

Supporting Students Early: Findings From Initial Analysis of Student Progress in Early Literacy in Massachusetts

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Background

Like many states, Massachusetts has intensified efforts in recent years to improve literacy outcomes, particularly in the early grades. Initiatives have focused on providing guidance and resources for implementing changes in curriculum, instruction, and additional screening and support for struggling students. In September 2022, the Board of Elementary and Secondary Education in Massachusetts amended state law to require that all elementary schools assess each student's reading abilities and early literacy skills a minimum of twice per year from kindergarten through at least of grade 3. The goal of such screening is to identify students who may be at risk of reading difficulty and proactively intervene to ensure that all students have the foundational skills needed to be successful readers. Beginning with the 2020/21 school year, the Massachusetts Department of Elementary and Secondary Education (DESE) began collecting literacy screening assessment data from schools and districts participating in certain state grants. The goal of collecting the data is to analyze patterns of performance to inform improvement efforts—for example, knowing when students struggle or how they progress over time may help schools, districts, and the state target resources and supports.

Grantee schools and districts that provided literacy screener data to DESE selected their screening assessments from a list of state-approved, commercially available literacy screener products. Each assessment is typically administered to students at least three times per year (most commonly in the fall/beginning of year, [BOY] winter/middle of year [MOY], and spring/end of year [EOY]). Using the benchmarks provided within each assessment to identify students at risk of reading

Available Data

- *More than 35,000 students across 2020/21 and 2021/22 school years*
- *About 10 percent of the state's K-3 student population*
- *43 districts and 159 schools*
- *Scores from multiple literacy screening assessments: Acadience Reading, DIBELS 8th Edition, mClass, FastBridge aReading, FastBridge CBMreading, FastBridge earlyReading, i-Ready Diagnostic, ISIP ER, Lexia Rapid, MAP Growth, MAP Reading Fluency, Star Early Literacy, Star Early Literacy Spanish, Star Reading*

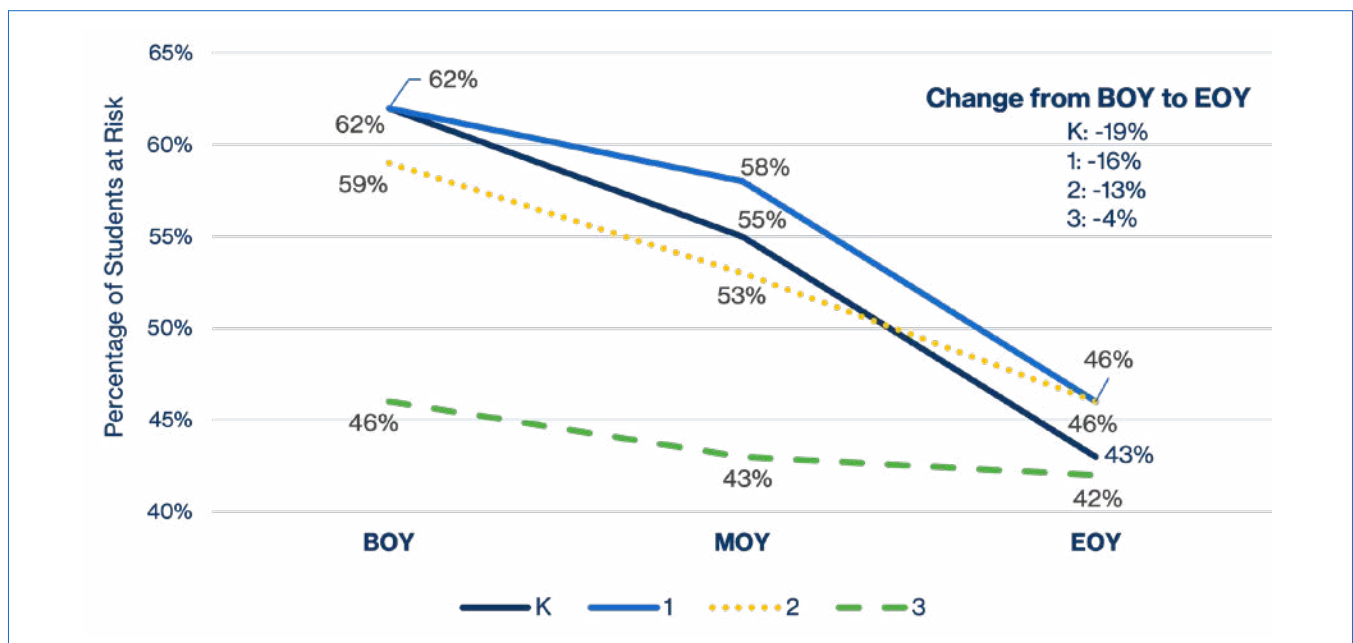
difficulty, this issue brief provides a first look at student progress within and across grade levels based on available data.¹

