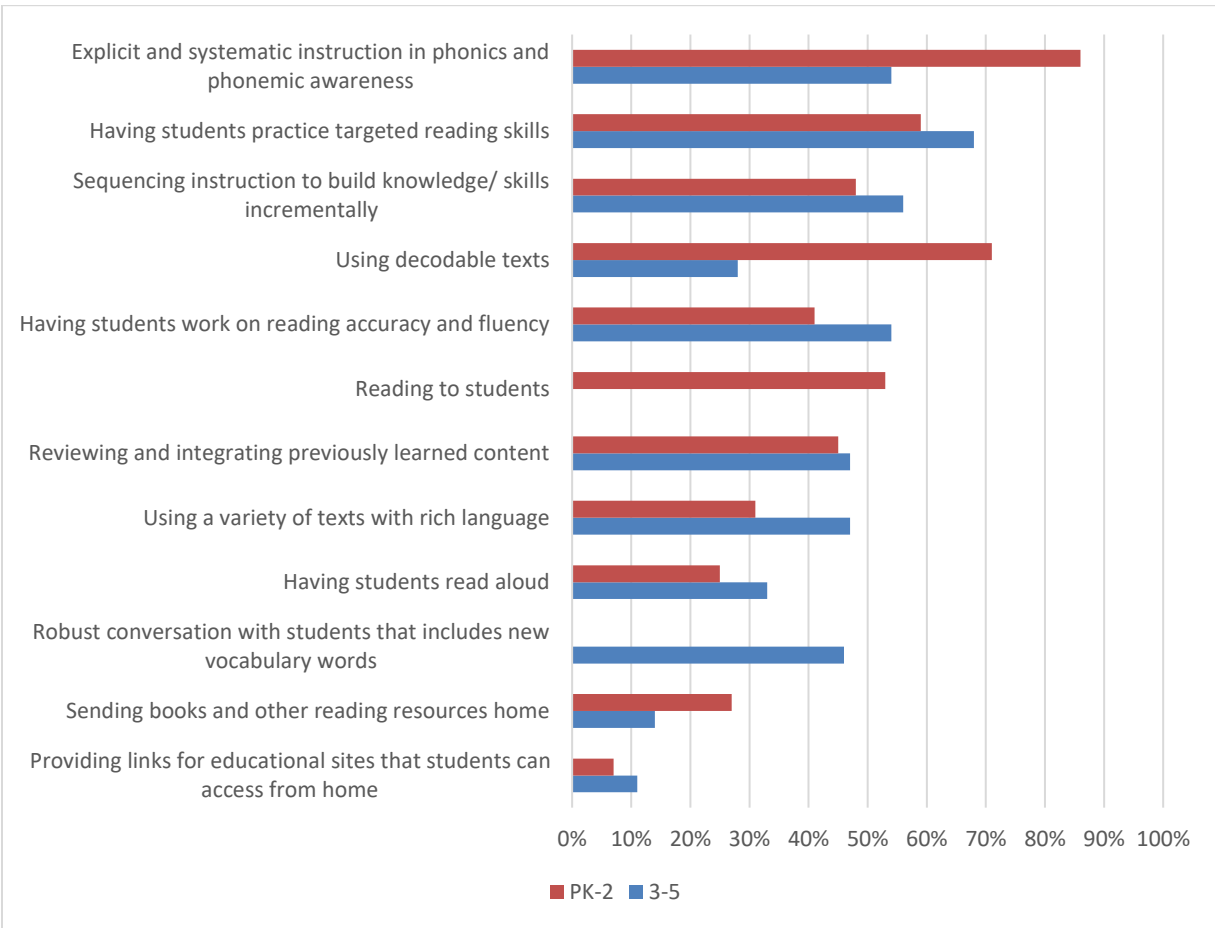
We were able to hire additional RTI teachers with COVID or other grant money, I'm not sure. But this extra interventionist has been extremely helpful to close the gap with struggling students.

In addition to asking teachers about school-level or district-wide practices, teachers were also asked questions about what they perceive as the most effective instructional and grouping practices to help students who are struggling in reading or math. We present the survey findings on these questions in the next sections.

