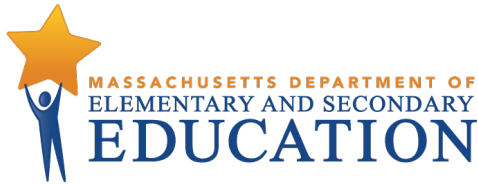


Resource Reallocation to District Priorities



Resource Reallocation to District Priorities: Case Studies

In the fall of 2017, 7 districts and 2 teams of districts applied for and received \$50,000 - \$100,000 in funding through DESE's Resource Reallocation to District Priorities grant. As part of the grant, districts:

- Identified an initiative in an area of need
- Invested in programming using resources from their existing budget and grant funding
- Conducted an academic return-on-investment analysis to measure the impact

Nine case studies outline these districts' investments, evaluation processes, outcomes, and future plans. Each one presents a Massachusetts district that invested in and measured the outcomes of a specific program to determine if the program is likely to succeed and is cost-effective. See the overview and summaries below, and download case studies from the district links.

For more information about evidence-based interventions and school improvement practices in Massachusetts, visit the How Do We Know website, which provides resources for measuring implementation and impact of district initiatives.

Overview of Case Studies

District	Enrolled Students	Initiative	Grade Levels	Content Area	Page
Andover	5,957	<ul style="list-style-type: none"> • Training Paraprofessionals • Interventions 	K to 3	Literacy Behavior/SEL	2
Berkshire Hills	1,203	<ul style="list-style-type: none"> • Co-teaching/UDL • Teacher PD/Coaching 	K to 8	Math	6
Dighton-Rehoboth	2,902	<ul style="list-style-type: none"> • Curriculum • Career Pathways • Teacher PD 	All Grades	STEAM	10
Greater New Bedford Regional Voc-Tech	2,139	<ul style="list-style-type: none"> • Teacher PD/Coaching 	9 to 12	Math ELA	14
Marblehead	3,051	<ul style="list-style-type: none"> • Intervention 	4 to 6	All	18
Maynard	1,350	<ul style="list-style-type: none"> • Training Paraprofessionals • Intervention 	K to 3	Behavior/SEL	22
Northern Berkshire	2,956 (group)	<ul style="list-style-type: none"> • Teacher PD/Coaching • Co-teaching/UDL 	PK to 2	All	26
SEEM Collaborative	24,528 (group)	<ul style="list-style-type: none"> • Teacher PD/Coaching • Co-teaching/UDL 	All Grades	All	31
Waltham	5,633	<ul style="list-style-type: none"> • Dual-language Instruction • Teacher PD • Intervention 	K to 2	Math ELA	36

Case Study: Andover Public Schools equips paraprofessionals to catalyze early intervention efforts



Executive Summary

- Andover Public Schools’ leadership team reviewed RADAR data in 2017 and noticed the district had higher percentages of students with disabilities and a larger number of out of district special education placements than similar districts.
- Andover had a high ratio of paraprofessionals to students with disabilities, and few received specific training.
- The district invested in two training programs for paraprofessionals: one program trained paraprofessionals to lead small group literacy interventions, and the second trained another group of paraprofessionals to work under a Board-Certified Behavior Analyst as Registered Behavior Technicians.
- Andover partnered with Massachusetts General Hospital to develop a series of modules through which paraprofessionals would earn literacy micro-credentials to lead interventions in K–3.
- Administration believed these trainings would improve paraprofessional job satisfaction and retention, students’ foundational early literacy skills, and behavioral supports for students.
- The district plans to sustain the cost of the trainings and the higher pay scale for the certified paraprofessionals after the grant by repurposing professional development funds and other operational cost savings.

FAST FACTS

Andover Public Schools

SY 2016-17

Schools
10

Teachers
457

Students
6,009

SWD
18.9%

District Leadership

Sheldon Berman, Superintendent
Sara Stetson, Dir. of Student Services

Case Study Authors

Sarah Carleton, DESE | Sr. Dist. Policy Analyst
Sam Ribnick, DMGroup | Sr. Director
Brianne Rok, DMGroup | Sr. Associate
J. Luke Chitwood, DMGroup | Case Writer

Resource Reallocation to District Priorities Grant Program

A competitive two-year program supporting school districts to make substantial changes in resource allocation and direct more resources toward evidence-based improvement strategies. This grant program also encourages districts to use the new suite of Resource Allocation and District Action Reports (RADAR) tools to analyze how they use resources.



Overview of Grant

This case study is one of nine in a series showcasing the work of recipients of a 2017 DESE two-year grant for reallocating resources to align with district priorities. The case study explains how the participants used state data tools such as RADAR and DART to identify an area of need, determined an evidence-based investment, shifted resources in their existing budget to make the investment, and then evaluated the cost and impact of the investment.

Planning: Andover developed training programs to prepare professionals to lead literacy interventions and become Registered Behavior Technicians

Andover Public Schools enrolls about 6,000 students across ten schools, including five elementary schools. In previous years, Student Services Director Sara Stetson prioritized training special education teachers and developing co-teaching models for students with language-based challenges. The district also worked to strengthen social-emotional and behavioral supports and hired a Clinical Health Director to integrate mental, physical, and behavioral health services as part of this effort.