Findings

Across grades K–3, more students were classified as at risk (below screening assessment benchmarks) at the beginning of the year (BOY) than at the end of the year (EOY), but there were greater decreases in the percentages of students at risk over time at earlier grade levels.

Across both 2020/21 and 2021/22, the percentage of scores below literacy benchmarks from BOY to EOY decreased by 19 percentage points for kindergarten students, 16 percentage points for students in grade 1, 13 percentage points for students in grade 2, and 4 percentage points for students in grade 3. By EOY, between 42 and 46 percent of student scores were below benchmark for the grade level, with greater percentages at grades 1 and 2 (see Figure 1).

Figure 1. Fewer Students Were At Risk at EOY Than at BOY Across Grade Levels, but There Was a Greater Decrease in the Percentage of Students At Risk Over Time in Grades K–2 Than in Grade 3



Source. 2020/21 and 2021/22 district-provided screening assessment data

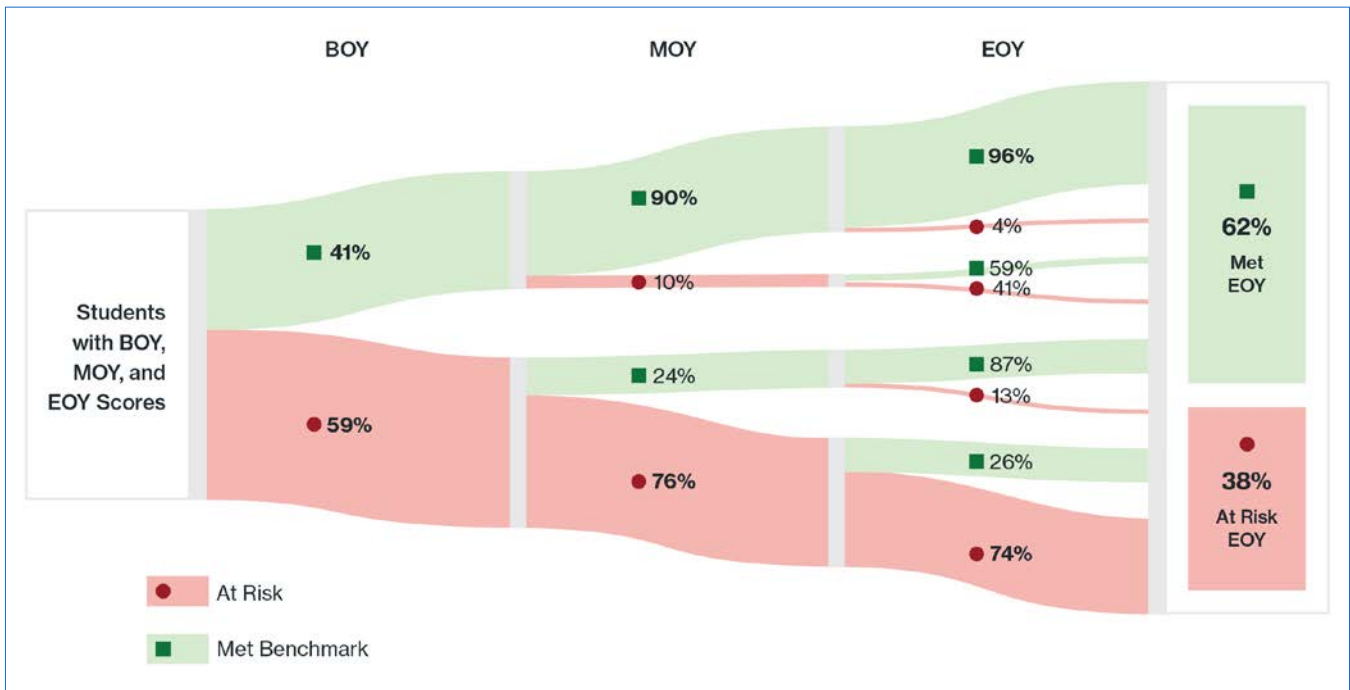
Note. Includes students with one, two, and three scores (i.e., scores for each time period do not necessarily represent the same students). Some students may appear multiple times per time period if they were administered multiple screening assessments. Among students with scores from BOY, MOY, and EOY, the decrease in the percentage of students at risk from BOY to EOY follows the same pattern, with greater changes for lower grades but large changes for all grades. Changes by grade from BOY to MOY to EOY for students with all three scores are as follows: grade K: 63% to 51% to 37% (–26%), grade 1: 63% to 53% to 40% (–23%), grade 2: 57% to 48% to 39% (–18%), grade 3: 51% to 41% to 37% (–14%).

