Opportunities Abound

How Massachusetts Districts Can Use New State Funding to Re-imagine Schools and Systems

February 2020

David Rosenberg,
Joseph Trawick-Smith,
and Karen Hawley Miles

ERS BRIEFING

EDUCATION RESOURCE STRATEGIES
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**How Massachusetts School Districts Can Use New State Funding to Re-imagine Schools and Systems**

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Massachusetts has earned its place as the leader among the states in K-12 education. On the most recent results from the National Assessment of Educational Progress (NAEP), Massachusetts students scored first in the nation in 4th grade reading, 8th grade math and 8th grade reading – and a close second to Minnesota in 4th grade math.¹ Our students’ success stands out on a global stage as well: according to the OECD’s Program for International Student Assessment (PISA), 15-year-olds in the Commonwealth overall score as high as their peers in any nation on earth in reading.²

Our students’ success is a function of many factors. Funding helps: at $16,197 per pupil, Massachusetts ranks eighth in the nation in K-12 spending, nearly one-third higher than the national average of $12,201 per pupil – and in some districts, per-pupil spending surpasses $25,000.³

But academic success in Massachusetts is far from universal. Gaps between low-income students and their higher income peers in Massachusetts are similar to those across the country; the gaps for English Language Learners are even greater.⁴

**Figure 1.** Gap in proficiency rates on 2019 NAEP, by student subgroup and exam.¹

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¹ How to read this chart: Nationally, proficiency rates on the ELA 4th grade exam are 29 points lower for FRL students than for non-FRL students; in Massachusetts, the gap is 30%.
New Funds and New Pressure

School districts in Massachusetts’ highest-need communities are about to receive an unprecedented influx of new funds with the express goal of helping close these persistent achievement gaps. Following bipartisan action by the Legislature and Gov. Baker, the state’s FY 2021 budget includes the first installments of a projected $1.5 billion in new K-12 investments under the Student Opportunity Act – including more than $300 million for the 2020-21 school year. Thirty-seven districts (out of more than 400 statewide) will receive at least $1.5 million next year, with increases of up to 12.7% on top of current annual budgets. Over seven years, in the median of these “long-form” districts – so named because they are required by DESE to provide more information about their spending plans – this equates to $25 million in new funds, while several will gain more than $100 million by 2028.5

**Figure 2.** Incremental Chapter 70 Aid, by District, 2020-21 (DESE projections as of 2/20), $ millions

<table>
<thead>
<tr>
<th>District</th>
<th>$M in FY21</th>
<th>% increase</th>
<th>District</th>
<th>$M in FY21</th>
<th>% increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lynn</td>
<td>$30.2</td>
<td>12.7%</td>
<td>Methuen</td>
<td>$3.5</td>
<td>4.0%</td>
</tr>
<tr>
<td>Lawrence</td>
<td>$21.8</td>
<td>10.3%</td>
<td>Marlborough</td>
<td>$3.2</td>
<td>4.9%</td>
</tr>
<tr>
<td>Brockton</td>
<td>$21.1</td>
<td>9.1%</td>
<td>Pittsfield</td>
<td>$2.9</td>
<td>3.8%</td>
</tr>
<tr>
<td>Springfield</td>
<td>$19.6</td>
<td>4.8%</td>
<td>Gtr Lowell RVT</td>
<td>$2.2</td>
<td>5.1%</td>
</tr>
<tr>
<td>Worcester</td>
<td>$18.0</td>
<td>4.8%</td>
<td>Malden</td>
<td>$2.2</td>
<td>2.3%</td>
</tr>
<tr>
<td>Lowell</td>
<td>$12.8</td>
<td>6.0%</td>
<td>Gtr Lawrence RVT</td>
<td>$2.2</td>
<td>6.8%</td>
</tr>
<tr>
<td>Fall River</td>
<td>$11.9</td>
<td>7.3%</td>
<td>Arlington</td>
<td>$2.0</td>
<td>3.2%</td>
</tr>
<tr>
<td>Chelsea</td>
<td>$10.9</td>
<td>10.9%</td>
<td>West Springfield</td>
<td>$2.0</td>
<td>3.9%</td>
</tr>
<tr>
<td>New Bedford</td>
<td>$10.7</td>
<td>5.6%</td>
<td>Waltham</td>
<td>$2.0</td>
<td>2.7%</td>
</tr>
<tr>
<td>Revere</td>
<td>$10.4</td>
<td>10.0%</td>
<td>Boston</td>
<td>$1.9</td>
<td>0.2%</td>
</tr>
<tr>
<td>Framingham</td>
<td>$7.1</td>
<td>6.2%</td>
<td>Leominster</td>
<td>$1.9</td>
<td>2.5%</td>
</tr>
<tr>
<td>Haverhill</td>
<td>$6.9</td>
<td>6.9%</td>
<td>Gtr Fall River RVT</td>
<td>$1.8</td>
<td>7.2%</td>
</tr>
<tr>
<td>Quincy</td>
<td>$6.6</td>
<td>5.3%</td>
<td>Gtr New Bedford RVT</td>
<td>$1.8</td>
<td>4.7%</td>
</tr>
<tr>
<td>Everett</td>
<td>$5.9</td>
<td>5.6%</td>
<td>Clinton</td>
<td>$1.8</td>
<td>7.5%</td>
</tr>
<tr>
<td>Holyoke</td>
<td>$4.4</td>
<td>5.0%</td>
<td>Attleboro</td>
<td>$1.7</td>
<td>2.2%</td>
</tr>
<tr>
<td>Chicopee</td>
<td>$4.0</td>
<td>4.0%</td>
<td>Rockland</td>
<td>$1.6</td>
<td>5.9%</td>
</tr>
<tr>
<td>Fitchburg</td>
<td>$3.9</td>
<td>5.1%</td>
<td>Randolph</td>
<td>$1.5</td>
<td>3.8%</td>
</tr>
<tr>
<td>Milford</td>
<td>$3.8</td>
<td>7.3%</td>
<td>Norwood</td>
<td>$1.5</td>
<td>3.8%</td>
</tr>
<tr>
<td>Taunton</td>
<td>$3.6</td>
<td>3.6%</td>
<td></td>
<td>All long-form districts</td>
<td>$251.3</td>
</tr>
</tbody>
</table>

