Building Evidence for a State System of Support: Massachusetts' Strategy for Improving Low-performing Schools

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Today's Agenda

Welcome & Introductions

Overview of Massachusetts System for Monitoring and Supporting Low-Performing Schools

Study #1 Research Findings: Relationships Between Schoolwide Instructional Observation Scores and Student Academic Achievement and Growth in Low-Performing Schools in Massachusetts

Study #2 Research Findings: Relationship Between State Annual School Monitoring Indicators and Outcomes in Massachusetts Low Performing Schools

Practitioner Perspective

Q&A

Wrap-up & Evaluation

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Today's Presenters

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Who Are We?

REL Northeast & Islands is one of 10 Regional Educational Laboratories.

We work in partnership with educators and policymakers to develop/use research that improves academic outcomes for students.

What we do:

- Conduct research studies

- Disseminate research findings to those we serve

- Strategically engage with partners to use findings

- Design and deliver technical assistance focused on the use of data and research

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Massachusetts School Turnaround Research Partnership

Goals

- Support state policymakers in using and applying research as they consider adjustments to strategies to support low-performing schools.

- Identify and develop strategies for low-performing schools and districts to use extant data to improve decision making.
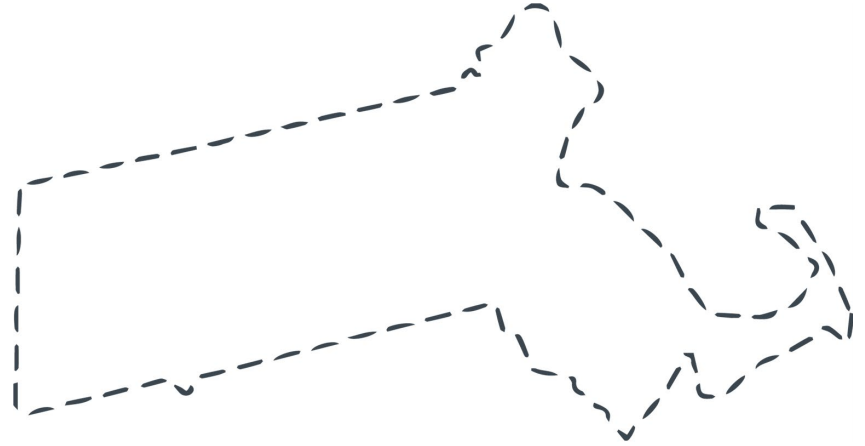
Objectives

Learn about Massachusetts Department of Elementary and Secondary Education's (DESE's) strategy to monitor and incentivize continuous improvement in Massachusetts low-performing schools and their districts

Access the state system of support's monitoring tools

Understand the relationship between schoolwide student outcomes and ratings on the monitoring tools based on findings from REL Northeast & Islands Massachusetts School Turnaround (MAST) partnership studies.

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Overview of Massachusetts System for Monitoring and Supporting Low-Performing Schools

Erica Champagne, Director, Massachusetts Department of Elementary & Secondary Education

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Successful Turnaround in Action
Turnaround Practices

1. ### Leadership, Shared Responsibility, and Professional Collaboration
   The school has established a community of practice through leadership, shared responsibility, and professional collaboration.

2. ### Intentional Practices for Improving Instruction
   The school employs intentional practices for improving teacher-specific and student-responsive instruction.

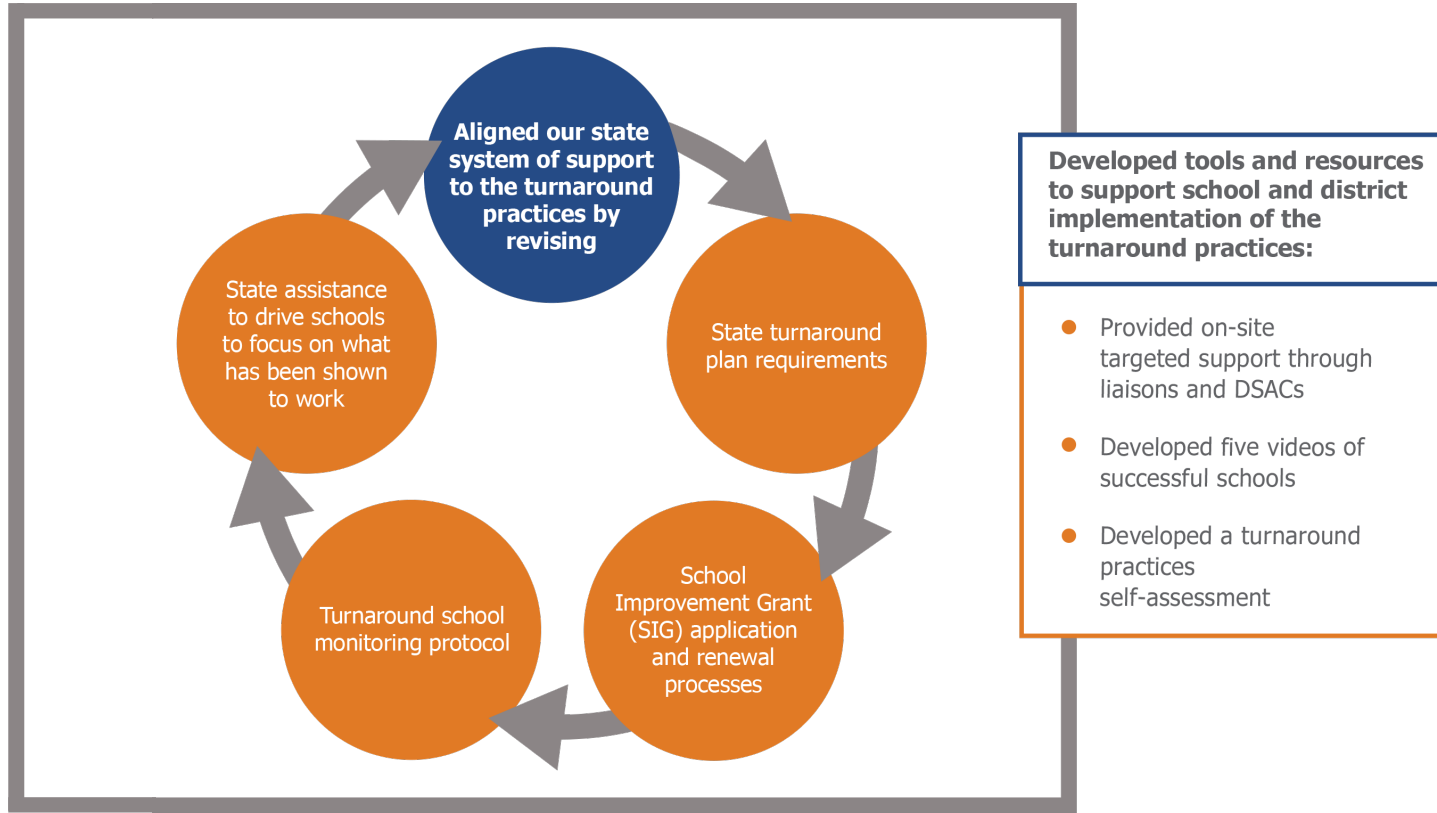3. ### Student-Specific Instruction and Supports to all Students
   The school provides student-specific supports and interventions informed by data and the identification of student-specific needs.

