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PROVIDENCE PUBLIC SCHOOL REFORMS

Interim Report on Student Achievement

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Executive Summary:

In 2019, Rhode Island intervened in Providence Public School District (PPSD) after concerns were raised over the school district's academic performance. Using publicly available data, we summarize the changes in mean math and reading achievement in Providence Public Schools in comparison to similar districts in three states: Massachusetts, Connecticut and Rhode Island. Because students in Massachusetts and Rhode Island take the same assessments, we compare mean scores for districts in those states directly. In order to include Connecticut districts, we added data from the Stanford Education Data Archive, which uses national data to put state tests in comparable units.

The COVID-19 pandemic disrupted schooling in all three states four months after the state's involvement with PPCD. In this report, we ask the following three questions:

- 1) How did PPCD's learning loss during the pandemic (as measured from 2019 to 2022) compare to similar districts?
- 2) How did PPCD's post-pandemic learning recovery (as measured from 2022 to 2023) compare to similar districts?
- 3) When considering the whole period, 2019 to 2023, how does the change in achievement in PPCD compare to that in similar districts?

Between 2019 and 2022, PPCD saw less learning loss in reading compared to the comparison groups in all three states: mean reading achievement in comparison districts in RI, MA, and CT declined by .05, .04, and .16 standard deviations more than in PPCD, respectively. In math, PPCD experienced less learning loss compared to MA and CT comparison districts (.02 standard deviations and .015 standard deviations, respectively), and the same amount of learning loss as the RI comparison district average.

In the first year of post-pandemic recovery (from 2022-2023), reading achievement was larger in PPCD than in the RI, MA, and CT comparison districts by .011, .05, and .05 standard deviations, respectively. In math, PPCD experienced greater gains in achievement compared to the RI and MA comparison districts (.05 and .04 standard deviations, respectively) and equivalent gains to the CT comparison districts.

Furthermore, while post-pandemic performance is still below pre-pandemic levels for PPCD and all the comparison districts, PPCD's current performance levels for both reading and math are closer to 2019 levels than in each of the three comparison groups. In reading, the losses in Providence were .06, .09 and .21 standard deviations smaller than losses in the RI, MA and CT comparisons, respectively. In math, the losses in Providence were .05, .06, and .15 standard deviations less than the RI, MA and CT comparisons, respectively.

To put these changes in perspective, research shows that six weeks of summer school improves academic performance by .10 standard deviations.¹ Additionally, having an experienced teacher rather than a novice teacher increases student performance by approximately .08 to .10 standard deviations.²

Although the results suggest Providence is moving in the right direction, the evidence prevents us from drawing conclusions about the efficacy of PPSD's reform efforts for two key reasons. First, we only have two years of reliable student assessments post-pandemic (and a single year change in annual scores) by which to judge. A fuller appraisal will be possible when the 2024 and 2025 assessments become available.

Second, there appears to have been a shift in enrollment from PPSD to charter schools, independent schools and parochial schools since 2019. Between 2019 and 2023, enrollment in PPSD declined by roughly 2900 students. Meanwhile, there was a rise in enrollment in the Providence area charter schools, Catholic schools and independent schools of a similar magnitude (3000 students). Before a final assessment is made with the 2024 and 2025 data, a deeper analysis should be done with longitudinal student-level data, accounting for possible changes in the make-up of the Providence school population.

¹ Lynch, K., An, L., & Mancenido, Z. (2023). The Impact of Summer Programs on Student Mathematics Achievement: A Meta-Analysis. *Review of Educational Research*, 93(2), 275-315.
<https://doi.org/10.3102/00346543221105543>

² Taylor, E. S. (2023). *Chapter 2—Teacher evaluation and training* (E. A. Hanushek, S. Machin, & L. Woessmann, Eds.; Vol. 7, pp. 61–141). Elsevier. <https://doi.org/10.1016/bs.hesedu.2023.03.002>

1. Methodology

In this report, we compare the change in student achievement since 2019 in the Providence Public Schools relative to comparison districts in Rhode Island, Massachusetts and Connecticut. Because we did not have access to confidential student-level data, we relied on publicly reported district mean achievement.

Data sources: We use two primary sources of data to make the comparisons. Because the Rhode Island state assessment (RICAS) uses the same test items and scoring as the Massachusetts assessment (MCAS), we combine RICAS and MCAS scores to compare achievement trends in Providence to similar districts in Rhode Island and Massachusetts in Sections 2.2, 2.4, and the appendix. To add comparison districts in Connecticut, in Section 2.3 and the appendix we use data from the Stanford Education Data Archive (SEDA). SEDA uses the mean and variance in state National Assessment of Educational Progress (NAEP) scores, which is a national assessment administered biennially in all 50 states and Washington D.C. in 4th and 8th grade math and English, to put each the results for districts in each state in comparable units. The SEDA scores are reported in student-level standard deviation units.

Time periods: Although the state intervention in Providence Public Schools occurred in 2019, we only have two years of outcomes post take-over: 2022 and 2023. The primary reason is that all three states cancelled testing in the Spring of 2020, due to the COVID-19 pandemic. Although testing resumed in the Spring of 2021, many students in Providence (roughly 14 percent) and in the comparison districts did not participate in testing. Given uncertainty about which students sat out, we do not include the 2021 scores in our analysis. Instead, we compare changes over three time periods: 2019-2022, 2022-23 and the cumulative change from 2019-23. In Tables 2-5 and the appendix, 2018 demographic data from the corresponding data source (RICAS/MCAS or SEDA) is included to provide a snapshot of district demographics before any potential enrollment shifts may have occurred.

Choosing Comparison Districts: To identify comparison districts, we initially created an index of difference relative to Providence based on three district traits: the share of students who were low income, the share of students who were Black or Hispanic, and the share of students who were multilingual learners (MLL). No two districts are identical on every dimension. Thus, choosing comparisons requires prioritizing the magnitude of difference on each dimension. (For instance, when one potential comparison differed by 5 percentage points on racial composition, but only 3 percentage points in the share of students low-income, while another was 3 percentage points different on racial composition, but differed by 5 percentage points in the percent of students low income, we had to determine which district was a better match.) To determine how much weight to attribute to each district trait, we used data from the Stanford Education Data Archive to estimate the relationship between each characteristic (holding the others constant) and

mean math achievement in years 2016-2019 (by running a regression.) These traits included enrollment in grades 3-8, proportion of students qualifying for free or reduced lunch, and proportions of students identifying as Black, Hispanic, Asian, Native American, White, or another race in each district, respectively. We then created an index, multiplying the difference between Providence and the potential comparisons on each trait by the trait's predictive weight. We selected the 5 comparison districts in each of the three states which were the closest matches to Providence.

Table 1. Comparison Districts by State

RI comparison districts	MA comparison districts	CT comparison districts
Woonsocket	Brockton	Hartford
Pawtucket	Chelsea	New Britain
Newport	Everett	Windham
Johnston	Holyoke	Bridgeport
W. Warwick	Springfield	Waterbury

2. Findings

2.1. Overview of Findings

- In 2023, all four groups of districts—Providence and the comparison districts in the three states—remain behind their mean achievement in 2019, having lost ground during the pandemic.
- In both math and ELA, we find that the decline in math and ELA achievement between 2019 and 2023 was smaller in Providence than the comparison districts in all three states: Rhode Island, Connecticut and Massachusetts.
- During the pandemic, between 2019 and 2022, the losses in mean math achievement in Providence were smaller than the losses in the comparison districts in Massachusetts and Connecticut and equivalent to the losses of the Rhode Island comparison districts. During the same period, Providence's losses in ELA were smaller than the losses experienced across comparison districts in RI, MA, and CT. It is not possible to say how much of the difference in pandemic losses was due to reform efforts or other factors, such as differences in school closure policy during the pandemic.
- The post-pandemic recovery in mean math achievement (between Spring 2022 and Spring 2023) was larger in Providence than in the Rhode Island or Massachusetts comparisons, by about .04 standard deviations. (The 2022 to 2023 improvement was the same in the Connecticut comparisons as in Providence.) The post-pandemic recovery in reading in Providence between 2022 and 2023 was .11 standard deviations larger than the Rhode Island comparisons and .05 standard deviations larger than the Massachusetts and Connecticut comparisons.