Reading Instruction Practices to Close Gaps. Teachers were asked to select up to five instructional practices that they felt were most useful to close gaps in reading. Teachers in kindergarten to grade two were given the option of "reading to students," while teachers in grades three to five were given a different option of "robust conversation with students that

includes new vocabulary words.” The other options were the same for both groups of teachers. Most early elementary teachers selected: explicit and systematic instruction in phonics and phonemic awareness (86%, n=92), using decodable texts (71%, n=76), having students practice targeted reading skills (59%, n=63) and reading to students (53%, n=57). Teachers in grade three to grade five chose: having students practice targeted reading skills (68%, n=76), sequencing instruction to build knowledge/ skills incrementally (56%, n=63), explicit and systematic instruction in phonics and phonemic awareness (54%, n=61) and having students work on reading fluency and accuracy (54%, n=61). Sending books or resources home (K-2 27%, 3-5 14%) or providing educational links that students could access from home (K-2 7%, 3-5 11%) were selected by the fewest teachers.

Figure 1. Reading Practices to Close Gaps



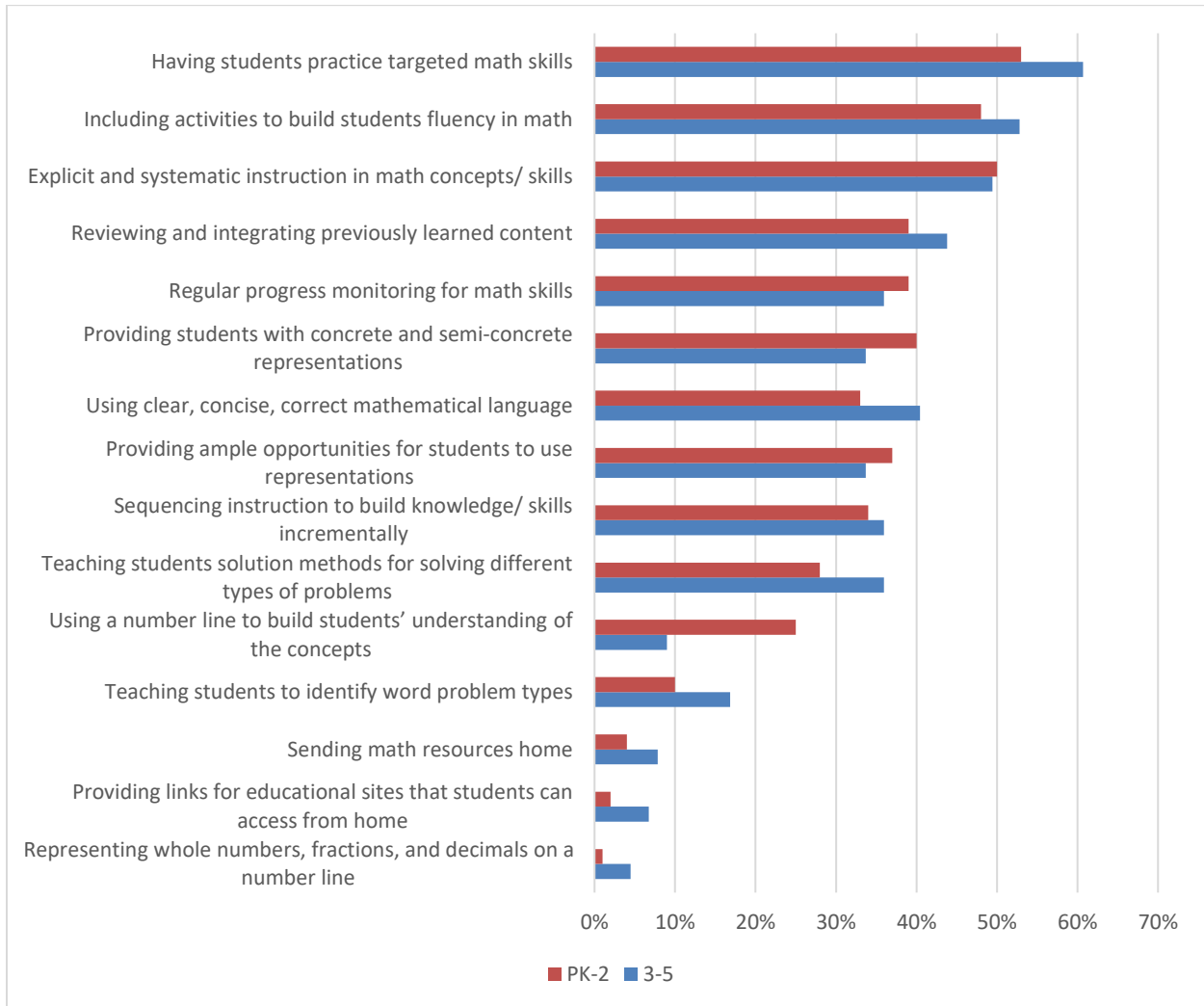
Grouping Practices for Reading. Teachers were asked to identify up to three grouping approaches that they felt had the most positive impact on students in their classroom who struggle with reading. Results were similar for teachers in early elementary grades and upper elementary grades. The top three grouping practices selected were: small flexible group instruction targeting a specific reading skill (80%, n=175), in person individualized instruction (70%, n=152), and small group instruction based on learning level (70%, n=152). A much smaller percentage of teachers chose: small group instruction with students of all reading levels (18%, n=39) and self-paced (guided instruction, typically online) (9%, n=19).