4. ### School Climate and Culture
   The school has established a climate and culture that provides a safe, orderly, and respectful environment for students and a collegial, collaborative, and professional culture among teachers that supports the school's focus on increasing student achievement.

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Massachusetts' Continuous Improvement Process in Action

Aligned our state system of support to the turnaround practices by revising

State turnaround plan requirements

School Improvement Grant (SIG) application and renewal processes

Turnaround school monitoring protocol

State assistance to drive schools to focus on what has been shown to work

Developed tools and resources to support school and district implementation of the turnaround practices:

- Provided on-site targeted support through liaisons and DSACs

- Developed five videos of successful schools

- Developed a turnaround practices self-assessment

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Impact Study Findings

Scores on Massachusetts's State Assessment at Schools Receiving SIG Funding (Effect Sizes in Years 1-3)
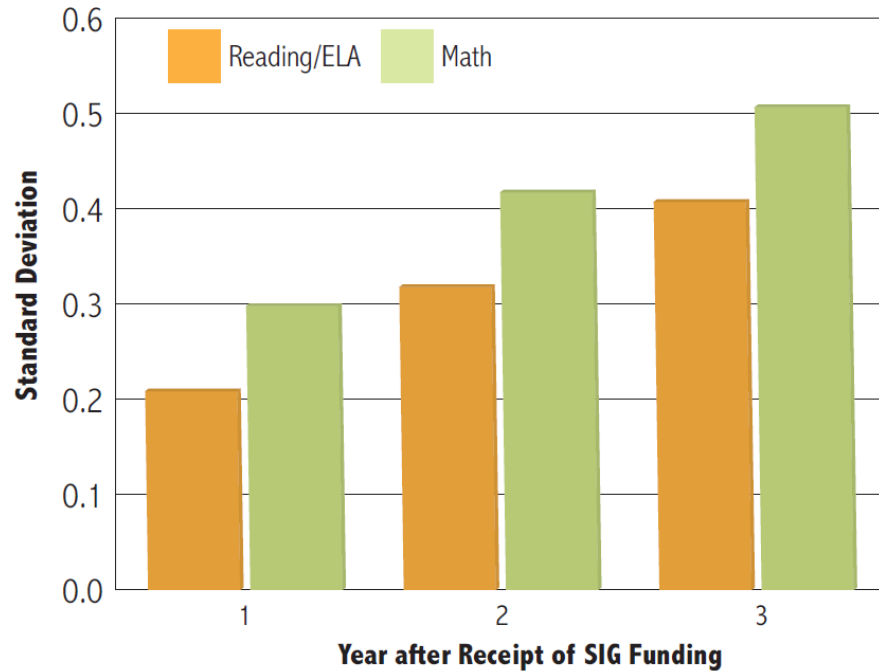
Equivalent to one additional year of schooling in both ELA and math

School Leaders Identify Indicators Critical to Turnaround Success

| 1. Leadership, Shared Responsibility, and Professional Collaboration	2. Intentional Practices for Improving Instruction	3. Student specific Supports and Instruction to All Students	4. School Climate and Culture
1.1 Use of Autonomy	**2.1 Instructional Expectations**	3.1 General Academic Interventions and Enrichment	**4.1 Safe and Supportive Learning Environments**
1.2 High Expectations and Positive Regard	2.2 Instructional Schedule	**3.2 Teacher Training to Identify Student Needs (academic and personal-social)**	**4.2 Adult–Student Relationships**
1.3 Vision/Theory of Action and Buy-In	**2.3 Identifying and Addressing Student Academic Needs**	**3.3 Systematic Determination of Student Interventions**	**4.3 Expanded Learning**
1.4 Monitoring Implementation and School Progress	**2.4 Classroom Observation Data Use**	3.4 General Enrichment and Advanced Learning Opportunities	**4.4 Wraparound Services and External Partners**
1.5 Trusting Relationships	2.5 Student Assessment Data Use (for Schoolwide Decision Making)	3.5 Academic Interventions for English Language Learners	**4.5 Family and Community Engagement**
1.6 Time Use for Professional Development and Collaboration	2.6 Student Assessment Data Use (for Classroom Instruction)	3.6 Academic Interventions for Students with Disabilities	
1.7 Communication with Staff	**2.7 Structures for Instructional Improvement**		
1.8 Sustainability	2.8 Planning for Incoming Students		
	2.9 Systems for College & Career Advising		