- When comparing the changes in scores between 2019 and 2023, Providence saw smaller losses than the RI Comparison districts and the MA comparison districts in math and ELA among Black students (Table 6), Hispanic students (Table 7), students with disabilities (Table 8), and low-income students (Table 10).
- During the pandemic (2019-2022), Providence saw less ELA learning loss among MLL students compared to Massachusetts but more than Rhode Island comparison districts. In 2022-2023, Providence was the only district to improve in ELA among MLL students. Overall, from 2019-2023, RI comparison districts had the smallest learning loss in ELA among MLL students (Table 9).

Although the results suggest Providence is moving in the right direction, especially in ELA, it is too early to draw conclusions about the efficacy of the Providence reform efforts. The pandemic disrupted schooling in the Spring of 2020, just months after the state take-over. We only have two years of reliable student assessments post-pandemic (and a single year change in annual scores) by which to judge. A fuller appraisal will be possible when the 2024 and 2025 assessments become available.

Another factor preventing us from drawing strong conclusions is the decline in enrollment in Providence schools. As illustrated in Figure 1, total enrollment in Providence Public Schools declined about 2,941 students between 2019 and 2023, a 12 percent decline. The decline seems to reflect a shift in enrollment to the Catholic, Independent and Charter school sectors. The total increase in enrollment in these other sectors (3,065) was roughly equivalent to the decline in Providence. As reported in Figure 2, in percentage terms, the PPSD decline was larger for low-income (22%) and for Black students (23%). If the departing students were achieving above the Providence Public School average, the differences in aggregate means which we report would be understating the progress that has been made. On the other hand, if the departing students would have scored below the Providence mean, we could be overstating the progress. Before a final assessment is made with the 2024 and 2025 scores, a deeper analysis should be done with longitudinal student-level data, accounting for the prior achievement of departing students.

Figure 1 The Decline in Enrollment in Providence Public Schools was Roughly Equivalent to the Rise in Enrollment in Other Sectors

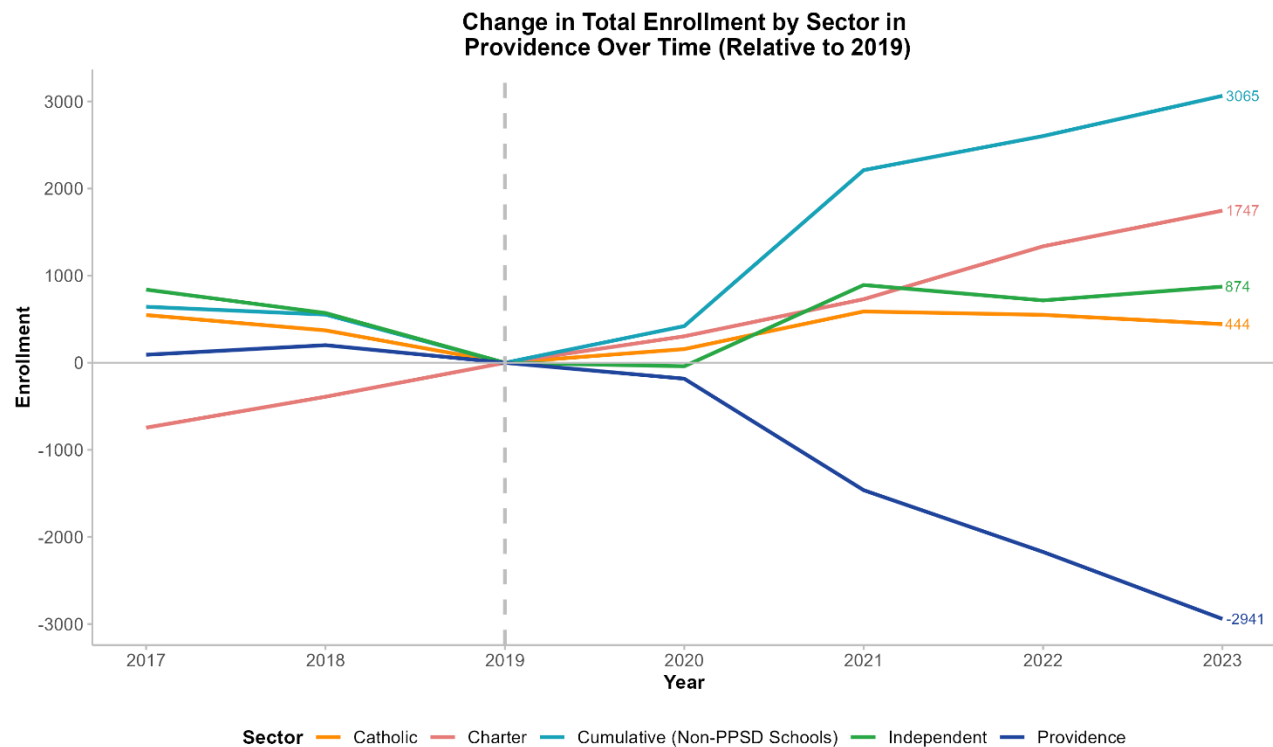
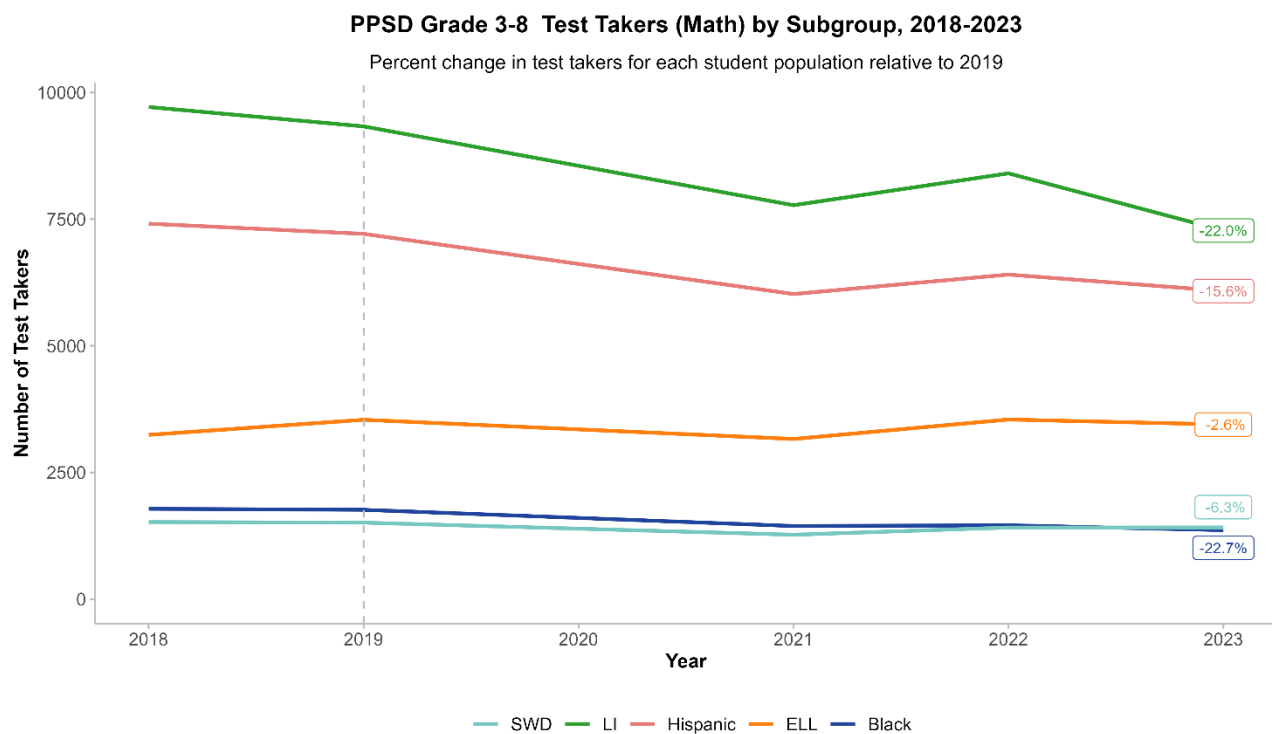


Figure 2 Decline was Larger for Low Income Students



2.2 Comparing Changes in RICAS/MCAS Scores in Providence vs. RI and MA Comparison Districts

Table 2. Mean Math Scores in Grades 3-8, 2019-2023

LEA	2018 Demographics				Scale Scores			Change In Scores		
	Tested Students	% ED	% Black/Hispanic	% MLL	2019	2022	2023	2019-22	2022-23	2019-23
Providence	9,879	87	82	28	475.0	472.0	474.0	-3.0	2.0	-1.0
RI Comparison Districts	2,042	60	42	9	480.9	477.3	477.6	-3.6	0.3	-3.3
MA Comparison Districts	5,029	67	80	21	485.5	478.7	479.5	-6.8	0.7	-6.1

Notes: RI comparison group includes Woonsocket, Pawtucket, Newport, Johnston, and West Warwick. MA comparison group includes Chelsea, Brockton, Holyoke, Springfield, and Everett. Comparison groups were chosen by regressing SEDA math scores on demographic variables in the pre-treatment period (2016-2019) and selecting districts with the closest predicted scores to Providence. Scale scores for 2021, 2022, and 2023 are averages of comparison districts weighted by total number of test takers in each district. % ED (Economically Disadvantaged) % Black, and % Hispanic are also weighted by 2018 3-8 total test-takers per district.