Table 21. Perceived Grouping Practices Most Beneficial for Struggling Readers.

	Kindergarten to Grade 2		Grades 3 to 5		Total	
Small flexible group instruction (targeting a specific reading skill)	78%	92	83%	83	80%	175
Individualized instruction, in person	72%	85	67%	67	70%	152
Small group instruction based on learning level	70%	83	69%	69	70%	152
Small group instruction with students of all reading levels	14%	17	22%	22	18%	39
Self-paced (guided instruction, typically online)	8%	9	10%	10	9%	19
Total	100%	118	100%	100	100%	218

Math Instruction Practices to Close Gaps. Teachers were asked to identify up to five strategies that they had found most helpful for closing learning gaps in math for students in their classroom. Three strategies were selected by about half of the teachers: having students practice targeted math skills; including activities to build students’ fluency in math; and explicit and systematic instruction in math concepts and skills. Several practices were identified by 30% to 40% of teachers. The practices that were selected by the fewest teachers included using a number line either to represent whole numbers, fractions and decimals or to build understanding of concepts. Sending resources home or providing educational links that students could access from home were selected by less than ten percent of teachers.

Figure 2. Math Instructional Practices to Close Gaps



Grouping Practices for Math. Teachers chose up to three grouping approaches that they felt had the most positive impact on students in their classroom who struggle with math. Teachers in the early grades chose similar grouping practices as those in the upper elementary grades. Small flexible group instruction targeting a specific skill was chosen by four out of five teachers (81%, n=160). In person individualized instruction was chosen by two thirds of teachers (68%, n=133). Half selected small group instruction based on learning level (52%, n=102). Strategies that fewer teachers felt had the most positive impact for students who struggle with math were small group instruction with students of all math levels (21%, n=42) and self-paced guided instruction (16%, n=32).

Table 22. Perceived Grouping Practices Most Beneficial for Students who Struggle in Math

	PK-2		3-5		Total	
Small flexible group instruction (targeting a specific math skill)	81%	88	81%	72	81%	160
Individualized instruction, in person	65%	70	71%	63	68%	133
Small group instruction based on learning level	53%	57	51%	45	52%	102
Small group instruction with students of all math levels	19%	20	25%	22	21%	42
Self-paced (guided instruction, typically online)	15%	16	18%	16	16%	32
Total	100%	108	100%	89	100%	197

Conclusion

We found that while a majority of K-5 teachers and schools in Maine appear to have access to a published, district-designated instructional program for reading and math, some do not. In particular, teachers at the PreK level are much less likely to have a district-designated reading program, and teachers across K-5 elementary grades are less likely to have an instructional program for reading than they are for math. Where there is no district-specified program, teachers said they create their own materials or find them from colleagues or online.

Teachers were more likely to have access to online programs for student instruction for math than for reading that were selected by their districts. More than a quarter of teachers said their districts use either Eureka or Illustrative Math, but there was much lower use of the Zearn online platform. Many teachers had not heard of Zearn, and about a quarter had not heard of Eureka or Illustrative Math. These programs offer evidence-based math instruction resources that are online and free, with additional print and other materials available for a fee.

Overall, teachers were far more satisfied with their district’s math program than their reading program. The most frequently mentioned reason for dissatisfaction with the district’s reading program was that it did not align with research evidence or the “science of reading.” The two most frequently used reading programs are rated by EdReports as not meeting their criteria for alignment with standards, while many other programs and materials used for reading have not been independently rated. By contrast, the seven math programs used most frequently are

rated as meeting the criteria of alignment with standards. Caution is needed with regard to using the ratings provided by systems (like EdReports) that evaluate instructional programs, as these systems are not perfect and may have some significant limitations. Yet, these rating systems are widely used and influential in decisions at the state and local levels across the US. Better systems are needed nationally to objectively and accurately assess the quality of published and online instructional programs for their alignment with Common Core State Standards as well as their ease of use at the classroom level, and for research evidence that particular programs are effective in promoting positive learning outcomes for students.

There were some specific suggestions to improve the quality of instructional programs from teachers, including a wider array of reading and math materials and tools to increase student interest and engagement in learning. For reading, they suggested more diverse topics and genres of reading materials for students. For math, they suggested more hands-on materials and games for concrete representations and engagement in learning and less reliance on paper worksheets. Some teachers reported their students struggle with the reading level expected in their reading or math programs, particularly ELL students and other struggling readers.