Context/Background

Rubric	Data Collection	Analysis	Reporting
• Turnaround Practices and Indicators Continuum	Annual and includes: • Instructional observations (CLASS by Teachstone) • Staff survey • Interviews and focus groups • Extant data review	• Qualitative and quantitative analysis methods • Prescribed process for integrating data sources • Ratings on each indicator and turnaround practice	• Formative feedback at the school and district levels • Cross-school comparisons • Comparisons of school progress over time.

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Background

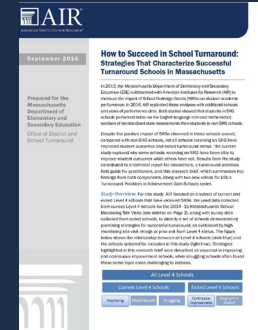**Evaluation of Level 4 School Turnaround Efforts in Massachusetts**
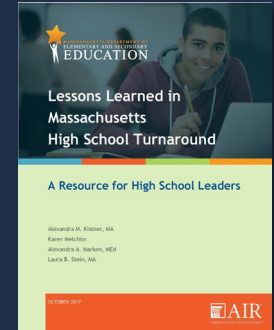

2016 Massachusetts Turnaround Practices Field Guide
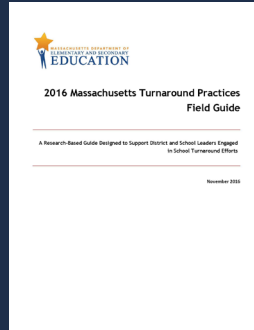
Research Brief

Lessons Learned in Massachusetts High School Turnaround

Study #1 Research Findings
The relationship between instructional observation scores and schoolwide student outcomes

Susan Bowles Therriault, MAST Partnership Lead, REL Northeast & Islands

Instructional Observations

- Uses Teachstone's Classroom Assessment Scoring System (CLASS) to collect data on the quality of interactions between teachers and students during instruction.

- CLASS tool rates the quality of interactions in three domains: Emotional support, classroom organization, and instructional support.

- Research suggests that individual classrooms with consistently high scores in each domain are associated with improved achievement outcomes for students (see, for example, Allen et al., 2013; Center for Advanced Study of Teaching and Learning, n.d.; Hamre & Pianta, 2010).

- These prior studies compared individual classroom scores—created by averaging across multiple observations of each classroom—with outcomes for students in those classrooms.

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CLASS Domains and Dimensions

Table 1. Domains and dimensions for the Classroom Assessment Scoring System instructional observations for elementary school (grades 4–5) and secondary school (grades 6–12) grade spans, 2016/17 and 2017/18

Emotional support	Classroom organization	Instructional support
• Positive climate	• Behavior management	• Content understanding/concept development
• Teacher sensitivity	• Productivity	• Quality of feedback
• Regard for student/adolescent perspectives	• Negative climate[a]	• Instructional learning formats
		• Analysis and inquiry
		• Instructional dialogue

a. Scored on a reverse scale and then normalized on the same scale as the other dimensions for all calculations.
Source: Authors' compilation.

CLASS Score Ranges

Table 2. Classroom Assessment Scoring System domain score classifications

Score range	Classification	Definition
1.00–2.99	Low range	The interactions observed within this domain are of minimal effectiveness. Effective interactions happen rarely, if ever, and when they do, they are isolated, brief, or of low quality.
3.00–5.99	Mid-range	Effective interactions within this domain are observed sometimes or to some degree but are inconsistent or limited.
6.00–7.00	High range	Effective interactions are observed consistently—they are frequent, sustained, and high quality.

Note: Each domain score is an average of the dimension scores within the domain (see table 1).
Source: Croasdale, 2015.

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Sample

Low-performing schools that received a state determined monitoring visit in either the 2016/17 or the 2017/18 school year

Schools categorized by grade spans to align with CLASS

Elementary grade span (grades 4–5),

Secondary grade span (grades 6–12), or

Both elementary and secondary grade spans

100 elementary and secondary grade spans across 88 low-performing schools (12 schools served students in both elementary and secondary grade spans)