- During the pandemic (2019-2022), scores in all three groups declined. However, the declines were smaller for Providence and the RI comparison districts than in the MA comparisons (3 and 3.6 points as opposed to 6.8 points in the MA comparison districts).
- Coming out of the pandemic (2022-2023), scores in Providence improved faster than the RI and MA comparisons (1.7 points faster than RI comparisons and 1.3 points faster than MA comparisons.)
- Although all three groups remain behind their 2019 achievement, Providence has lost the least. Between 2019 and 2023, the losses in Providence were 2.3 points less than RI Comparisons and 5.1 points less than the MA comparisons.

Table 3. Mean ELA Scores in Grades 3-8, 2019-2023

LEA	2018 Demographics				Scale Scores			Change In Scores		
	Tested Students	% ED	% Black/ Hispanic	% MLL	2019	2022	2023	2019-22	2022-23	2019-23
Providence	9,643	87	82	28	479.0	474.0	474.0	-5.0	0.0	-5.0
RI Comparison Districts	2,028	59	42	9	484.4	479.3	477.5	-5.0	-1.8	-6.8
MA Comparison Districts	5,027	67	80	21	488.4	481.1	480.1	-7.3	-1.0	-8.3

Notes: RI comparison group includes Woonsocket, Pawtucket, Newport, Johnston, and West Warwick. MA comparison group includes Chelsea, Brockton, Holyoke, Springfield, and Everett. Comparison groups were chosen by regressing SEDA math scores on demographic variables in the pre-treatment period (2016-2019) and selecting districts with the closest predicted scores to Providence. Scale scores for 2021, 2022, and 2023 are averages of comparison districts weighted by total number of test takers in each district. % ED (Economically Disadvantaged) % Black, and % Hispanic are also weighted by 2018 3-8 total test-takers per district.

- During the pandemic (2019-2022), ELA scores in all three groups declined. However, the declines were smaller for Providence and the RI comparison districts, each 5 points, compared to the 7.3-point decline in MA comparison districts.
- Coming out of the pandemic (2022-2023), ELA achievement in Providence held steady, while the scores of RI comparison districts fell by 1.8 points and the scores of MA comparisons fell by 1 point.
- Although all three groups remain behind their 2019 achievement, Providence has lost the least ground. Between 2019 and 2023, the losses in Providence were 1.8 points less than in RI Comparisons and 3.3 points less than in the MA comparisons.

Figure 3: Achievement Trends on MCAS/RICAS Math Tests for 2019-23
Achievement Trends on MCAS/RICAS Math Tests for 2019-23

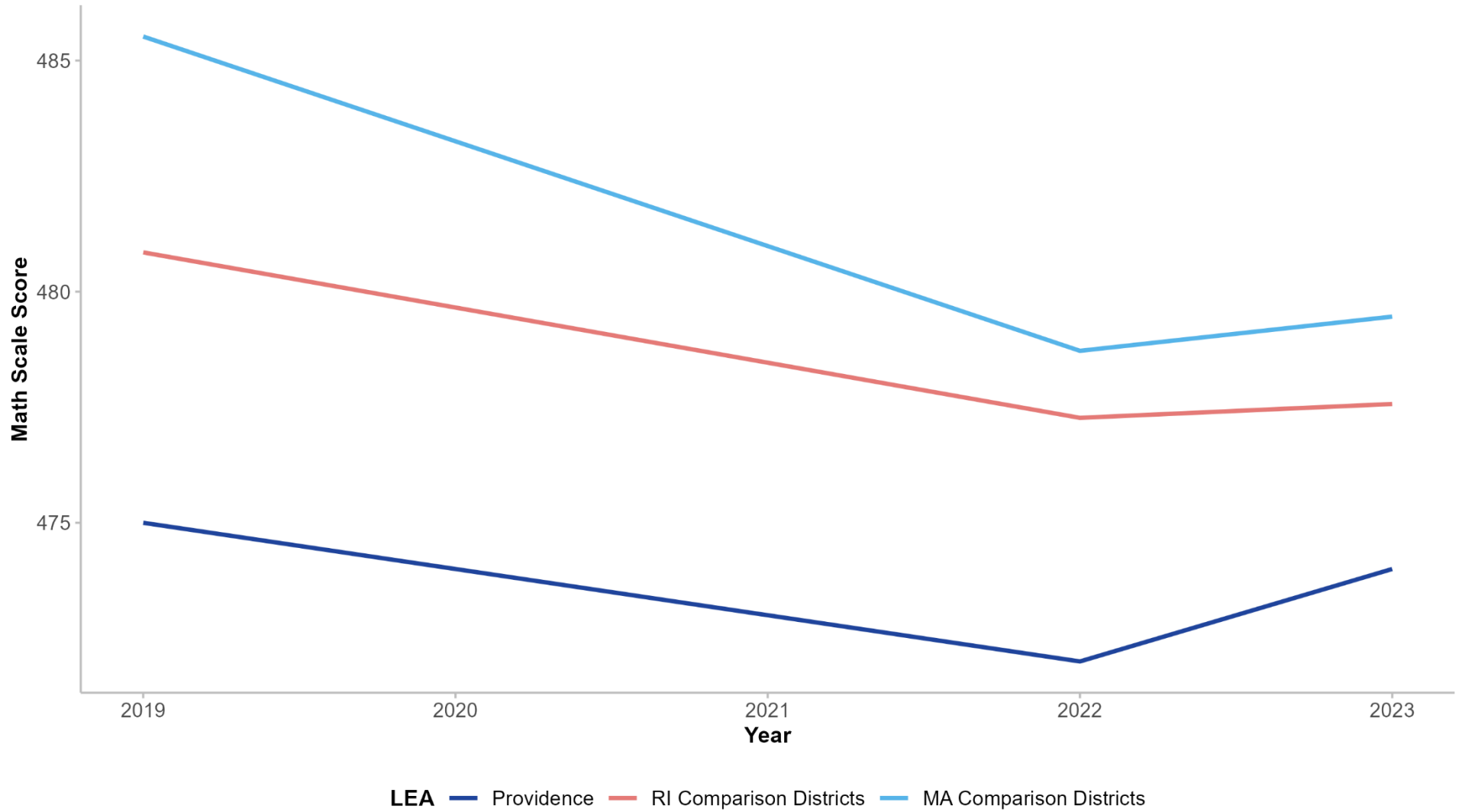
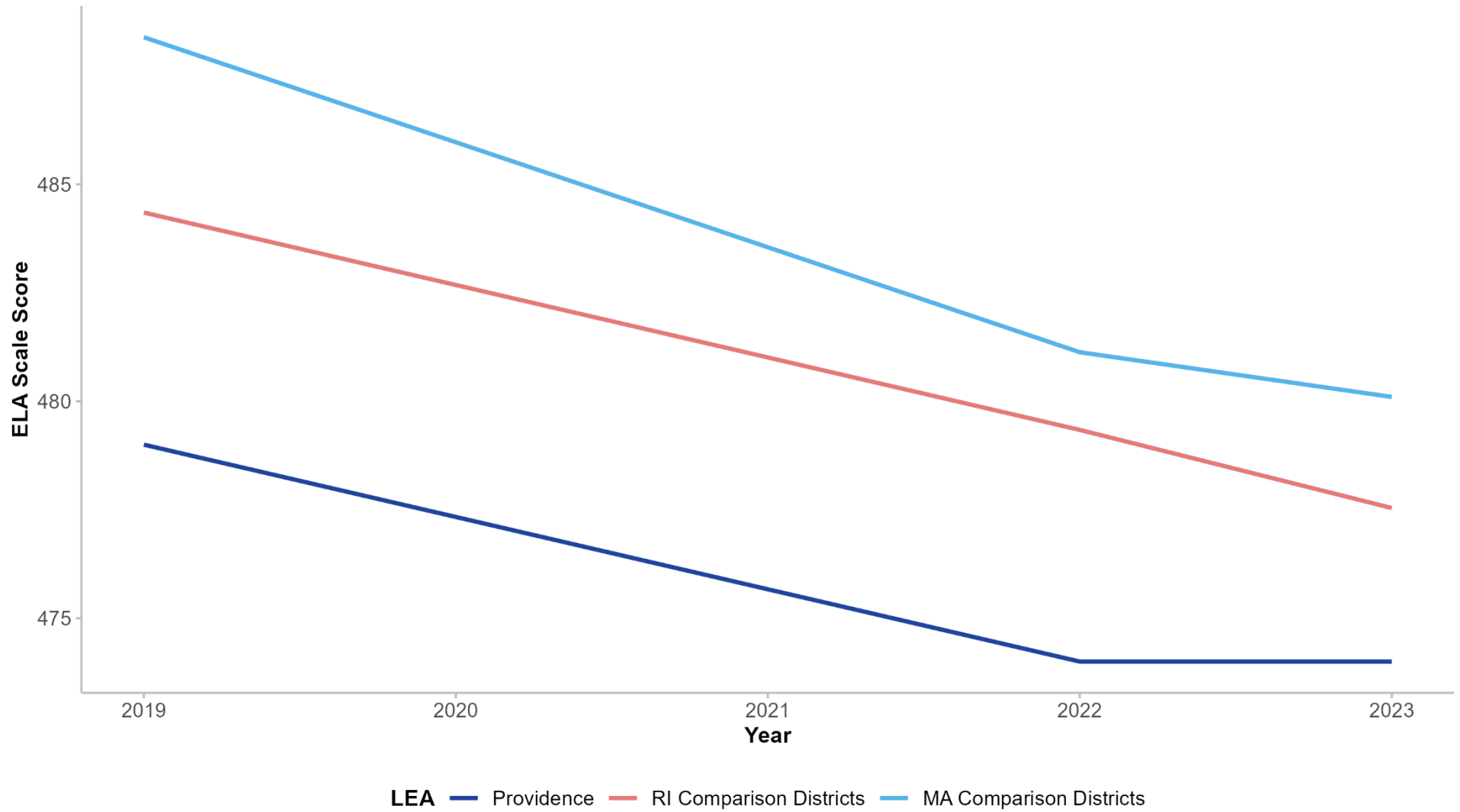