ii Excluding Boston, the average increase is 6.2%; among all districts receiving at least $10M in FY21, the average is 7.5%.
The impending arrival of these funds creates a unique opportunity for education leaders. To hold districts accountable for effectively using new resources, the state requires that districts develop an “evidence-based three-year plan” specifying how new funding will be used; DESE has since provided guidance for district leaders on priorities and practices to consider.

Over the past fifteen years of our work with leaders in several states and more than fifty large urban school districts, including several in our home state of Massachusetts, we’ve observed that the most effective system leaders resist the temptation to simply layer new resources on top of existing, outdated structures. Instead, they engage their communities in a dialogue about student need and implement evidence-based strategies for addressing them. Ideally, they use new resources to catalyze school and district redesign while targeting these resources to boost strategies that support students and teachers with the greatest needs and have the highest potential to accelerate learning for every child.

Schools that accelerate learning for all students – especially those who live in poverty or are English language learners – “do school differently.” They change the way they organize the everyday work of instruction to enable more targeted individual attention and time for students with the greatest learning needs. They enable teachers to share the work with a team of colleagues, with more sustainable workloads and opportunities for career growth. And they integrate investments in social, emotional, and academic development that benefit all students.

Unfortunately, what works and what is politically popular are often at odds. In the coming months, many local leaders will face intense pressure to double down on traditional, one-size-fits-all strategies that aren’t getting the job done.

Here, we provide a frame for district leaders and other stakeholders to address these common pressure points, contrasting them with the evidence-based strategies that have the potential to change the odds for students with the most significant learning needs. Throughout, we show how these link to the “evidence-based strategies” included in the guidance provided by the Department of Elementary and Secondary Education.

For each strategy, we offer cost estimates for a “typical” Massachusetts district receiving a significant infusion of funds under SOA. To be clear, local context matters, and no two districts are exactly alike. However, by grounding our analysis in how actual Massachusetts districts use resources today (and outlining our assumptions in an accompanying Appendix), we hope that the tradeoffs described here can meaningfully shape district leaders’ conversations with constituents and ensure that new funds have a direct, positive impact on student learning.