Teachers were more satisfied with the quality of their training in using their district-selected math program than they were with their reading program. Teachers who were satisfied with the quality of their instructional program were also more likely to be satisfied with their training on that program.

Half of the teachers indicated their school districts have generally adopted a strategy of remediation for students with learning loss, and 42% said their districts use the strategy of acceleration. A majority of teachers said their districts use the approach of pulling students out of their regular classes for support. A significant number of teachers were using a lower grade level of their district programs for reading and math instruction. National and professional organizations discourage the strategy of remediation and encourage acceleration. Further, pulling students out of the regular classes may make it more difficult for them to catch up.

Some teachers shared written comments that their district's efforts to address pandemic-related learning loss was helpful, but that the end of federal relief funding means their district will no longer be able to afford the staffing support to provide smaller learning groups, summer programs or other supports. Some teachers expressed frustration with the lack of staffing and other resources to support students' diverse needs in the classroom or through interventions

outside the classroom, and many commented on the on-going social and behavioral challenges with students. Some teachers felt pressured in their district to move ahead with work when their students are struggling.

Teachers' views of the most effective instructional practices for reading and math were similar. They felt explicit and systematic instruction; including activities to build students' fluency in math or phonics; and having students practice targeted skills were some of the most useful strategies to help struggling students. They also identified the same three grouping strategies as the most useful to help students: small flexible group instruction targeting a specific reading skill; in person individualized instruction; and small group instruction based on learning level.

Implications for Policy and Practice

Based on our analysis of data from three separate surveys of teachers and/ or administrators in Maine at the elementary grade level (through grade 5), we see some broad implications for policy and practice to support the effective and more consistent use of high-quality, evidence-based reading and math instructional programs and practices in Maine schools. Related to this, we also offer some thoughts about ways to strengthen supports for students struggling with reading or math, whether from the effects of the pandemic period in education or other reasons.

Instructional Programs and Practice

- Although many districts have been upgrading their instructional programs, or plan to do so in the next three years, more work and support are needed to assist school districts in selecting, adopting and using high quality, evidence-based instructional programs and using them with fidelity, particularly in the area of reading, where a majority of schools appear to be using non-evidence-based programs, and teachers are more dissatisfied with the quality of their reading programs. Some schools and educators have no district-designated reading program for some PK-5 grades or all grades. Some districts are trying to create their own K-2 reading program where high-quality programs exist. Supports needed include:
 - More reliable and comprehensive information is needed to help states and districts identify and select high quality, evidence-based instructional programs for both

published and online programs. There are few systems currently (e.g., EdReports and others) that provide rubrics or ratings for some instructional programs, but they have real limitations and/ or problems. Decision-makers and classroom educators need to know:

- 1) to what extent a program aligns with Common Core State Standards and current guidance on effective instructional practices for a content area;
 - 2) the practical ease of use for a program at the classroom level (i.e., can teachers and students use the program as written or do they need guidance on how to pick and choose the best pieces?); and
 - 3) whether there is any research evidence that a specific instructional program is effective in promoting positive learning outcomes for students.
- Funding to purchase new instructional programs that are both aligned with standards and evidence-based, including both print and online programs and materials, since schools are facing increased fiscal constraints after the ending of federal relief funding.
 - Training and on-going professional development for educators and administrators to ensure understanding and effective use of standards-aligned, evidence-based programs and practices, particularly in the area of reading instruction, where past practices have under-emphasized some foundational reading skills like phonics and phonemic awareness and explicit instruction. Many teachers are not satisfied with the training they received locally on their reading or math instructional program, which may indicate a need for stronger support from the state, regional collaboratives or partnering universities.
- More attention is needed at the PreK level in particular, where educators are less likely to have a reading instruction program in their district.
 - Funding or access to materials is needed to provide teachers with a wider range of materials to use to engage students in both reading and math. Teachers commented that they need reading materials on different topics and genres for their students, and that the activities and mode of learning for math (e.g., paper worksheets and overly wordy math problems) are not interesting or engaging for their students. They seek more manipulatives, games and other hands-on materials.

- Teachers would like to see their districts adopt a more comprehensive reading curriculum that covers the required areas of reading and literacy, rather than a patchwork of programs and materials.
- National data on teacher preparation programs indicate that many programs do not prepare educators on evidence-based practices for reading instruction. Maine’s teacher education programs should examine the content of their courses in reading instruction to ensure they are emphasizing effective practices for future educators.