Figure 4: Achievement Trends on MCAS/RICAS ELA Tests for 2019-23

Achievement Trends on MCAS/RICAS ELA Tests for 2019-23



2.3 Comparing Changes in SEDA Scores in Providence vs. RI, MA, and CT Comparison Districts

Table 4. Mean Math Scores in Providence and Comparison Districts in RI, MA and CT, 2019-2023

LEA	2018 Demographics				Scores (Standard Deviations)			Change In Scores		
	Tested Students	% ED	% Black/Hispanic	% MLL	2019	2022	2023	2019-22	2022-23	2019-23
Providence	11,177	86	17	65	-0.66	-0.83	-0.79	-0.17	0.04	-0.13
RI Comparison Districts	10,883	62	16	26	-0.38	-0.55	-0.56	-0.17	-0.01	-0.18
MA Comparison Districts	23,677	82	27	53	-0.41	-0.6	-0.6	-0.19	0.0	-0.19
CT Comparison Districts	32,617	85	25	54	-0.68	-1.00	-0.96	-0.32	0.04	-0.28

Note: The test score data are from the Stanford Education Data Archive (SEDA) and reported in standard deviation units. RI and MA comparison are the same as in Table 2 and Table 3. CT comparison group includes Hartford, New Britain, Windham, Bridgeport, and Waterbury. Comparison groups were chosen by regressing SEDA math scores on demographic variables in the pre-treatment period (2016-2019) and choosing districts with the closest predicted scores to Providence. Scores for 2021, 2022, and 2023 are averages of comparison districts weighted by total number of test takers in each district. % ED (Economically Disadvantaged), % Black, and % Hispanic are also weighted by 2018 3-8 total enrollment per district. % of time spent in remote learning in 2021 is an unweighted average because enrollment data for that year was not available across all comparison groups.

- During the pandemic (2019-2022), math scores in all four groups declined. However, the declines were smaller for Providence (.17 standard deviations) and the RI comparison districts (.17 standard deviations) than in the MA (.19 standard deviations), and CT (.32 standard deviations).
- Coming out of the pandemic (2022-2023), Providence improved by .04 SD (the same as the CT comparisons), which was more than RI and MA comparisons.
- Although all four groups remain behind their 2019 achievement as of 2023, Providence has lost the least ground. The losses in Providence were .05, .06, and .15 standard deviations less than the RI, MA and CT comparisons, respectively.

Table 5. Mean ELA standardized scores (SEDA) in Providence and comparison districts, 2019-2023

LEA	2018 Demographics				Scores (Standard Deviations)			Change In Scores		
	Tested Students	% ED	% Black/Hispanic	% MLL	2019	2022	2023	2019-22	2022-23	2019-23
Providence	9,100	86	17	65	-0.64	-0.70	-0.67	-0.06	0.03	-0.03
RI Comparison Districts	10,656	62	16	26	-0.38	-0.39	-0.47	-0.01	-0.08	-0.09
MA Comparison Districts	21,854	82	27	53	-0.34	-0.44	-0.46	-0.10	-0.02	-0.12
CT Comparison Districts	20,931	85	25	54	-0.54	-0.76	-0.78	-0.22	-0.02	-0.24

Note: The test score data are from the Stanford Education Data Archive (SEDA) and reported in standard deviation units. RI and MA comparison are the same as in Table 2 and Table 3. CT comparison group includes Hartford, New Britain, Windham, Bridgeport, and Waterbury. Comparison groups were chosen by regressing SEDA math scores on demographic variables in the pre-treatment period (2016-2019) and choosing districts with the closest predicted scores to Providence. Scores for 2021, 2022, and 2023 are averages of comparison districts weighted by total number of test takers in each district. % ED (Economically Disadvantaged), % Black, and % Hispanic are also weighted by 2018 3-8 total enrollment per district. % of time spent in remote learning in 2021 is an unweighted average because enrollment data for that year was not available across all comparison groups.

- During the pandemic (2019-2022), ELA/English language arts scores in all four groups declined. However, the declines were smaller for Providence (.06) and the RI comparison districts (.01) than in the MA (.10 SD), CT (.22 SD).
- Coming out of the pandemic (2022-2023), Providence improved by .03 SD, while RI, MA, and CT comparison districts continued to decline.
- Although all four groups remain behind their 2019 achievement as of 2023, Providence has lost the least ground. Between 2019 and 2023, the losses in Providence were .06, .09 and .21 standard deviations smaller than the RI, MA and CT comparisons, respectively.