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* For more on how effective system leaders use resources strategically, see the following ERS publications: *It Takes a System*, *The Rewards of Perseverance*, and *Back from the Brink*. 
**Figure 3. Comparison of traditional and strategic approaches for using new school district funding**

<table>
<thead>
<tr>
<th>Pressure Points</th>
<th>Instead of traditional “one-size-fits-all” strategies...</th>
<th>Focus on targeted, evidence-based strategies</th>
</tr>
</thead>
</table>
| Teacher salaries | Implement across-the-board salary increases for all staff | Target salary increases to:  
  • Ensure competitiveness with surrounding districts  
  • Retain highly effective teachers when they are most at risk of leaving  
  • Compensate teachers for taking on instructional leadership or hard-to-staff roles |
| Class sizes      | Implement incremental across-the-board class size reductions | Create opportunities for small-group instruction for students with the greatest learning needs, when they need it most |
| Learning time    | Extend the school day by adding a little bit of time to each student activity | Provide more high-quality instructional time in core subjects and for students with the most unfinished learning |
| PD for teachers  | Add time and compensation for off-site professional development workshops | Provide time and support for teachers to work in teams and independently as they learn and adapt new curriculum, plan daily lessons and adjust instruction in response to students’ learning needs |
| Whole child support | Increase the number of counselors and social workers without changing the way schools are organized | Organize schools and build teacher expertise to support social and emotional learning needs integrated with academic work |

**Teacher Salaries**

The announcement of new funding is often followed by pressure from constituents to increase salaries for educators. Nationally, teachers earn an average 21% less than their college-educated peers in other industries, and there is little doubt that teacher pay increases are essential to elevating and sustaining the profession. At the same time, there is tremendous variation in pay for Massachusetts teachers, with average salaries ranging from $65,600 to $101,800 in districts that will receive the bulk of new SOA funds. And though the basic structure of a teacher’s salary schedule is similar across districts – rising based on the number of years and for additional courses taken – districts vary in how fast compensation grows and how much teachers gain for additional coursework. Such significant variation suggests the importance of carefully examining local competition in developing a strategy for teacher compensation.
Traditional Approach

Pay increases are often rolled out across the board, with every teacher receiving a similar increase regardless of their experience, role, or contribution. In districts with non-competitive salary structures or exceptionally low pay, this may be an important component of a compensation investment. Unfortunately, across-the-board individual pay increases are rarely large enough to impact recruitment or retention, nor do they have a direct link to improved instructional practice. They are also expensive and lock in long-term cost increases that may not be sustainable for the system.

For example, a 5% across-the-board pay increase for all teachers would account for an average 35% of new Chapter 70 funds provided under SOA in 2020-21. This is equivalent to 2.1% of a district’s total annual operating budget. In other words, even a relatively modest across-the-board salary increase could limit district leaders’ ability to make the type of fundamental change envisioned by the Student Opportunity Act.

Strategic Approach

For a similar level of investment, districts could concentrate their efforts on strategic ways to build a competitive teacher pipeline, increase retention, and expand the breadth of teacher responsibilities. For example, for the same cost of a 5% across-the-board salary increase, leaders in a Massachusetts district receiving significant new SOA funds could do both of the following:

- Raise salaries for teachers in their first five years by an average of $8,000, or 15%, to stay competitive with surrounding districts and reduce early-career turnover (1.5% of budget or $200 per pupil)\textsuperscript{iv}
- Invest in $10,000 stipends and an extra period of release time per day for teacher leaders, who would be assigned to provide coaching and feedback to rookie or struggling teachers (1.0% of budget or $175 per pupil)

\textbf{Evidence-based program examples highlighted by DESE*}

- Diversifying the educator/administrator workforce through recruitment and retention
- Strategies to recruit and retain educators/administrators in hard-to-staff schools and positions

\textsuperscript{*}For a complete list of DESE evidence-based practices, see the appendix on p. 14.

\textsuperscript{iv} All cost projections are estimates that will vary based on individual district context.
Learning Time

Increasing the amount of academic time students receive with effective teachers can be a powerful lever for improving achievement, as state-funded pilots of expanded time in Massachusetts have demonstrated. In one study of 35 charter schools in New York City, researchers concluded that increased instructional time was among the strongest predictors of school effectiveness.\(^{10}\) These results are unsurprising when considering the additional learning time students could experience through an extended day model: adding an hour to a typical school day is equivalent to adding over a month of student time per year.\(^{v}\)

**Traditional Approach**

When presented the opportunity to extend the school day, districts often do so in ways that fail to improve students’ academic experience. For example, schools may use the additional time to move from 45-minute periods to 55-minute periods for all subjects in high schools, without adjusting daily lesson plans to help accelerate student learning. With an added cost of about 2% of a typical districts’ budget, or roughly 36% of new SOA funds, this approach can be an expensive way to preserve the status quo.