¹ Most of the approved screening assessments provide several performance benchmarks or risk levels (e.g., “some risk” and “high risk” or “well below benchmark” and “below benchmark”). For the analyses in this brief, we use the generic terms “at risk” or “did not meet benchmark” to differentiate students with any level of risk of reading difficulty from those classified as having little or no risk. See *A First Look at Early Literacy Performance in Massachusetts: Results of Initial Analysis Based on State Grantee Literacy Screening Assessments* for details.

Most students who were classified as at risk in one time period were also at risk in later time periods, but students who got on track midyear tended to stay on track.

Figure 1 shows all scores for students from both school years—it does not track individual student progress across time periods. Among students with scores in each of the three time periods, 56 percent of students who were at risk at BOY were still at risk at MOY and EOY. However, about 24 percent of students who were at risk at BOY met benchmark at MOY, and among those students, 87 percent met benchmark at EOY (see Figure 2, which shows students from grades K–3).

Figure 2. Percentage of Students Meeting or Not Meeting Literacy Benchmarks From Beginning to End of Year (Grades K–3)



Source. 2020/21 and 2021/22 district-provided screening assessment data

Note. Some students may appear multiple times per time period if they were administered multiple screening assessments. Only students with scores in each time period (54% of all students) are included.

The percentage of students who stay at risk across time periods increases across grade levels.

Among students with at least two scores, more students in grade 3 stay at risk across time periods than students in grades K–2, more students in grade 2 stay at risk than students in grades K–1, and more students in grade 1 stay at risk than students in kindergarten (Table 1). For example, 51 percent of kindergarten students who were at risk at BOY were also at risk at EOY, compared to 67 percent for grade 3.

Table 1. Percentage of Students At Risk in Later Time Periods if At Risk in Earlier Time Period

Grade Level	At Risk EOY if At Risk BOY	At Risk EOY if At Risk MOY
K	51%	68%
1	58%	73%
2	67%	80%
3	67%	82%