Figure 5: Achievement Trends on SEDA Math Scores for 2019-23

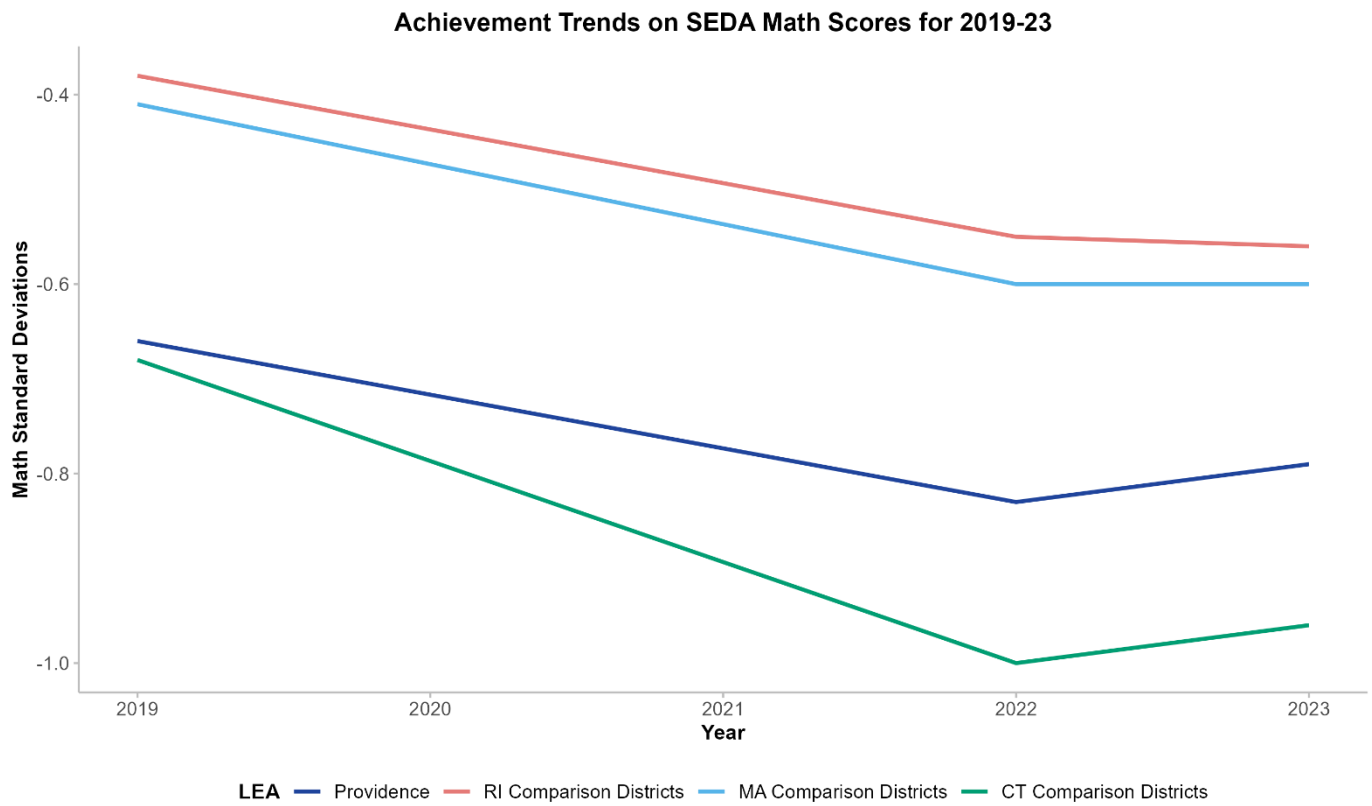
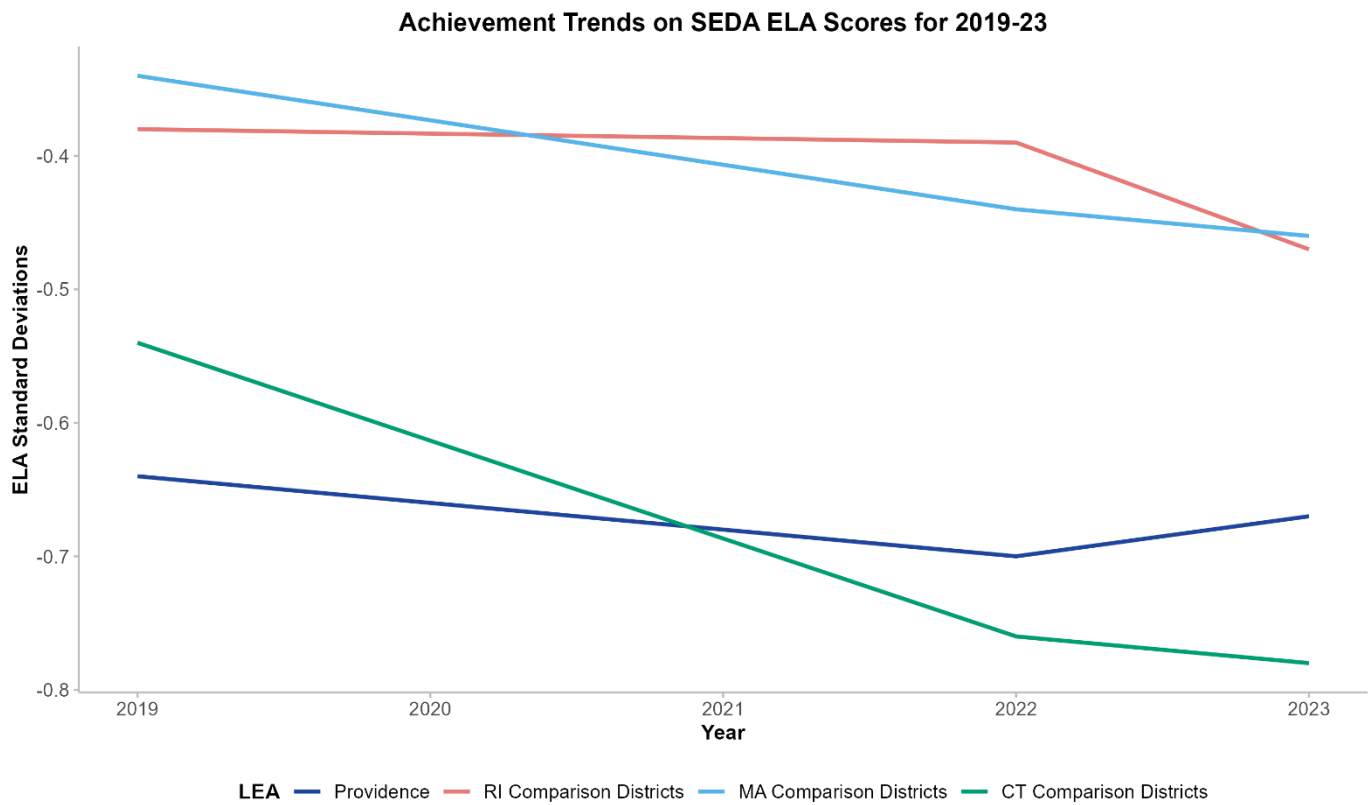


Figure 6: Achievement Trends on SEDA ELA Scores for 2019-2023



2.4 Comparing Changes in RICAS/MCAS Scores in Providence vs. RI and MA Comparison Districts for Student Subgroups

Table 6. Mean Math & ELA Scores in Grades 3-8 in Providence and Comparison Districts in RI & MA, 2019-2023: Black student subgroup

LEA	Tested Students	Scale Score			Change In Scores		
		2019	2022	2023	2019-22	2022-23	2019-23
Math							
Providence	6,520	473.8	471.5	473.1	-2.3	1.6	-0.7
RI Comparison Districts	608	477.6	474.8	474.5	-2.7	-0.4	-3.1
MA Comparison Districts	2,843	484.0	477.3	479.0	-6.7	1.7	-5.0
ELA							
Providence	1,465	478.5	474.6	474.8	-3.8	0.1	-3.7
RI Comparison Districts	417	480.5	478.3	474.7	-2.2	-3.6	-5.8
MA Comparison Districts	1,174	487.8	481.4	480.9	-6.4	-0.5	-6.9

Note: RI comparison group includes Woonsocket, Pawtucket, Newport, Johnston, and West Warwick. MA comparison group includes Chelsea, Brockton, Holyoke, Springfield, and Everett. Comparison groups were chosen by regressing SEDA math scores on demographic variables in the pre-treatment period (2016-2019) and selecting districts with the closest predicted scores to Providence. Scale scores for 2021, 2022, and 2023 are averages of comparison districts weighted by total number of test takers in each district.

- During the pandemic (2019-2022), ELA/English language arts scores and math scores among Black students in Providence, RI comparison districts, and MA comparison districts all declined. In mathematics, the declines were smaller for Providence (-2.3 points) and the RI comparison districts (-2.7 points) than in the MA comparison districts (-6.7 points). In ELA, the declines were smallest in the RI comparison districts (-2.2 points) and Providence (-3.8 points), and largest in the Massachusetts comparison districts (-6.4 points).
- Coming out of the pandemic (2022-2023), Mathematics scores among Black students in Providence improved by 1.6 points, scores among Black students in the MA comparison districts improved by 1.7 points, while scores among Black students in RI comparison districts continued to decline. In ELA, scores among Black students in Providence improved by 0.1 point, while scores among Black students in both RI and MA comparison districts continued to decline.
- Although scores among Black students in all three groups remain behind their 2019 achievement as of 2023 in both mathematics and ELA, Providence has lost the least ground in both subjects. Between 2019 and 2023, the losses in mathematics among Black students in Providence were 2.4 and 4.3 points smaller than the losses among Black students in the RI and MA comparison districts, respectively. The losses in ELA among Black students in Providence were 2.1 and 3.2 points smaller than in the RI and MA comparison districts, respectively.