**Strategic Approach**

For the same level of investment, districts can use extended time to reengineer the school day and dramatically improve the student experience. For example, schools could do both of the following:

- Add 60 minutes of intervention time for struggling students four days a week, while simultaneously providing large-group enrichment opportunities for students who are on-track (2% or $315 per pupil)
- Extend planning time for teachers to 90-120 minutes one day a week so they can collaborate in teams with an expert teacher or coach (0.4% or $60 per pupil)

**Evidence-based program examples highlighted by DESE**

- **Supporting educators to implement high-quality, aligned curriculum**
- **Acceleration Academies and/or summer learning to support skill development and accelerate advanced learners**

\(^{v}\) Assumes a 180-day school year and pre-investment school day length of 7 hours
Class Sizes

Lowering class sizes is a popular way to invest new dollars, in part because it is so concrete. There also is a sizeable body of research on the effect of lowering class sizes on student learning. In general, the research indicates that class size reductions can have a positive impact on student learning, especially in early grades and for students with higher needs. Incremental class size reductions, while costly, generally are not linked to any change in student achievement.

Traditional Approach

When presented with the opportunity to add teachers and reduce class sizes, districts often seek to do so across-the-board, reducing class sizes by an average of two or three students for all subjects or grades in a school. For a typical district, this modest reduction would cost about 4.5% of annual expense and 75% of its new Chapter 70 funds available in 2020-21.

Strategic Approach

Targeted and meaningful group size reductions can make a difference on student learning if they are deployed for students with the greatest learning needs, when they need it most. For example, for a similar cost as an across-the-board reduction of two to three students per class, a typical Massachusetts school district could do all the following:

- Implement daily one-hour literacy blocks, with group sizes of fewer than ten students, across all K-3 classrooms – a research-backed approach with the potential to put more students on the path to literacy and long-term academic success (2.0% of budget or $300 per pupil)
- Provide two hours per week of small group tutoring after school, with group sizes of five or fewer students, for the 15% of elementary school students with the most unfinished learning (0.5% of budget or $90 per pupil)
- Implement a sixth-grade and ninth-grade “academy model,” where students benefit from stronger adult relationships and targeted academic support as they navigate the transition from elementary to middle and middle to high school. This model would include a summer bridge program, lower class sizes and additional time for teachers who share students to collaborate (1.2% of budget or $200 per pupil)
- Create two one-week “acceleration academies” during school vacations, where 25% of students in all grades with the most unfinished learning engage in 6 hours per day of teacher-led core instruction (1% of budget or $110 per pupil)
Professional Development for Teachers

In the face of persistent achievement gaps, families and school communities often call on district leaders to invest more resources in improving teacher effectiveness. This often means investing to grow teachers from within through a sustained investment in professional development.

Traditional Approach

Most professional development for teachers still consists of out-of-school workshops with limited relationship to actual curriculum – and limited impact on actual instruction. Traditional professional development often requires a significant investment of teacher time outside of school: nationally, the typical large, urban school district invests 3.1% of total annual expenditures on professional development workshops, including the cost of teacher time.\(^{12}\)

Many districts also invest significant funds – an average of 3.3% of total annual expenditures in districts ERS has studied across the country – in higher pay for teachers who have earned advanced degrees, which are proven to have limited correlation to overall teacher effectiveness or student learning, except in Math and Science.\(^{13}\)

Strategic Approach

In contrast, high-quality professional learning is embedded into teachers’ everyday jobs, led by educators with deep expertise in the curricula being taught, and accompanied by frequent cycles of observation and growth-oriented, non-evaluative feedback. High-quality professional learning happens in teams, with teachers who teach the same content working together on lesson planning and reviewing student work for as much as 90 minutes per week.