46 elementary grade spans

54 secondary grade spans

Low-performing Schools Demographics Compared to State Averages

Figure 1. Low-performing schools in Massachusetts served higher percentages of Black, Hispanic, economically disadvantaged, and English learner students compared with the state average, 2017/18
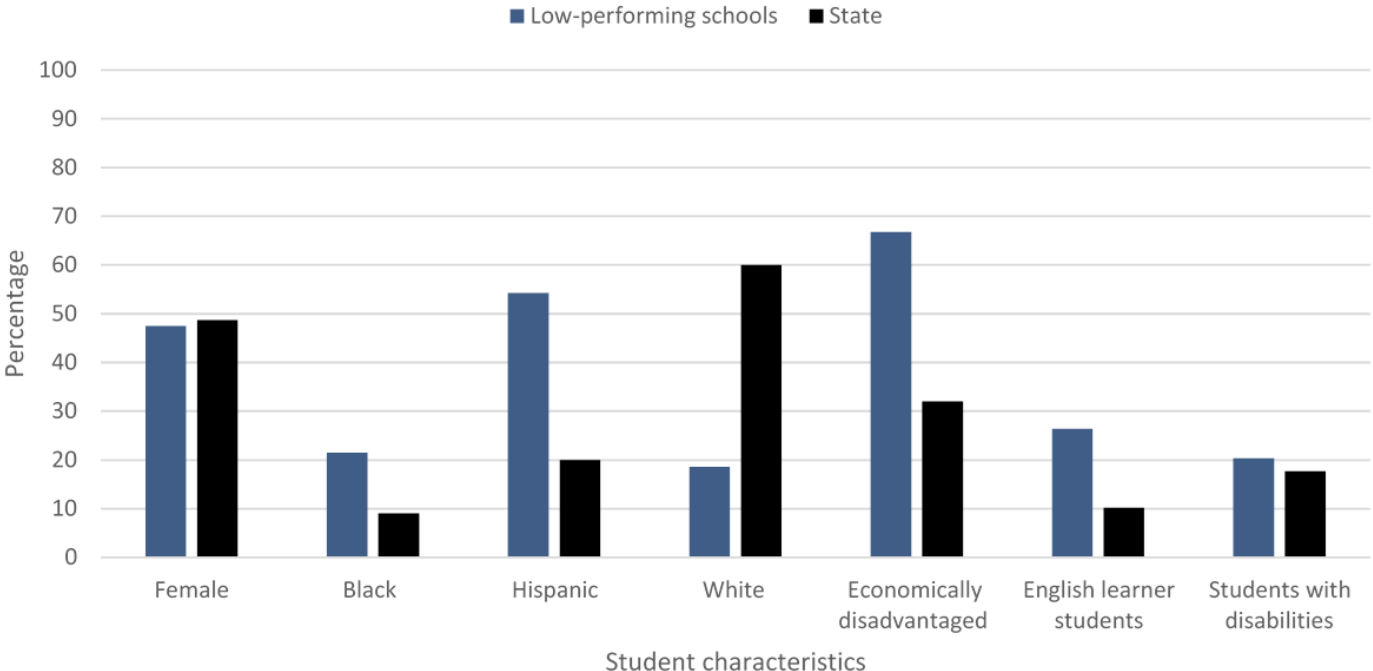
Academic Performance

Figure 2. The percentages of students who met or exceeded expectations on state English language arts and math assessments were lower in low-performing elementary and secondary schools than state averages, 2016/17 or 2017/18
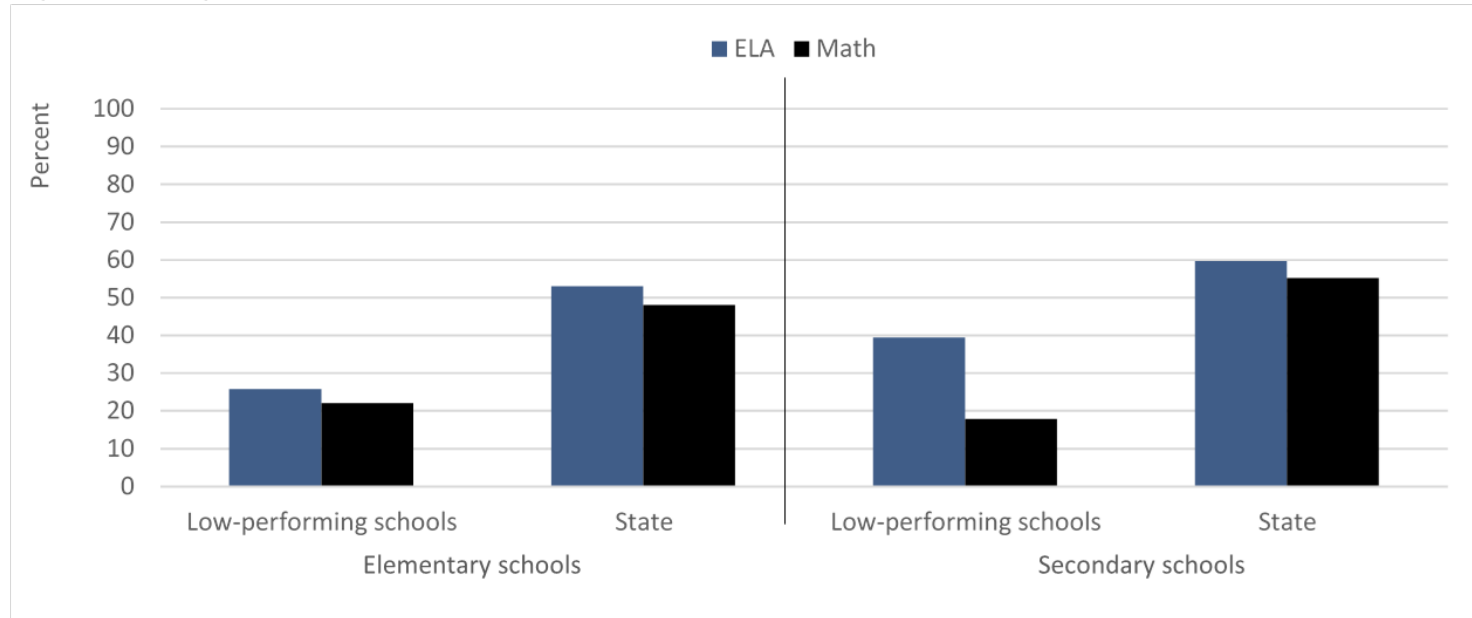
Median Academic Growth