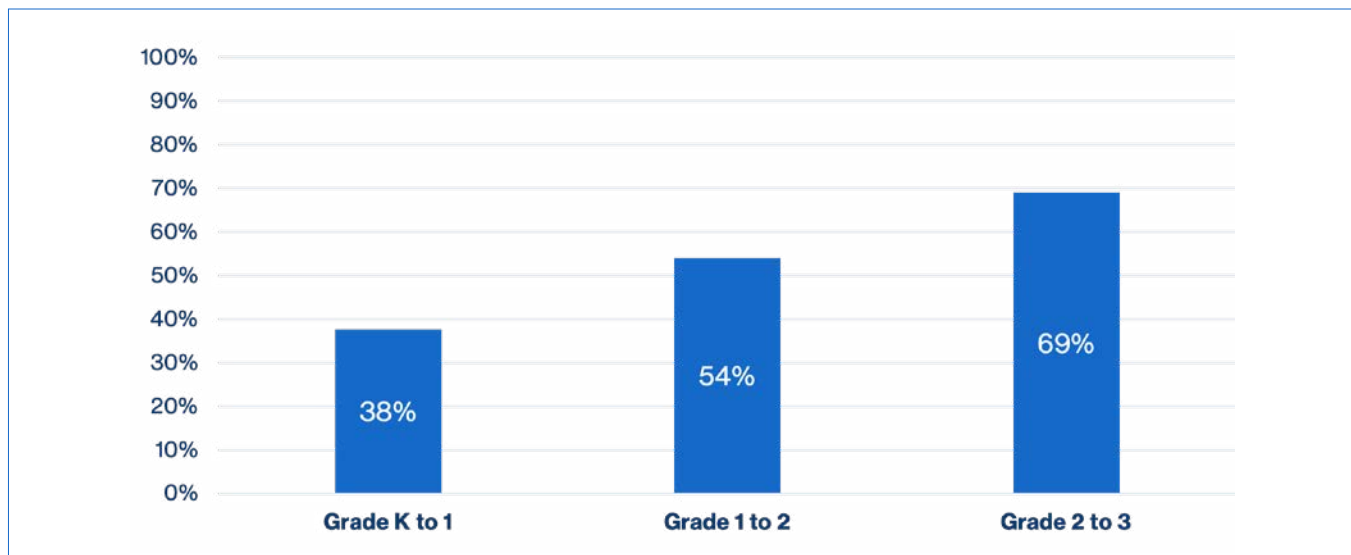
Source. 2020/21 and 2021/22 district-provided screening assessment data

Note. Students may appear multiple times per time period if they were administered multiple screener assessments. Students with only one score during a school year are not included in the table.

Within grades K–3, more students at higher grade levels stayed at risk across grade levels and years than did students at lower grade levels.

Among students with scores from both 2020/21 and 2021/22, 855 students had BOY scores from 2020/21 and EOY scores from 2021/22 from the same screening assessment, representing about 2 percent of the total number of 38,500 students in the sample. Of the students with scores in both time periods, about 37 percent were identified as at risk across grade levels at BOY. Examining their performance at the end of the next grade level shows that more students in earlier grades got on track across years than did students in later grades (Figure 3). For example, 38 percent of students who were identified as at risk at the beginning of their kindergarten year were still at risk at the end of grade 1, compared to 54 percent of students who were identified as at risk at the start of grade 1 and were still at risk at the end of grade 2 and 69 percent of students who were identified as at risk at the start of grade 2 and were still at risk at the end of grade 3.

Figure 3. Percentage of Students At Risk at the Beginning of One Grade Level and at the End of the Next Grade Level



Source. 2020/21 and 2021/22 district-provided screening assessment data

Note. Screening assessments with fewer than 10 students in both time periods were excluded from analysis.

Implications for Policy and Practice

Although initial data are somewhat limited, analysis shows that many students are not meeting literacy benchmarks in grades K–3. At the same time, data show that schools can change the trajectory of student literacy performance, and getting students on track within the school year most often keeps them on track—especially in earlier grades. These findings suggest some potential implications for policy and practice to allow more students to meet benchmarks and stay on track:

- **Interventions and supports for students in later grades may need to be more intensive than those at earlier grades.** These data suggest that more students at risk in grade 3 stay at risk over the course of the school year. Strategies and supports to get these students on track may need to be more intensive compared to those used for students in kindergarten.
- **Getting students on track by midyear can help keep them on track.** Focusing on support early in the year for students identified as at risk at BOY can help students in the longer term.

Data for additional cohorts of students in future years will provide further insight into student progress over time, particularly across grade levels.

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