Implementing this type of model requires re-thinking traditional staffing and scheduling practices, including by creating significant blocks of content-focused collaboration time for teachers.\(^{vi}\) While many leading-edge districts do this without increasing their investment in professional learning, the projected influx of Chapter 70 funds can make these shifts easier. For

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\(^{vi}\) For ideas on how to create long blocks for teacher collaboration, see the ERS publication *Finding Time for Collaborative Planning.*
example, for a similar level of investment in professional development workshops, a typical Massachusetts district could instead:

- Purchase and adapt high-quality, standards-aligned curricular materials in core content areas (0.5% of budget or $85 per pupil)
- Create 90 minutes of weekly common planning time for teachers that share content (2.0% of budget or $270 per pupil)
- Invest in release time for teacher leaders, or staff instructional experts at schools to lead common planning time and provide feedback to teachers (1.0% of budget or $175 per pupil)

Evidence-based program examples highlighted by DESE

- Supporting educators to implement high-quality, aligned curriculum
- Leadership pipeline development programs for schools
- Increased staffing to expand student access to arts, athletics, and enrichment, and strategic scheduling to enable common planning time for teachers
- Strategies to recruit and retain educators/administrators in hard-to-staff schools and positions

Whole Child Support

Research increasingly points to the importance of both cognitive and social-emotional learning as drivers of students’ academic success. Schools that focus on social-emotional development are more likely to see improvements in achievement, behavior, emotional well-being and a range of long-term adult outcomes. So, when new resources become available, families and school communities often advocate for investing in services that help support the “whole child.”

Traditional Approach

While we must help ensure educators have the resources to manage the most acute student needs, simply adding counselors, psychologists or other social-emotional professionals to support all students can create a disjointed school experience – academics in one room, social-emotional support in another – that is at odds with what we know about children’s cognitive and emotional development. For a typical Massachusetts district, adding a counselor and social worker at every school would cost 2-3% of its annual budget, or roughly half of its SOA funding increase.

Strategic Approach

Instead, district leaders can invest to create strategies that promote integration of social, emotional, and academic development, including by explicitly building opportunities for critical thinking, self-reflection and norms-based discussions into daily classroom interactions. For example, for the same cost of adding counselors and social workers at every school, districts could:
• Purchase a high-quality, evidence-based SEL program for integration with regular classroom instruction in grades six through twelve (e.g. project-based learning modules, teen outreach programs, etc.) and accompanying teacher development seminars (0.5% of budget or $50 per pupil)
• Invest in time once a month for teachers and student support providers that share students to collaborate around SEL instruction and support for specific students. This practice should be in addition to, not in lieu of, weekly collaboration among subject teams (0.5% of budget or $75 per pupil)
• Partner with community organizations that provide youth development opportunities outside of the school day, and fund through philanthropic support (cost-free to the district)
• Provide a stipend or establish a new site coordinator role to help coordinate community partnerships and within-school SEL supports (1.0% of budget or $150 per pupil)

**Evidence-based program examples highlighted by DESE**

- Dropout prevention and recovery programs
- Community partnerships for in-school enrichment and wraparound services
- Parent-teacher home visiting programs

**Moving Forward**

The infusion of new funds under the Student Opportunity Act is a once-in-a-generation moment for education leaders who are working to ensure that all schools succeed for all students. Ultimately, Massachusetts’ position as a leader in K-12 education rides on our ability to take advantage of this moment. To succeed, district leaders can:

- **Engage the community.** Changing the odds for our highest-need students will take a collaborative effort among a broad range of stakeholders, including many who are often left out of the dialogue. Families, students and advocates working to amplify the voices of under-represented groups must be front-and-center in this work.

- **Follow the research.** Decades of research and real-life evidence tell a clear story: traditional, across-the-board investments, while often politically attractive, simply don’t change the odds for our highest-need students. Strategic, targeted and integrated investments in evidence-based approaches do.

- **Support your strategic plan.** There is a difference between maintaining strategic consistency and using new funds to do more of the same. New funding makes it possible for leaders and their partners to think bigger about how to address deep and longstanding student needs.
• **Challenge status quo investments.** Rather than layer on more of the same, leaders can use SOA as a catalyst for re-thinking how they use existing resources. Since new investments should be part of an integrated improvement strategy, districts and schools should look to ramp down strategies that aren’t evidence-based and double down on approaches that have the best chance for supporting student success.

• **Take a long view.** Many districts will see large flows of new funds very soon, which bring with it pressure to act fast. But leaders should also take a long view of the Student Opportunity Act, which includes sizable investments for at least the next seven years. Investing resources up front to develop a thoughtful, sustainable long-term plan for change is time well-spent. Leaders will also need to avoid short-term fixes that paper over, rather than directly address, deep-seated challenges.

• **Stay the course.** Change doesn’t happen overnight. It will take a sustained, focused and disciplined effort to realize the promise that new funding offers for improving outcomes for students who too often have been left behind by longstanding education policies and practices.
Appendix

A. Technical Appendix

All increased payments to staff include an additional 7.65% cost for employer FICA contribution.