Figure 3. Schoolwide median academic growth in low-performing schools in Massachusetts was lower than the state median, but some low-performing schools performed better, by subject and grade span, 2016/17 or 2017/18.
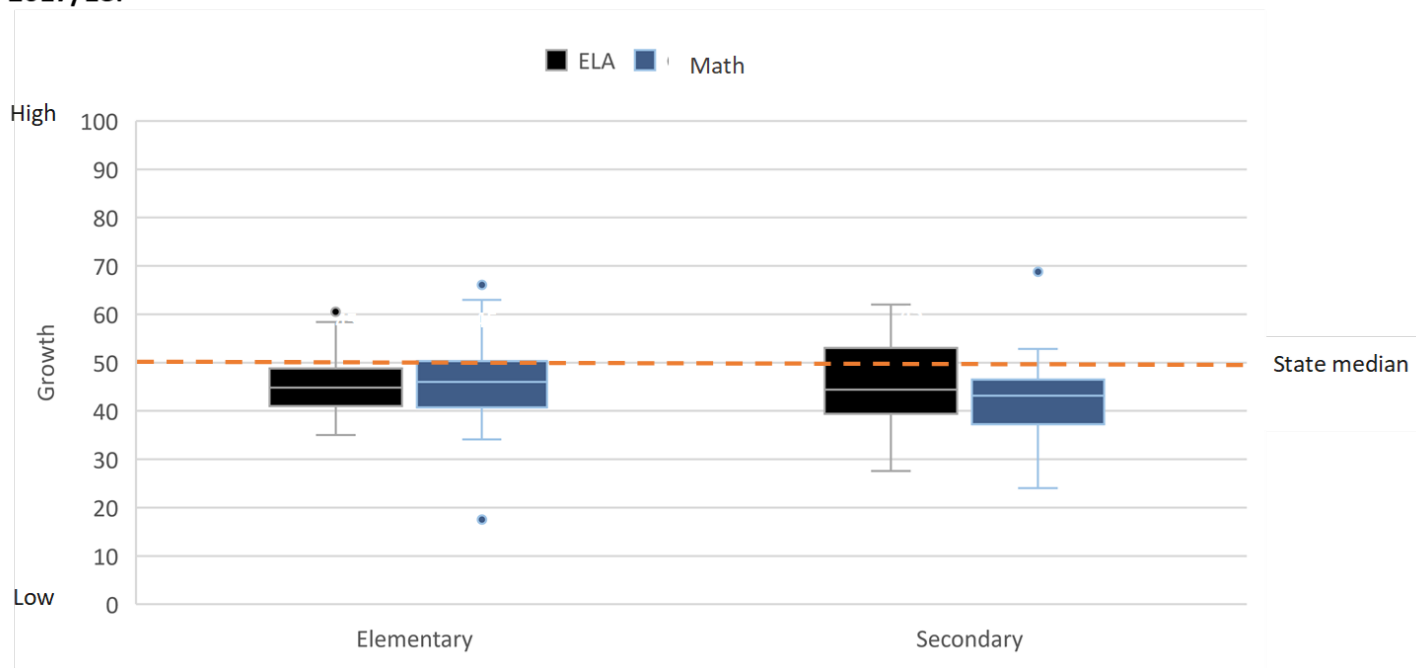
Average Domain Scores

Figure 4. Average domain scores in low-performing schools in Massachusetts were highest for classroom organization in both elementary and secondary schools, 2016/17 or 2017/18

Legend: ■ Elementary Mean instructional observation score   ■ Secondary Mean instructional observation score

Categories: Emotional support, Classroom organization, Instructional support

X-axis: Average instructional observation score (1 to 7)
Low range, Mid-range, High range

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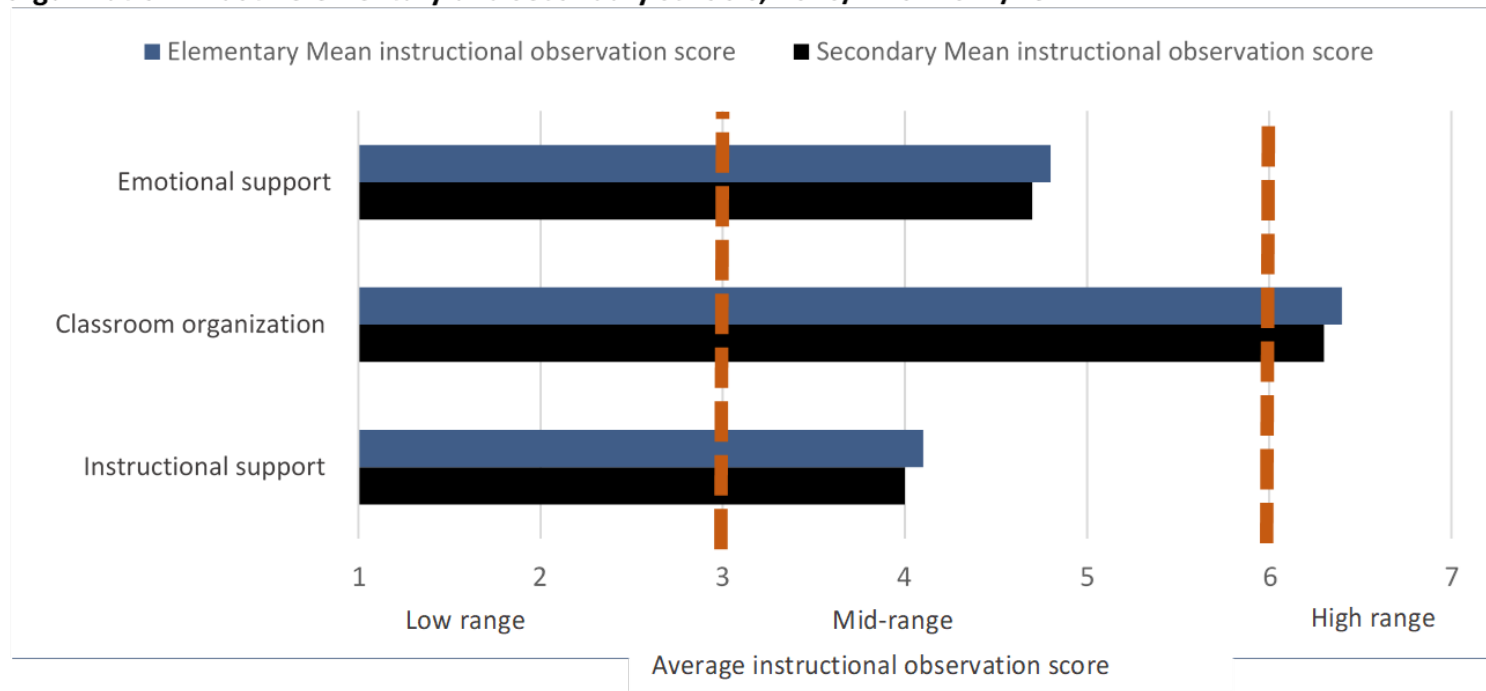
Average School Scores - Distribution