Supports for Struggling Students

- Teachers indicated many of their students are struggling readers, and that poor reading skills are a barrier for students in their ability to do some work in math as well (i.e., reading math problems with lots of words or more advanced vocabulary). Supporting the use of high-quality instructional reading and math programs in schools, through the strategies outlined above, will help to improve students’ reading skills benefiting their readiness to learn across subject areas.
- Teachers indicated that districts are often using a strategy of remediation for students who struggle in reading or math, with pull out instructional support. Of the teachers who indicated they have a district-designated reading or math program, nearly a third said they are using that program but at a lower level than the grade they currently teach. Encouraging districts and teachers to use grade-level instruction with scaffolding and appropriate supports or interventions within class, rather than remediation, will help ensure that students don’t fall further behind.
- The on-going challenge of staffing shortages in schools, together with the ending of the federal pandemic relief funding, means that many school districts have had to halt strategies they implemented and found helpful to address learning gaps. Making staffing and the availability literacy specialists and interventionists priorities will help to improve support in the classroom. Creative strategies are also needed to attract people into Ed Tech and other roles that help with academic support and behavior management. Some schools don’t have the funding to provide summer programs to reduce learning loss. Regional approaches may be needed to pool resources.

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Appendices

Appendix A. Teacher Survey

Appendix B. Administrator Survey

Appendix C. Demographic Data

Appendix A. Teacher Survey

MEPRI Teacher Survey on K-5 Reading and Math Programs and Instruction

The Maine Education Policy Research Institute (MEPRI) has been asked by the state legislature to conduct a research study to identify what instructional programs and materials school districts and teachers are using for reading and math in grades K-5 and how they are addressing COVID-19 related learning losses. To this end, MEPRI is conducting a statewide survey of public school teachers in regular education. You are invited to share your views by participating in this survey study conducted by Dr. Janet Fairman and Dr. Patricia Lech of the University of Maine. This survey is confidential and no individuals nor school districts will be identified in any reports. The estimated time to complete the survey is approximately 10 minutes. You may stop and start this survey at any time. For questions about the study, please contact: janet.fairman@maine.edu. For problems with completing the survey, please contact: patricia.lech@maine.edu.

Do you teach general education in a public school?

Choices: Yes, No

Which grade levels do you teach? (Check all that apply)

Choices: K, 1, 2, 3, 4, 5, any or all grades 6-8, any or all grades 9-12

Which of the following subjects do you regularly teach as a classroom teacher? (Check all that apply)

Math

Reading, Language Art

I do not teach either subject to a class

Do you have anything that you would like to share about your district's experience in addressing COVID-19 learning losses?

Do you have anything that you would like to share about your district's experience in addressing COVID-19 learning losses?

Instructional Reading Programs and Materials K-5

What types of instructional programs does your district use for reading in the grades that you teach?
(Check all that apply)

- Published program
- Online program for students
- District created program
- None

How often do you use the grade level instructional reading program selected by your district?

- Never
- Sometimes
- About half the time
- Most of the time
- Always

What resources do you use for reading instruction? (Check all that apply)

- Previous district instructional programs
- Published program materials
- Materials from other teachers (including online)
- Materials that I created
- Other _____

What other resources do you use for reading instruction? (Check all that apply)

- Previous district instructional programs
- Current instructional program at a lower grade level
- Published program materials other than district selected ones
- Materials from other teachers (including online)
- Materials that I created
- Other _____

What do you use for phonics instruction? (Check all that apply)

- District's published program
- District's online program
- Previous district instructional programs
- Current instructional program at a lower grade level
- Published program materials other than district selected ones
- Materials from other teachers (including online)
- Materials that I created
- Other _____

How satisfied are you with the quality of your district's reading program for the grades that you teach?

- Extremely dissatisfied
- Somewhat dissatisfied
- Neither satisfied nor dissatisfied
- Somewhat satisfied
- Extremely satisfied

What do you feel needs to be changed to improve your district's reading program?

How adequate was your training to use your district's reading program?

- Extremely inadequate
- Somewhat inadequate
- Neither adequate nor inadequate
- Somewhat adequate
- Extremely adequate

Has your district adopted updated or different reading instructional programs or materials in the past three years (since 2020) for the grades that you teach?

Choices: Yes, No

What changes were made? (Check all that apply)

- Supplemented existing programs
- Adopted an updated version of the previous instructional program (same publisher)
- Selected a different instructional program
- Other _____

Is your district considering changing reading instructional programs in the next few years?