<table>
<thead>
<tr>
<th>Pressure Point</th>
<th>Opportunity</th>
<th>Estimated % of Budget</th>
<th>Estimated Cost Per Pupil</th>
<th>Assumptions &amp; Methodology Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Traditional</strong>: Teacher Salaries</td>
<td>A 5% across-the-board pay increase for teachers would account for an average 45% of new Chapter 70 funds</td>
<td>2.1%</td>
<td>$300</td>
<td>• The median cost of such an increase for districts receiving a large enough SOA increase to submit the long-form application is 35%.</td>
</tr>
<tr>
<td><strong>Strategic</strong>: Teacher Salaries</td>
<td>Raise salaries for teachers in their first five years by $8K, or ~15%, to stay competitive with surrounding districts and reduce early-career turnover</td>
<td>1.5%</td>
<td>$200</td>
<td>• Based on Massachusetts district with high teacher turnover, where 37% of teachers are in their first five years of teaching</td>
</tr>
</tbody>
</table>
| **Strategic**: Teacher Salaries | Invest in $10K stipends and extra period of release time per day for teacher leaders to provide coaching and feedback to novice or struggling teachers | 1.0%                   | $175                     | • Assumes one out of every 10 teachers becomes a teacher leader, and that teacher leaders receive one additional period of release time per day for observations or preparing to lead professional learning  
  • Based on the ratio above a midsize Massachusetts city district with ~1K teachers would have to hire an additional 15 teachers to provide coverage for teacher leaders. This estimate assumes that teacher leaders and periods are distributed in such a way that the minimum number of teachers could cover the teacher leaders’ release periods  
  • Assumes a stipend for each teacher leader of $10,000, an average salary for the new teachers of $76,000 (the district average), and approximately 20% of salary in benefits costs for the new teachers |
| **Traditional**: Learning Time | Schools may use the additional time to move from 45-minute periods to 55-minute periods for all subjects | 2.0%                   | $315                     | • Assumes the district adds an extra hour to the school day in its high schools, and pays high school teachers proportionally more for their time based on an average salary of $76,000. |
| **Strategic**: Learning Time | Add 60 minutes of intervention time for struggling students 4 days a week, while simultaneously providing large-group enrichment opportunities | 2.0%                   | $315                     | • Assumes teachers in a midsize Massachusetts city district work a 7-hour day, 182 days a year, for an average salary of $76,000  
  • Based on assumptions above the district would need to pay teachers $60 per hour |
### Strategic: Learning Time

Extend planning time for teachers 1 day a week so they can collaborate in teams with an expert teacher or coach

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Cost (in $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.4%</td>
<td>$60</td>
</tr>
</tbody>
</table>

- Assumes each teacher needs one additional period of planning time per week to have 90 minutes of collaborative planning time.
- Based on an average teacher salary of $76,000 and benefits costs equal to 20% of salary.
- Assumes school sizes and class sizes allow for ideal scheduling.

### Traditional: Class Sizes

Reducing class sizes by an average of one or two students in all subjects

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Cost (in $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.5%</td>
<td>$665</td>
</tr>
</tbody>
</table>

- Based on an overall student-teacher ratio of 14:1 in a midsize Massachusetts city district and a decrease to a ratio of 12.4:1.
- To estimate average class sizes from student:teacher ratios, assumes teacher teach 5 periods out of a 7-period day.
- Assumes an average teacher salary of $76,000 and benefits costs equal to 20% of salary.
- Based on reducing student:core subject teacher ratios from 32:1 to 22:1 in 6th and 9th grade. Because at any time in the day some students are in arts and electives classes, students will experience class sizes substantially smaller than 22:1.
- Assumes an average teacher salary of $76,000 and benefits that cost about 20% of the salary.
- Also includes costs to pay 6th and 9th grade teachers for a day-long summer bridge program for incoming 6th and 9th graders at the start of the year, assuming the average teacher salary is $76,000 for a 182-day teacher year.
- Includes costs of stipends for 6th and 9th grade teachers to meet after school once a month about the students they share, at the same assumed salary costs as above.

### Strategic: Class Sizes

Implement a sixth-grade and ninth-grade “academy model,” where students benefit from stronger adult relationships and targeted academic support as they navigate the transition from elementary to middle and middle to high school.