Figure 5. Average observation scores within each domain varied across low-performing schools in Massachusetts, 2016/17 or 2017/18
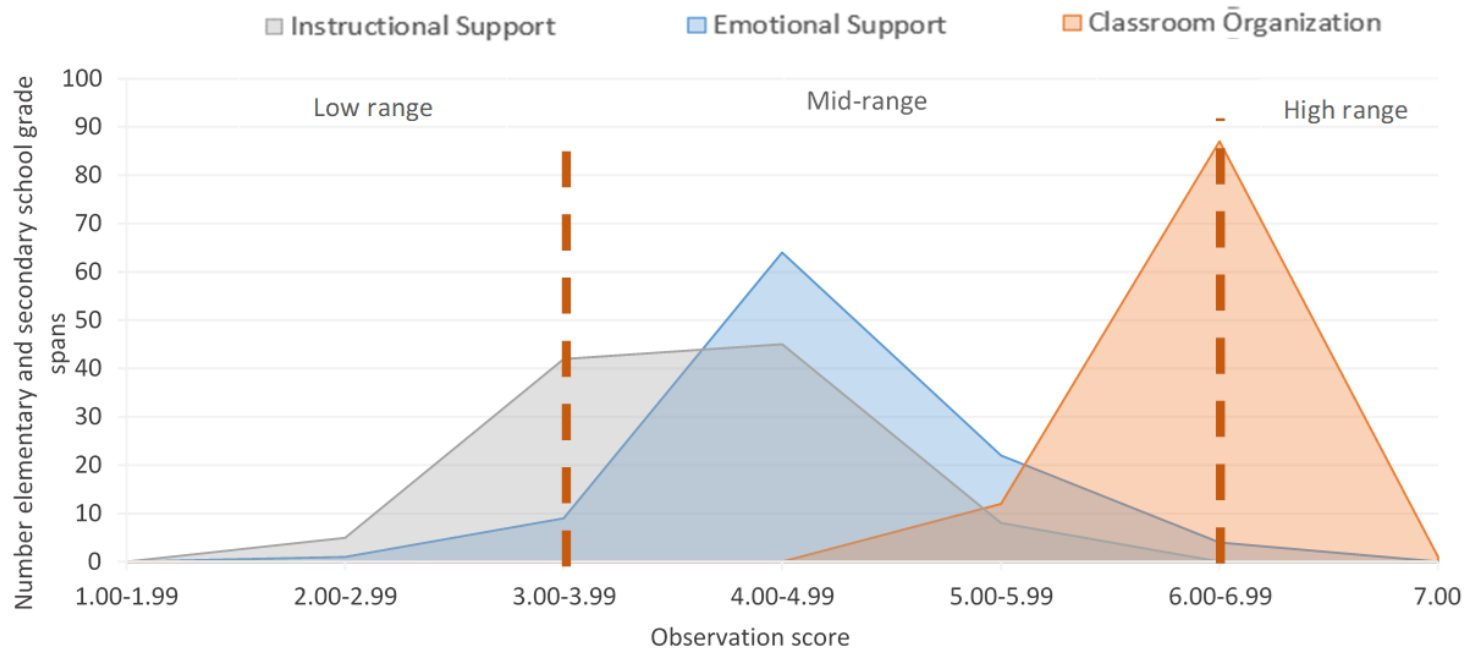
RQ1: Within School Variation

Table 4. There was a high level of variation in the quality of emotional support and instructional support in over 40 percent of low-performing schools in 2016/17 or 2017/18

Degree of within-school variation	Emotional support	Classroom organization	Instructional support
High variation (standard deviation greater than or equal to 1.0)	43%	12%	42%
Moderate variation (standard deviation of .5–.9)	50%	54%	55%
Low variation (standard deviation less than .5)	7%	34%	3%

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Relationship Between Domain Scores and **Schoolwide Student Achievement**

- Classroom organization domain scores **had a statistically significant positive relationship with schoolwide student achievement** on the state **English language arts assessment** in concurrent years

- A 1-point increase in the 7-point observation score was associated with a **5.1 percentage point increase in the percentage of students who met or exceeded expectations in English language arts**

- Other instructional domain scores had no significant relationship with English language arts or math achievement

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Relationship Between Domain Scores and **Schoolwide Student Academic Growth**