Choices: Yes, No

Instructional Math Programs and Materials for K-5

What types of instructional programs does your district use for math in the grades that you teach?
(Check all that apply)

- Published program
- Online program for students
- District-created program
- None

How often do you use the grade level instructional math program selected by your district?

- Never
- Sometimes
- About half the time
- Most of the time
- Always

What other resources do you use for math instruction? (Check all that apply)

- Previous district instructional programs
- Current instructional program at a lower grade level
- Published program materials other than district selected ones
- Materials from other teachers (including online)
- Materials that I created
- Other _____

What resources do you use for math instruction? (Check all that apply)

- Previous district instructional programs
- Published program materials
- Materials from other teachers (including online)
- Materials that I created
- Other _____

What do you know about these free published math programs: Illustrative Math and Eureka?

- My district uses one of these programs
- I use one or both on a regular basis
- I occasionally use these materials
- I have looked at one or both of them but do not use their materials
- I have heard of one or both of them but not looked at them
- I have never heard of them

What do you know about the free Zearn math program?

- I use it on a regular basis
- I occasionally use it
- I have looked at it but do not use it
- I have heard of it but not looked at it
- I have never heard of it

How are you using materials from these programs (Eureka, Illustrative Math and/or Zearn)

How satisfied are you with the quality of your district's math program for the grades that you teach?

- Extremely dissatisfied
- Somewhat dissatisfied
- Neither satisfied nor dissatisfied
- Somewhat satisfied
- Extremely satisfied

What do you feel needs to be changed to improve your district's math program?

How adequate was your training to use the district math program?

- Extremely inadequate
- Somewhat inadequate
- Neither adequate nor inadequate
- Somewhat adequate
- Extremely adequate

Has your district adopted updated or different math instructional programs or materials in the past three years (since 2020) for the grades that you teach?

Choices: Yes, No

What changes were made? (Check all that apply)

- Supplemented existing program
- Adopted an updated version of the previous instructional program (same publisher)
- Selected a different published instructional program
- Other _____

Is your district considering changing math instructional programs in the next few years?

Choices: Yes, No

Addressing COVID-19 Learning Losses

Which of the following instructional strategies have you found the most helpful for closing the gaps in reading for students in your classroom? (check up to 5)

- Explicit and systematic instruction in phonics and phonemic awareness
- Sequencing instruction to build knowledge/ skills incrementally
- Reviewing and integrating previously learned content
- Robust conversation with students that includes new vocabulary words
- Having students work on reading accuracy and fluency
- Using a variety of texts with rich language
- Using decodable texts
- Having students practice targeted reading skills
- Sending books and other reading resources home
- Providing links for educational sites that students can access from home
- Having students read aloud

Which of the following grouping approaches have had the most positive impact for helping students who struggle with reading in your classroom? (check up to 3)

- Individualized instruction, in person
- Self-paced (guided instruction, typically online)
- Small flexible group instruction (targeting a specific reading skill)
- Small group instruction based on learning level
- Small group instruction with students of all reading levels

Which of the following instructional strategies have you found the most helpful for closing the gaps in math for students in your classroom? (check up to 5)

- Explicit and systematic instruction in math concepts/ skills
- Sequencing instruction to build knowledge/ skills incrementally
- Reviewing and integrating previously learned content
- Providing students with concrete and semi-concrete representations
- Using clear, concise, correct mathematical language
- Using a number line to build students' understanding of the concepts
- Representing whole numbers, fractions, and decimals on a number line
- Teaching students to identify word problem types
- Providing ample opportunities for students to use representations
- Teaching students solution methods for solving different types of problems
- Including activities to build students fluency in math
- Regular progress monitoring for math skills
- Sending math resources home
- Providing links for educational sites that students can access from home
- Having students practice targeted math skills

Which of the following grouping approaches have had the most positive impact for helping students who struggle with math in your classroom? (check up to 3)

- Individualized instruction, in person
- Self-paced (guided instruction, typically online)
- Small flexible group instruction (targeting a specific math skill)
- Small group instruction based on learning level
- Small group instruction with students of all math levels

How would you describe your district's primary strategy to address COVID-19 learning loss?

- Remediation (instruction and support at child's learning level)
- Acceleration (beginning the year with grade level content and adding scaffolding/support to fill in learning gaps)
- Previewing / Pre-teaching (exposing students to material prior to class instruction)

How has your district assisted students who struggle in math or reading? (Check all that apply)

- Extra instruction in class during subject time (support from Ed Tech or teacher)
- Pull out during scheduled subject time
- Additional subject instructional time during the school day for some students
- Longer math instructional time during the school day for all students
- Longer reading instructional time during the school day for all students
- After school support or programs
- Summer programs

Do you have anything that you would like to share about your district's experience in addressing COVID-19 learning losses?