Table 7. Mean Math & ELA Scores in Grades 3-8 Among Students in Providence and Comparison Districts in RI & MA, 2019-2023: Hispanic Student Subgroup

LEA	Tested Students	Scale Score			Change In Scores		
		2019	2022	2023	2019-22	2022-23	2019-23
Math							
Providence	1,578	474.0	470.7	473.0	-3.3	2.3	-1.1
RI Comparison Districts	334	477.9	474.3	474.7	-3.6	0.4	-3.2
MA Comparison Districts	1,345	483.4	477.5	477.7	-5.9	0.2	-5.7
ELA							
Providence	1,591	477.6	472.1	472.7	-5.5	0.6	-4.9
RI Comparison Districts	341	481.8	476.4	474.4	-5.3	-2.0	-7.3
MA Comparison Districts	1,345	486.1	479.5	477.4	-6.5	-2.1	-8.7

Note: RI comparison group includes Woonsocket, Pawtucket, Newport, Johnston, and West Warwick. MA comparison group includes Chelsea, Brockton, Holyoke, Springfield, and Everett. Comparison groups were chosen by regressing SEDA math scores on demographic variables in the pre-treatment period (2016-2019) and selecting districts with the closest predicted scores to Providence. Scale scores for 2021, 2022, and 2023 are averages of comparison districts weighted by total number of test takers in each district.

- During the pandemic (2019-2022), ELA/English language arts scores and math scores among Hispanic students in Providence, RI comparison districts, and MA comparison districts all declined. In mathematics, the declines were smaller for Providence (-3.3 points) and the RI comparison districts (-3.6 points) than in the MA comparison districts (-5.9 points). In ELA, the declines were smallest in the RI comparison districts (-5.3 points) and Providence (-5.5 points), and largest in the Massachusetts comparison districts (-6.5 points).
- Coming out of the pandemic (2022-2023), Mathematics scores among Hispanic students in Providence improved by 2.3 points, scores among Hispanic students in the RI comparison districts improved by 0.4 points, and scores among Hispanic students in the MA comparison districts improved by 0.2 points. In ELA, scores among Hispanic students in Providence improved by 0.6 points, while scores among Hispanic students in both the RI and MA comparison districts continued to decline.
- Although scores among Hispanic students in all three groups remain behind their 2019 achievement as of 2023 in both mathematics and ELA, Providence has lost the least ground in both subjects. Between 2019 and 2023, the losses in mathematics among Hispanic students in Providence were 2.1 and 4.6 points smaller than the losses among Hispanic students in the RI and MA comparison districts, respectively. The losses in ELA among Hispanic students in Providence were 2.4 and 3.8 points smaller than in the RI and MA comparison districts, respectively.

Table 8. Mean Math & ELA Scores in Grades 3-8 Among Students with Disabilities in Providence and Comparison Districts in RI & MA, 2019-2023

LEA	Tested Students	Scale Score			Change In Scores		
		2019	2022	2023	2019-22	2022-23	2019-23
Math							
Providence	1,465	459.8	458.8	460.8	-1.0	2.1	1.0
RI Comparison Districts	417	462.9	461.2	461.9	-1.6	0.7	-0.9
MA Comparison Districts	1,174	469.7	465.6	466.8	-4.0	1.1	-2.9
ELA							
Providence	1,464	461.2	458.2	457.7	-3.0	-0.5	-3.5
RI Comparison Districts	416	464.3	461.6	459.5	-2.7	-2.0	-4.7
MA Comparison Districts	1,175	471.6	467.0	465.5	-4.6	-1.5	-6.1

Note: RI comparison group includes Woonsocket, Pawtucket, Newport, Johnston, and West Warwick. MA comparison group includes Chelsea, Brockton, Holyoke, Springfield, and Everett. Comparison groups were chosen by regressing SEDA math scores on demographic variables in the pre-treatment period (2016-2019) and selecting districts with the closest predicted scores to Providence. Scale scores for 2021, 2022, and 2023 are averages of comparison districts weighted by total number of test takers in each district.

- During the pandemic (2019-2022), ELA/English language arts scores and math scores among students with disabilities in Providence, RI comparison districts, and MA comparison districts all declined. In mathematics, the declines were smaller for Providence (-1.0 points) and the RI comparison districts (-1.6 points) than in the MA comparison districts (-4.0 points). In ELA, the declines were smallest in the RI comparison districts (-2.7 points) and Providence (-3.0 points), and largest in the Massachusetts comparison districts (-4.6 points).
- Coming out of the pandemic (2022-2023), Mathematics scores among students with disabilities in Providence improved by 2.1 points, by 0.7 points in the RI comparison districts, and by 1.1 points in the MA comparison districts. In ELA, scores among students with disabilities in Providence and both the RI and MA comparison districts continued to decline.
- Between 2019 and 2023, students with disabilities in Providence have lost the least ground in ELA, and have improved slightly in mathematics. Between 2019 and 2023, mathematics scores among students with disabilities in Providence improved by 1.0 point, while mathematics scores in both the RI and MA comparison districts fell between 2019 and 2023. While all three groups lost ground in ELA scores between 2019 and 2023, students with disabilities in Providence had the smallest losses (-3.5), followed by the RI comparison districts (-4.7) and the MA comparison districts (-6.1).

Table 9. Mean Math & ELA Scores in Grades 3-8 Among Students in Providence and Comparison Districts in RI & MA, 2019-2023: Multilingual learners

LEA	Tested Students	Scale Score			Change In Scores		
		2019	2022	2023	2019-22	2022-23	2019-23
Math							
Providence	3,444	466.6	464.4	466.6	-2.2	2.2	0.0
RI Comparison Districts	260	468.0	467.2	468.2	-0.8	1.0	0.2
MA Comparison Districts	1,082	475.0	469.3	470.1	-5.7	0.8	-4.8
ELA							
Providence	3,132	468.4	463.0	463.6	-5.3	0.6	-4.8
RI Comparison Districts	231	467.9	465.6	464.0	-2.3	-1.6	-3.9
MA Comparison Districts	1,081	474.3	467.2	465.2	-7.1	-2.0	-9.1

Note: RI comparison group includes Woonsocket, Pawtucket, Newport, Johnston, and West Warwick. MA comparison group includes Chelsea, Brockton, Holyoke, Springfield, and Everett. Comparison groups were chosen by regressing SEDA math scores on demographic variables in the pre-treatment period (2016-2019) and selecting districts with the closest predicted scores to Providence. Scale scores for 2021, 2022, and 2023 are averages of comparison districts weighted by total number of test takers in each district.

- During the pandemic (2019-2022), ELA/English language arts scores and math scores among multilingual learners in Providence, RI comparison districts, and MA comparison districts all declined. In mathematics, the declines were smaller for the RI comparison districts (-0.8 points) and Providence (-2.2 points) and larger in the MA comparison districts (-5.7 points). In ELA, the declines were also smallest in the RI comparison districts (-2.3 points), followed by Providence (-5.3 points), and the Massachusetts comparison districts (-7.1 points).
- Coming out of the pandemic (2022-2023), mathematics scores among multilingual learners in Providence improved by 2.2 points, scores among multilingual learners in the RI comparison districts improved by 1.0 point, and scores among multilingual learners in the MA comparison districts improved by 0.8 points. In ELA, scores among multilingual learners in Providence improved by 0.6 points, while scores among multilingual learners in both the RI and MA comparison districts continued to decline.
- Between 2019 and 2023, mathematics scores among multilingual learners in Providence stayed the same, but increased slightly in the RI comparison districts (0.2 points), and decreased in the MA comparison districts (-4.8 points). In the same period, ELA scores decreased by 4.8 points in Providence, 3.9 points in the RI comparison districts, and 9.1 points in the MA comparison districts.