Schoolwide instructional observation scores in all three domains were positively related to student academic growth in English language arts and math

For **English language arts** a 1-point increase domain scores for each of the 3 domains is positively related to an increase in student academic growth

- emotional support: 3.3 point increase
- classroom organization: 4.2 point increase
- instructional support: 2.7 point increase

For **math** a 1-point increase in the domain score for each of the 3 domains is positively related to an increase in student academic growth

- emotional support: 3.6 point increase
- classroom organization: 7.6 point increase
- instructional support: 2.6 point increase

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Relationship Between Domain Scores and **Achievement**

Table 5. Higher observation scores in all domains were associated with higher ELA and math achievement growth in low-performing schools in Massachusetts, by domain and subject, 2016/17 or 2017/18

Domain	Schoolwide student academic achievement		Schoolwide student academic growth	
	English language arts	Math	English language arts	Math
Emotional support	1.8	1.9	3.3**	3.6**
Classroom organization	5.1*	4.3	4.2*	7.6**
Instructional support	1.3	2.3	2.7**	2.6*
Three domains combined	2.9	3.4	4.4**	5.1**

* Significant at $p < .05$; ** significant at $p < .01$.

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Limitations

Limited sample

- Low-performing schools
- Purposive classroom sampling (ELA, math, science)

Outcomes of academic achievement and growth only

Definition of schoolwide academic achievement may limit understanding of the relationship with instructional domain scores

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Study #2 Research Findings

Relationship Between State Annual School Monitoring Indicators and Outcomes in Massachusetts Low Performing Schools

Jingtong Pan, Principal Investigator, REL Northeast & Islands

Low-Performing School Monitoring Rubric

- Uses the Massachusetts Turnaround Practices and Indicators Continuum as a rubric to assess schoolwide progress and provide feedback to schools and districts (transparent process).

- Revised the Turnaround Practices and Indicators to reflect specific issues related to elementary and secondary education, although core indicators remained the same.

- The rubric was developed based on research conducted in Massachusetts low-performing schools that successfully turned around and research from across the nation focusing on improving low-performing schools.

- The rubric is publicly available to support transparency in the monitoring process and serve as a guide to schools and their districts as they focus on continuous improvement.

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Sample and Data

Massachusetts low-performing schools that received Turnaround Practices and Indicators (TP&I) ratings for 2014/15–2018/19, which are publicly available from the Massachusetts Department of Elementary and Secondary Education (91 schools)

229 Monitoring visits from 2014/15 through 2018/19

Each school's annual school-level outcome data, including school-level mean student growth percentile in English language arts and math assessed on the Massachusetts Comprehensive Assessment System (MCAS) and chronic absenteeism rates

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Indicator Implementation Continuum: 4-point rating system

Limited Evidence	Developing	Providing	Sustaining
Necessary organizational practices, structures, and/or processes are nonexistent, evidence is limited, or practices are so infrequent that their impact is negligible. (For example, common planning time is not scheduled, or instructional leaders are unaware of research and promising practices.)	Organizational practices, structures, and/or processes exist on paper or are being tried but are not yet fully developed or implemented consistently. (For example, the practice may only be implemented by some teachers or with a target group of students or may intermittently be used but is not part of a consistent approach. Processes are inconsistent or operate in silos. For example, data might be collected, but only a few people are looking at or effectively using the information.)	Systems are functional, and their structures and processes have been implemented consistently throughout the school; however, either communication between systems may be lacking or systems do not contribute to systemic decision making. (For example, an assessment system is in place and data are tracked, but results are not used in collaboration with other systems, such as teacher effectiveness or instructional guidance.)	The organizational practices, structures, and processes are functioning effectively, and timely feedback systems are embedded to identify potential problems and challenges. Feedback systems include progress checks to inform timely course corrections. The practice is embedded into the school culture.

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Excerpt from Turnaround Practices and Indicators Rubric

Turnaround Practice 1. Leadership, Shared Responsibility, and Professional Collaboration					
	Indicators	**Limited Evidence**	**Developing**	**Providing**	**Sustaining**
1.1	Use of Autonomy	School leaders have little to no autonomy (e.g., budgeting, staffing, school schedule) to make decisions about key elements of the school, such as staffing, length of the school day.	School leaders have some autonomy to make decisions about key elements of the school (e.g., budgeting, staffing, school schedule) but have not yet used this autonomy or are uncertain how best to use it.	School leaders have the autonomy (e.g., budgeting, staffing, school schedule) to make decisions about key elements of the school day and have begun to use this autonomy to make changes in the school.	School leaders use their autonomy (e.g., budgeting, staffing, school schedule) and authority to focus work on implementing their sustainable improvement plan or other improvement efforts to improve the quality of teaching and learning at the school.
1.2	High Expectations and Positive Regard	There is little to no evidence that the school makes high expectations and positive regard between leadership, staff, and students a priority.	School leaders understand the importance of high expectations and positive regard between leadership, staff, and students but do not implement specific strategies or activities to ensure that these elements are in place. School leaders understand the importance of providing equitable opportunity for traditionally underserved students (high poverty, English learners, students with disabilities, historically marginalized racial/ethnic	School leaders understand the importance of high expectations and positive regard between leadership, staff, and students and implement strategies or activities to ensure that these elements are in place. There are schoolwide structures and processes in place to provide equitable access and opportunity for traditionally underserved students (high poverty, English learners, students with disabilities	School leaders understand the importance of high expectations and positive regard between leadership, staff, and students and implement strategies or activities to ensure that these elements are in place. There are schoolwide structures and processes in place to provide equitable access and opportunity for traditionally underserved students (high poverty, English learners, students with disabilities, historically marginalized racial/ethnic groups

Link to Turnaround Practices and Indicators Rubric and Monitoring Site Visit Process Guide: https://www.doe.mass.edu/turnaround/howitworks/monitoring.html

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Findings

Half the turnaround indicators had statistically significant relationships with better schoolwide student outcomes and effect sizes of .25 or greater, and no indicator had a statistically significant relationship with worse outcomes.