Demographics

What is the total student enrollment in your school?

- less than 100
- 101-200 students
- 201- 300 students
- 301-400 students
- 401 or more students

What is the total student enrollment in your district?

- less than 100 students
- 101 to 500 students
- 501-999 students
- 1000 or more students

What best describes your school setting?

- City or Urban
- Suburban
- Small town
- Remote rural

In what county are your district's schools primarily located?

Choices: Androscoggin Aroostook, Cumberland, Franklin, Hancock, Kennebec, Knox, Lincoln, Penobscot, Piscataquis, Oxford, Sagadahoc, Somerset, Waldo, Washington, York

This is the end of the survey. You may go back to previous questions.

When you are ready to submit the survey, please hit the forward arrow.

Appendix B. Administrator Survey
MTSS Tier 1 Core K-5 Academic Practices Survey

BACKGROUND INFORMATION

1. What is your current position?
 - a. Principal
 - b. Assistant Principal
 - c. Instructional Coach
 - d. Reading Specialist
 - e. Math Specialist
 - f. Curriculum Coordinator
 - g. Superintendent
 - h. Other
2. How many years have you worked as an educator?
 - a. 0-5
 - b. 6-10
 - c. 11-15
 - d. 16-20
 - e. 25 or more
3. What is the total student enrollment in your district?
 - a. less than 100 students
 - b. 101 to 500 students
 - c. 501-999 students
 - d. 1000 or more students
4. In what county are your district's schools located?
 - a. Androscoggin
 - b. Aroostook
 - c. Cumberland
 - d. Franklin
 - e. Hancock
 - f. Kennebec
 - g. Knox
 - h. Lincoln
 - i. Penobscot
 - j. Piscataquis
 - k. Oxford
 - l. Sagadahoc
 - m. Somerset
 - n. Waldo
 - o. Washington
 - p. York

MTSS KNOWLEDGE AND SKILLS

Below is a definition of a multi-tiered system of support (MTSS).

A multi-tiered system of support (MTSS) includes three tiers of intensity for instruction, intervention, and supports. Tier 1 includes high-quality, schoolwide academic, social, emotional and behavioral programming and supports designed to meet the needs of all students. At Tier 2, schools provide small group, standardized academic interventions or targeted behavioral or mental health supports using validated intervention programs to support students identified as at-risk. Tier 3 includes intensive intervention for students not responding to Tier 2 through instruction and supports that are intensified and individualized based on student need. At all levels, attention should be on selection of evidence-based practices and fidelity of implementation, with consideration for cultural and linguistic responsiveness and recognition of student strengths.

The following questions are based on the above definition of an MTSS.

5. How do you rate your knowledge and skills for implementing a multi-tiered system of supports (MTSS)?
 - a. No MTSS knowledge and skills
 - b. Some MTSS knowledge and skills
 - c. Average MTSS knowledge and skills
 - d. Very strong MTSS knowledge and skills

READING INSTRUCTION

6. Does your school currently utilize MTSS methods to support students who are struggling with reading?
 - a. Yes
 - b. No
7. If yes, please rate the strength of your school's tier 1 reading instructional methods.
 - a. Weak
 - b. Fair
 - c. Good
 - d. Excellent
8. If yes, please rate the strength of your school's tier 2 reading instructional methods.
 - a. Weak
 - b. Fair
 - c. Good
 - d. Excellent
9. If yes, please rate the strength of your school's tier 3 reading instructional methods.
 - a. Weak
 - b. Fair
 - c. Good
 - d. Excellent
10. What type of instructional materials does your school use for tier 1 core reading instruction (select all that apply)?
 - a. Evidence-based published reading program
 - b. Published reading program
 - c. Combination of materials from multiple published programs
 - d. Teacher-created materials
 - e. I don't know

11. If your school uses any published reading instruction materials, what is the name of the program(s)?
- [type answers here]

12. Who participated in the selection of the current reading instruction materials (select all that apply)?
- A district-wide committee made the selection
 - A school-level committee made the selection
 - Curriculum coordinator
 - Reading specialist(s)
 - Classroom teacher(s)
 - Special education teacher(s)
 - School psychologist
 - Parent(s)
 - Other(s):

13. Has your district adopted different published reading instruction programs and/or materials in the past three years (since 2020) in K-5 grades?
- Yes
 - No

If you answered "Yes" to the above question, please indicate what changes were made in the following grade bands: (select all that apply)

14-A. Grades K-2:

- No changes made in these grades.
- Supplemented our existing program/ materials
- Adopted an updated edition of our existing program/ materials
- Selected a different published program/ materials