Table 10. Mean Math & ELA Scores in Grades 3-8 Among Students in Providence and Comparison Districts in RI & MA, 2019-2023: Low Income Students

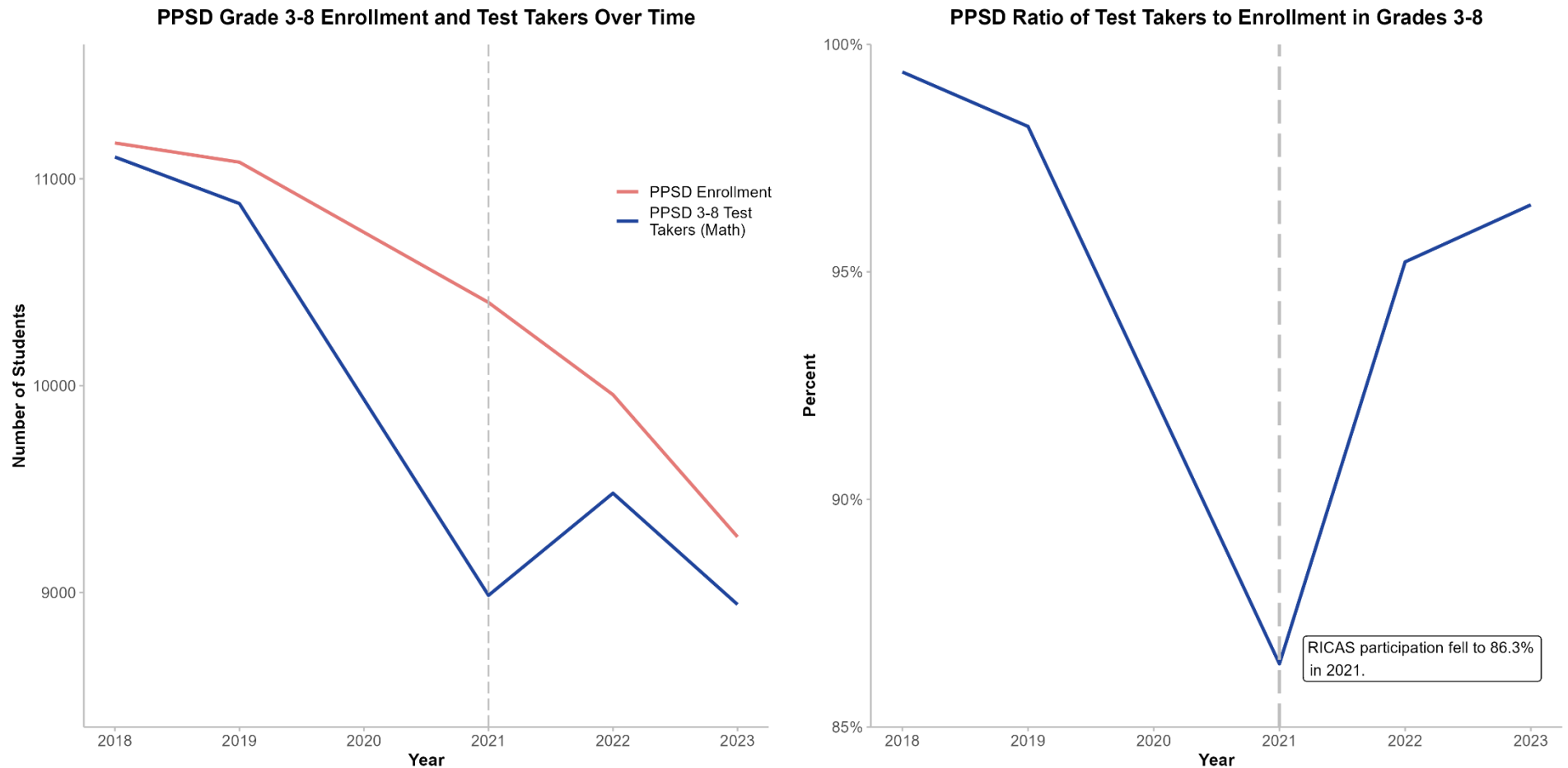
LEA	Tested Students	Scores (Standard Deviations)			Change In Scores		
		2019	2022	2023	2019-22	2022-23	2019-23
Math							
Providence	8,681	474.5	471.0	473.1	-3.5	2.1	-1.3
RI Comparison Districts	1,379	477.4	473.5	474.2	-3.9	0.7	-3.2
MA Comparison Districts	3,986	483.1	477.1	477.8	-6.0	0.7	-5.3
ELA							
Providence	8,469	478.2	472.9	473.2	-5.3	0.3	-5.0
RI Comparison Districts	1,366	480.6	475.9	474.0	-4.7	-1.8	-6.5
MA Comparison Districts	3,988	486.0	479.7	478.5	-6.3	-1.2	-7.5

Note: RI comparison group includes Woonsocket, Pawtucket, Newport, Johnston, and West Warwick. MA comparison group includes Chelsea, Brockton, Holyoke, Springfield, and Everett. Comparison groups were chosen by regressing SEDA math scores on demographic variables in the pre-treatment period (2016-2019) and selecting districts with the closest predicted scores to Providence. Scale scores for 2021, 2022, and 2023 are averages of comparison districts weighted by total number of test takers in each district.

- During the pandemic (2019-2022), ELA/English language arts scores and math scores among low-income students in Providence, RI comparison districts, and MA comparison districts all declined. In mathematics, the declines were smaller for Providence (-3.5 points) and the RI comparison districts (-3.9 points) and larger in the MA comparison districts (-6.0 points). In ELA, the declines were smallest in the RI comparison districts (-4.7 points), followed by Providence (-5.3 points), and the Massachusetts comparison districts (-6.3 points).
- Coming out of the pandemic (2022-2023), mathematics scores among low-income students in Providence improved by 2.1 points, and scores among low-income students in both the RI and MA comparison districts improved by 0.7 points. In ELA, scores among low-income students in Providence improved by 0.3 points, while scores among low-income students in both the RI and MA comparison districts continued to decline.
- Between 2019 and 2023, low-income students in all three groups have lost ground in both mathematics and ELA. Between 2019 and 2023, the losses in mathematics among low-income students in Providence were 1.9 and 4.0 points smaller than the losses among low-income students in the RI and MA comparison districts, respectively. The losses in ELA among low-income students in Providence were 1.5 and 2.5 points smaller than in the RI and MA comparison districts, respectively.

Section 3. Concerns regarding enrollment and the ratio of test takers.

Figure 7:



- As reported in Figure 7, the share of students who were tested in 2021 had fallen to nearly 85 percent. Given the potential change in the test-taking population, we do not use the 2021 results in the analysis.

Section 4. Appendix

Table 11. Mean math standardized scores (SEDA) in Providence and Rhode Island comparison districts, 2019-2023

LEA	2018 Demographics				Scores (Standard Deviations)			Change In Scores		
	Tested Students	% ED	% Black/Hispanic	% MLL	2019	2022	2023	2019-22	2022-23	2019-23
PPSD	11,177	86	17	65	-0.66	-0.83	-0.79	-0.17	0.04	-0.13
RI comparison group	10,883	62	16	26	-0.38	-0.55	-0.56	-0.17	-0.01	-0.18
Woonsocket	2,779	73	10	33	-0.58	-0.72	-0.76	-0.14	-0.04	-0.18
Pawtucket	4,531	66	28	27	-0.36	-0.52	-0.50	-0.16	0.02	-0.14
Newport	921	64	13	26	-0.37	-0.59	-0.67	-0.22	-0.08	-0.30
Johnston	1,543	45	5	20	-0.06	-0.18	-0.22	-0.12	-0.04	-0.16
W. Warwick	1,109	46	5	14	-0.38	-0.67	-0.63	-0.29	0.04	-0.25

Table 12. Mean ELA standardized scores (SEDA) in Providence and Rhode Island comparison districts, 2019-2023

LEA	2018 Demographics				Scores (Standard Deviations)			Change In Scores		
	Tested Students	% ED	% Black/Hispanic	% MLL	2019	2022	2023	2019-22	2022-23	2019-23
PPSD	9,100	86	17	65	-0.64	-0.70	-0.67	-0.06	0.03	-0.03
RI comparison group	10,656	62	16	26	-0.38	-0.39	-0.47	-0.01	-0.08	-0.09
Woonsocket	2,742	73	10	33	-0.62	-0.61	-0.70	0.01	-0.09	-0.08
Pawtucket	4,429	66	28	27	-0.38	-0.39	-0.47	-0.01	-0.08	-0.09
Newport	586	64	13	26	-0.35	-0.52	-0.67	-0.17	-0.15	-0.32
Johnston	1,531	45	5	20	0.01	0.05	0.04	0.04	-0.01	0.03
W. Warwick	1,368	46	5	14	-0.35	-0.36	-0.42	-0.01	-0.06	-0.07

Table 13. Mean math standardized scores (SEDA) in Providence and Massachusetts comparison districts, 2019-2023