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Overview of Findings, by Indicator

Selected Massachusetts turnaround practice indicators that have statistically significant and strong relationships with school outcomes, 2014/15–2018/19

Turnaround practice area and indicator	School mean student growth percentile		Chronic absenteeism
	English language arts	**Math**	
1. Leadership, Shared Responsibility, and Professional Collaboration			
1.2 High Expectations and Positive Regard			■
1.5 Trusting Relationships			■
2. Intentional Practices for Improving Instruction			
2.1 Instructional Expectations		■	
2.2 Instructional Schedule	■		
2.5 Student Assessment Data Use (for schoolwide decision-making)	■		
2.6 Student Assessment Data Use (for classroom instruction)	■	■	
2.7 Structures for Instructional Improvement	■	■	
3. Student-Specific Supports and Instruction to All Students			
3.1 General Academic Interventions and Enrichment	■		■
3.2 Teacher Training to Identify Student Needs	■		
3.5 Academic Interventions for English Language Learners	■		
3.6 Academic Interventions for Students with Disabilities	■		
4. School Climate and Culture			
4.1 Schoolwide Behavior Plan	■		■
4.2 Adult–Student Relationships		■	■

Two turnaround indicators in **Turnaround Practice 1. Leadership, Shared Responsibility, and Professional Collaboration** turnaround practice area had a statistically significant and practically meaningful relationship with _lower chronic absenteeism rate_

Turnaround practice indicator	School mean student growth percentile				Chronic absenteeism	
	English language arts		Math			
	Estimate	Effect size	Estimate	Effect size	Estimate	Effect size
1.2 High Expectations and Positive Regard	ns	nc	ns	nc	**–3.29***	**.27**
1.5 Trusting Relationships	ns	nc	ns	nc	**–3.00****	**.25**
1.7 Communication with Staff	ns	nc	ns	nc	–2.29*	.19

Five turnaround indicators in the **Turnaround Practice 2. Intentional Practices for Improving Instruction** turnaround practice area had a statistically significant and practically meaningful relationship with *higher academic growth in English language arts or math*.

Turnaround practice indicator	School mean student growth percentile				Chronic absenteeism	
	English language arts		Math			
	Estimate	Effect size	Estimate	Effect size	Estimate	Effect size
2.1 Instructional Expectations	ns	ns	3.45*	0.35	ns	ns
2.2 Instructional Schedule	2.12**	.26	ns	ns	ns	ns
2.3 Identifying and Addressing Student Academic Needs	1.43*	0.17	ns	ns	ns	ns
2.4 Classroom Observation Data Use	2.03*	0.24	ns	ns	ns	ns
2.5 Student Assessment Data Use (for schoolwide decision-making)	2.04**	.25	ns	ns	ns	ns
2.6 Student Assessment Data Use (for classroom instruction)	2.07**	.25	3.42***	0.35	ns	ns
2.7 Structures for Instructional Improvement	2.62*	.32	3.84**	0.39	ns	ns

Four indicators in **Turnaround Practice 3. Student-Specific Supports and Instruction to All Students** turnaround practice area had a statistically significant and practically meaningful relationship with _higher academic growth in English language arts, and one with lower chronic absenteeism rates_

Turnaround practice indicator	School mean student growth percentile				Chronic absenteeism	
	English language arts		Math			
	Estimate	Effect size	Estimate	Effect size	Estimate	Effect size
3.1 General Academic Interventions and Enrichment	**2.40****	**0.29**	2.34*	0.24	**−3.34****	**0.27**
3.2 Teacher Training to Identify Student Needs (academic and nonacademic)	**2.64*****	**0.32**	2.19*	0.22	ns	ns
3.3 Determining Schoolwide Student Supports (Academic Interventions and Enrichment)	1.64*	0.20	1.73*	0.18	−2.98***	0.24
3.4 Multitiered System of Support (academic and nonacademic)	1.75**	0.21	1.95*	0.20	ns	ns
3.5 Academic Interventions for English Language Learners	**2.47*****	**0.30**	2.06*	0.21	ns	ns
3.6 Academic Interventions for Students with Disabilities	**2.29****	**0.28**	ns	ns	ns	ns

Two indicators in the **Turnaround Practice 4. School Climate and Culture turnaround practice area** had a statistically significant and practically meaningful relationship with *higher academic growth in either English language arts or math and lower chronic absenteeism rate*

Turnaround practice indicator	School mean student growth percentile				Chronic absenteeism	
	English language arts		Math			
	Estimate	Effect size	Estimate	Effect size	Estimate	Effect size
4.1 Schoolwide Behavior Plan	**2.34****	**.28**	ns	ns	**−3.20****	**.26**
4.2 Adult–Student Relationships	ns	ns	**2.94****	**.30**	**−3.36****	**.27**

Limitations

Limited sample

Does not demonstrate causal relationships

Limited time span (one year)

Chronic absenteeism direction for some indicators

Implications

Erica Champagne, Director, Massachusetts Department of Elementary & Secondary Education

Questions & Answers

Susan Bowles Therriault

We Listen to You!

Your feedback is essential to our work.
Please take our survey to help us improve.

To Contact Today's Presenters

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Thank you!

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