14-B. Grades 3-5:

- No changes made in these grades.
- Supplemented our existing program/ materials
- Adopted an updated edition of our existing program/ materials
- Selected a different published program/ materials

15. What were the steps used to select the current reading instruction materials (select all that apply)?
- A review protocol was used that evaluated the research evidence regarding student learning outcomes
 - Those making the decision read research articles about the programs
 - Program publishers made presentations on-site in the school or district
 - Program publishers made presentations via webinar
 - Sample materials were implemented by classroom teachers
 - Other:

16. What was the most important factor leading to the selection of current reading instruction materials?
- Research evidence
 - Prior experience with the publisher
 - Teacher preference
 - Similarity with prior reading instruction materials
 - Other:

17. Does your school currently utilize MTSS methods to support students who are struggling with math?
- Yes
 - No
18. If yes, please rate the strength of your school's tier 1 math instructional methods.
- Weak
 - Fair
 - Good
 - Excellent
19. If yes, please rate the strength of your school's tier 2 math instructional methods.
- Weak
 - Fair
 - Good
 - Excellent
20. If yes, please rate the strength of your school's tier 3 math instructional methods.
- Weak
 - Fair
 - Good
 - Excellent
21. What type of instructional materials does your school use for tier 1 core math instruction (select all that apply)?
- Evidence-based published mathematics program
 - Published mathematics program
 - Combination of materials from multiple published programs
 - Teacher-created materials
 - I don't know
22. If your school uses any published math instruction materials, what is the name of the program(s)?
- [type answers here]
23. Who participated in the selection of the current math instruction materials (select all that apply)?
- A district-wide committee made the selection
 - A school-level committee made the selection
 - Curriculum coordinator
 - Math specialist(s)
 - Classroom teacher(s)
 - Special education teacher(s)
 - School psychologist
 - Parent(s)
 - Other(s):
24. Has your district adopted different published math instruction programs and/or materials in the past three years (since 2020) in K-5 grades?
- Yes
 - No

If you answered "Yes" to the above question, please indicate what changes were made in the following grade bands: (select all that apply)

25-A. Grades K-2:

- No changes made in these grades.
- Supplemented our existing program/ materials
- Adopted an updated edition of our existing program/ materials
- Selected a different published program/ materials

25-B. Grades 3-5:

- g. No changes made in these grades.
- h. Supplemented our existing program/ materials
- i. Adopted an updated edition of our existing program/ materials
- j. Selected a different published program/ materials

26. What were the steps used to select the current math instruction materials (select all that apply)?

- a. A review protocol was used that evaluated the research evidence regarding student learning outcomes
- b. Those making the decision read research articles about the programs
- c. Program publishers made presentations on-site in the school or district.
- d. Program publishers made presentations via webinar.
- e. Sample materials were implemented by classroom teachers
- f. Other:

27. What was the most important factor leading to the selection of current math instruction materials?

- a. Research evidence
- b. Prior experience with the publisher
- c. Teacher preference
- d. Similarity with prior math instruction materials
- e. Other:

28. What other information would you like to share about your current tier 1 core math and reading instruction materials?

- a. [type answers here]

29. What other information would you like share about your school's MTSS practices?

- a. [type answers here]

Appendix C. Demographic Information for Teacher and Administrator Surveys

Table 1. Grades Taught by Teachers

Grade	%	n=
PK	2%	5
K	17%	46
1	25%	67
2	21%	55
3	21%	56
4	20%	54
5	21%	56
Any or all grades 6-8	3%	7
Any or all grades 9-12	0%	0
Total		264

Table 2. Teachers by Reported School Locale

	%	n=
City or Urban	14%	30
Suburban	19%	42
Small town	50%	111
Remote rural	18%	39
Total	100%	222

Table 3. Teachers by Reported Geographic Area

Area	Teacher Survey		Administrator Survey		State	
Central	16%	36	15%	16	20%	1785
Northern	20%	44	28%	29	26%	2325
Southern	33%	74	39%	41	34%	2959
Western	31%	68	18%	19	20%	1746
Total	100%	222	100%	105	100%	8815

Table 4. Teachers by District Size

District Size	Teacher Survey		Administrator Survey		State	
less than 500 students	17%	38	31%	33	12%	1881
501-999 students	19%	42	16%	17	11%	1704
1000 or more students	63%	139	52%	55	76%	11512
Total	100%	219	100%	105	100%	15097

Table 5. Districts in Maine by Size

	%	n=
less than 500 students	55%	108
501-999 students	13%	26
1000 or more students	32%	63
Total	100%	197

This includes only districts that have teachers listed.