LEA	2018 Demographics				Scores (Standard Deviations)			Change In Scores		
	Tested Students	% ED	% Black/ Hispanic	% MLL	2019	2022	2023	2019-22	2022-23	2019-23
PPSD	11,177	86	17	65	-0.66	-0.83	-0.79	-0.17	0.04	-0.13
MA comparison group	23,677	82	27	53	-0.41	-0.60	-0.60	-0.19	0.00	-0.19
Brockton	7,698	81	58	15	-0.43	-0.57	-0.54	-0.14	0.03	-0.11
Chelsea	2,406	84	5	86	-0.34	-0.57	-0.62	-0.23	-0.05	-0.28
Everett	1,470	77	16	52	-0.08	-0.38	-0.44	-0.30	-0.06	-0.36
Holyoke	1,101	81	3	80	-0.83	-1.05	-1.06	-0.22	-0.01	-0.23
Springfield	11,002	84	20	65	-0.39	-0.58	-0.58	-0.19	0.00	-0.19

Table 14. Mean ELA standardized scores (SEDA) in Providence and Massachusetts comparison districts, 2019-2023

LEA	2018 Demographics				Scores (Standard Deviations)			Change In Scores		
	Tested Students	% ED	% Black/ Hispanic	% MLL	2019	2022	2023	2019-22	2022-23	2019-23
PPSD	11,177	86	17	65	-0.64	-0.70	-0.67	-0.06	0.03	-0.03
MA comparison group	23,677	82	27	53	-0.34	-0.44	-0.46	-0.10	-0.02	-0.12
Brockton	7,698	81	58	15	-0.36	-0.41	-0.42	-0.05	-0.01	-0.06
Chelsea	2,406	84	5	86	-0.17	-0.48	-0.57	-0.31	-0.09	-0.4
Everett	1,470	77	16	52	N/A	N/A	N/A	N/A	N/A	N/A
Holyoke	1,101	81	3	80	-0.63	-0.81	-0.90	-0.18	-0.09	-0.27
Springfield	11,002	84	20	65	-0.3	-0.38	-0.38	-0.08	0.00	-0.08

Table 15. Mean math standardized scores (SEDA) in Providence and Connecticut comparison districts, 2019-2023

LEA	2018 Demographics				Scores (Standard Deviations)			Change In Scores		
	Tested Students	% ED	% Black/ Hispanic	% MLL	2019	2022	2023	2019-22	2022-23	2019-23
PPSD	11,177	86	17	65	-0.66	-0.83	-0.79	-0.17	0.04	-0.13
CT comparison group	32,617	85	25	54	-0.68	-1.00	-0.96	-0.32	0.04	-0.28
Hartford	8,695	84	30	53	-0.70	-1.03	-1.03	-0.33	0.00	-0.33
New Britain	4,637	77	11	64	-0.98	-1.28	-1.16	-0.3	0.12	-0.18
Windham	1,661	73	4	70	-0.32	-0.70	-0.53	-0.38	0.17	-0.21
Bridgeport	9,532	96	35	48	-0.72	-0.95	-0.95	-0.23	0.00	-0.23
Waterbury	8,092	79	23	53	-0.53	-0.93	-0.88	-0.40	0.05	-0.35

Table 16. Mean ELA standardized scores (SEDA) in Providence and Connecticut comparison districts, 2019 - 2023

LEA	2018 Demographics				Scores (Standard Deviations)			Change In Scores		
	Tested Students	% ED	% Black/ Hispanic	% MLL	2019	2022	2023	2019-22	2022-23	2019-23
PPSD	9,100	86	17	65	-0.64	-0.70	-0.67	-0.06	0.03	-0.03
CT comparison group	20,931	85	25	54	-0.54	-0.76	-0.78	-0.22	-0.02	-0.24
Hartford	8,514	84	30	53	-0.63	-0.86	-0.89	-0.23	-0.03	-0.26
New Britain	N/A	77	11	64	-0.72	-0.90	-0.92	-0.18	-0.02	-0.20
Windham	1,333	73	4	70	-0.31	-0.57	-0.52	-0.26	0.05	-0.21
Bridgeport	3,094	96	35	48	-0.53	-0.74	-0.75	-0.20	-0.02	-0.22
Waterbury	7,990	79	23	53	-0.41	-0.64	-0.65	-0.22	-0.01	-0.24

Table 17. Mean math scale scores on RICAS/MCAS for Rhode Island Comparison Districts, 2019-2023

LEA	2018 Demographics				Scale Scores			Change In Scores		
	Tested Students	% ED	% Black/Hispanic	% MLL	2019	2022	2023	2019-22	2022-23	2019-23
Providence	9,879	87	82	28	475.0	472.0	474.0	-3.0	2.0	-1.0
RI Comparison Districts	2,042	60	42	9	480.9	477.3	477.6	-3.6	0.3	-3.3
Johnston	1,529	45	25	5	488.0	486.0	485.0	-2.0	-1.0	-3.0
Newport	913	64	40	9	482.0	476.0	476.0	-6.0	0.0	-6.0
Pawtucket	4,551	61	55	13	481.0	478.0	479.0	-3.0	1.0	-2.0
West Warwick	1,552	46	19	2	481.0	473.0	475.0	-8.0	2.0	-6.0
Woonsocket	2,768	72	43	10	476.0	474.0	473.0	-2.0	-1.0	-3.0

Table 18. Mean ELA scale scores on RICAS/MCAS for Rhode Island Comparison Districts, 2019-2023

LEA	2018 Demographics				Scale Score			Change In Scores		
	Tested Students	% ED	% Black/Hispanic	% MLL	2019	2022	2023	2019-22	2022-23	2019-23
Providence	11,105	87	82	28	479.0	474.0	474.0	-5.0	0.0	-5.0
RI Comparison Districts	2,982	56	42	9	484.4	479.3	477.5	-5.1	-1.8	-6.9
Johnston	1,517	45	25	5	493.0	489.0	489.0	-4.0	0.0	-4.0
Newport	894	64	40	9	484.0	476.0	473.0	-8.0	-3.0	-11.0
Pawtucket	4,453	61	55	13	484.0	479.0	477.0	-5.0	-2.0	-7.0
West Warwick	1,556	46	19	2	486.0	480.0	478.0	-6.0	-2.0	-8.0
Woonsocket	2,732	72	43	10	479.0	475.0	473.0	-4.0	-2.0	-6.0

Table 19. Mean math scale scores on RICAS/MCAS for Massachusetts Comparison Districts, 2019-2023

LEA	2018 Demographics				Scale Scores			Change In Scores		
	Tested Students	% ED	% Black/ Hispanic	% MLL	2019	2022	2023	2019-22	2022-23	2019-23
Providence	11,105	87	82	28	475.0	472.0	474.0	-3.0	2.0	-1.0
MA Comparison Districts	7,525	67	80	21	485.5	478.7	479.5	-6.8	0.8	-6.0
Holyoke	2,206	78	83	22	475.8	469.0	469.0	-6.8	0.0	-6.8
Springfield	11,088	77	85	16	485.9	479.0	480.0	-6.9	1.0	-5.9
Brockton	7,714	55	74	24	484.4	479.0	481.0	-5.4	2.0	-3.4
Chelsea	2,844	66	91	37	486.7	479.0	479.0	-7.7	0.0	-7.7
Everett	2,964	51	69	20	493.0	484.0	482.0	-9.0	-2.0	-11.0

Table 20. Mean ELA scale scores on RICAS/MCAS for Massachusetts Comparison Districts, 2019-2023

LEA	2018 Demographics				Scale Scores			Change In Scores		
	Tested Students	% ED	% Black/ Hispanic	% MLL	2019	2022	2023	2019-22	2022-23	2019-23
Providence	11,105	87	82	28	479.0	474.0	474.0	-5.0	0.0	-5.0
MA Comparison Districts	7,525	67	80	21	488.4	481.1	480.1	-7.3	-1.0	-8.3
Holyoke	2,201	78	83	22	480.7	473.0	471.0	-7.7	-2.0	-9.7
Springfield	11,080	77	85	16	488.9	482.0	482.0	-6.9	0.0	-6.9
Brockton	7,716	55	74	24	487.1	482.0	481.0	-5.1	-1.0	-6.1
Chelsea	2,843	66	91	37	490.1	480.0	478.0	-10.1	-2.0	-12.1
Everett	2,967	51	69	20	493.8	483.0	480.0	-10.8	-3.0	-13.8



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