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Cost (in $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0%</td>
<td>$210</td>
</tr>
</tbody>
</table>

- For 25% of students in a midsized Massachusetts city district to participate in two full-day weeks of acceleration academy with student:teacher ratios of 10:1, the district would pay $1.6 million to teachers for additional days, assuming an average teacher salary of $76,000. This does not cover additional costs for facilities, other staff, transportation, or food service.

### Strategic: Class sizes

Create two one-week “acceleration academies” during school vacations

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Cost (in $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0%</td>
<td>$110</td>
</tr>
</tbody>
</table>

- Assumes the district implements new curriculum in two subjects at a time for six grades at once (e.g. K-5 ELA and social science).
| **Strategic:** PD for Teachers | curricular materials in core content areas |  | studies), and assuming a curriculum cost of about $100 per student  
• Assumes the district trains one staff member for each of its fifteen elementary schools to become an expert in the new curriculum at the cost of $2,650 for summer training, but uses existing beginning-of-year professional development days and school professional learning time to train all subject teachers in the new curriculum  
• Assumes every teacher needs an additional period out of a seven-period day free once per week to lengthen their existing planning time to 90 minutes  
• Using the assumptions above, a midsize Massachusetts city district with 10K students would need an additional 43 teachers to cover increased teacher planning. This estimate assumes that school and class sizes allow for perfect scheduling  
• Cost of teacher time assumes an average salary of $76,000 | 2.0% | $270 |  |
| **Strategic:** PD for Teachers | Create 90 minutes of weekly common planning time for teachers that share grade-level content |  |  |  |
| **Strategic:** PD for Teachers | Invest in release time for teacher leaders, or staff instructional experts at schools to lead common planning time and provide feedback to teachers | 1.0% | $175 |  |
| **Traditional:** Whole Child Support | Add a counselor and social worker at every school | 3.0% | $425 |  |
| **Strategic:** Whole Child Support | Purchase a high-quality, evidence-based SEL program for integration with regular classroom instruction in 6-12 grades [e.g. project-based learning modules, teen outreach programs, etc.] and accompanying teacher PD seminars | 0.5% | $50 |  |
| **Strategic:** Whole Child Support | Invest in time once a month for teachers and student support providers that share students to collaborate around SEL instruction and support | 0.5% | $75 |  |
**Strategic: Whole Child Support**

Partner with community organizations that provide youth development opportunities outside of the school day, and fund through philanthropic support

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<tr>
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<th>• Assumes that site coordinators organize these partnerships as part of their role, but that partner staff are funded by the partner or philanthropy, not the district.</th>
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<tr>
<td><strong>Strategic: Whole Child Support</strong></td>
<td>Provide a stipend or establish a new site coordinator role to help coordinate community partnerships and within-school SEL supports</td>
<td>1.0%</td>
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### B. Evidence-Based Program Examples Identified by DESE

**Enhanced Core Instruction**

1. Expanded access to full-day, high-quality pre-kindergarten for 4-year-olds, including potential collaboration with other local providers
2. Research-based early literacy programs in pre-kindergarten and early elementary grades
3. Early College programs focused primarily on students under-represented in higher education
4. Supporting educators to implement high-quality, aligned curriculum
5. Expanded access to career-technical education, including “After Dark” district-vocational partnerships and innovation pathways reflecting local labor market priorities

**Targeted Student Supports**

6. Increased personnel and services to support holistic student needs
7. Inclusion/co-teaching for students with disabilities and English learners
8. Acceleration Academies and/or summer learning to support skill development and accelerate advanced learners
9. Dropout prevention and recovery programs

**Talent Development**

10. Diversifying the educator/administrator workforce through recruitment and retention
11. Leadership pipeline development programs for schools
12. Increased staffing to expand student access to arts, athletics, and enrichment, and strategic scheduling to enable common planning time for teachers
13. Strategies to recruit and retain educators/administrators in hard-to-staff schools and positions

**Conditions for Student Success**

14. Community partnerships for in-school enrichment and wraparound services
15. Parent-teacher home visiting programs
16. Labor-management partnerships to improve student performance
17. Facilities improvements to create healthy and safe school environments
Endnotes


2 Massachusetts Department of Elementary and Secondary Education. PISA 2015 Results. December 2016.


5 ERS analysis of district data from DESE and the U.S. Department of Education.

6 Massachusetts Department of Elementary and Secondary Education. Recommended SOA Programs Budget – Chapter 70 Funds Only, for long form districts.


9 See citations 6 and 8.


13 See citation 12.