Stetson analyzed RADAR data in 2017 and recognized 18.9% of students in Andover had a disability, as compared to 14.6% – 17% in comparable districts. Andover also employed a higher number of paraprofessionals (known in the district as Instructional Assistants, or IAs), with over 100 IAs in grades K–5. Many of Andover’s out-of-district (OOD) placements of students with disabilities stemmed from language-based learning differences. District administration evaluated school-level practices and identified that behavioral issues and dyslexia were the most common causes for evaluation referrals in the primary grades, yet kindergarten IAs were not trained in targeted behavioral or literacy supports.

Stetson believed that the IAs could be more effective with better training on reading and behavior. This effort was part of a broader district strategy to provide more intensive support to students with disabilities at the elementary level, and use innovative strategies to build teacher and IA capacity to deliver these services. Stetson and her team also aimed to increase the percentage of students with disabilities in inclusive settings, and saw providing intensive behavior and literacy supports as fundamental to achieve this goal. Andover applied for and received grant funding to cover the cost of two training programs for IAs: one

Exhibit 1 | Andover Enrollment

Exhibit 1.a Total district enrollment (students)

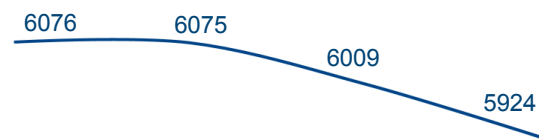
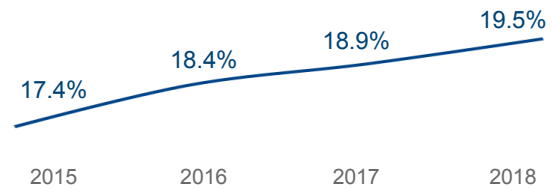


Exhibit 1.b Students with disabilities (% of total enrollment)



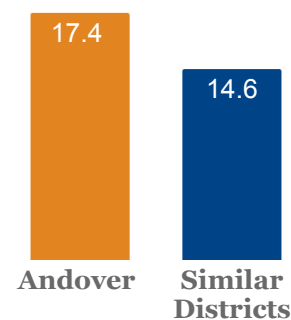
that prepared IAs to earn literacy microcredentials and lead K–2 literacy interventions, and one that prepared IAs to become Registered Behavior Technicians (RBTs) and deliver behavioral interventions.

Andover partnered with Lesley Maxwell, Associate Chair and Associate Professor for the Department of Communication Sciences and Disorders at the Massachusetts General Hospital (MGH) Institute of Health Professions, to develop literacy micro-credentialing coursework throughout the first half of the 2018-2019 school year. Twenty-five IAs from Andover’s five elementary schools were identified through a combination of self-selection and principal recommendations. MGH facilitated in-person training in December 2018 for these IAs, and they continued their professional development with a series of online modules during the spring of 2019. Each module lasted five weeks and included ten hours of instruction on leading literacy interventions. Training also included structured observations of both advanced and struggling readers.

Staff has found some aspects of the MGH training and practicums challenging, so school administration and district leaders developed “Professional Learning Groups” (PLGs). PLGs reinforced learnings from the trainings and were led by administration at each

Exhibit 2 | RADAR Analysis – Staffing

Paraprofessional staff (FTE) per 100 SWDs (2016-17)



school. PLGs continued throughout 2018-2019 in conjunction with the literacy modules.

For the behavior training, Andover partnered with Constellation Behavior Services to train ten additional IAs for RBT certification. RBT trainees participated in a two-year training program throughout 2017-2018 and 2018-2019, and nine of the ten RBT-trainees passed their certification exams in the spring of 2019. While training, the RBT-trainees delivered research-based interventions, collected data for Functional Behavior Assessments, and implemented Behavior Intervention Plans under the supervision of a Board-Certified Behavioral Analyst (BCBA). To implement this initiative, district leadership negotiated contractual changes with the paraprofessional union. This time-consuming process delayed the IA's formal change in responsibilities and job title. However, in early 2019 the contracts were amended and RBT-trained IAs began to support students with behavior, supervised by the BCBA.

Measuring: Andover used data to measure the impact of the IA trainings on student and staff outcomes

The Andover team worked with DMGroup and DESE to define success for the training programs. The team developed the following definitions of success:

- The portion of K–2 students scoring below benchmark on the DIBELS assessment will decrease by ten percentage points during 2018-2019.
- RBT-trained IAs will respond positively to a survey regarding RBT certification and instruction.
- 100% of students will meet their goals at 80% or higher based on RBT observations over the course of 2018-2019.
- The number of students placed out-of-district will decrease 40% in the 2018-2019 compared to the average over prior years.

Andover used grant funds to contract with Constellations to deliver RBT training in 2017-2018 and 2018-2019. The grant also covered the partnership with MGH, including the development and facilitation of the literacy training modules.

To supplement these investments, Andover reallocated professional development funds. Moving forward, Andover expects to cover stipends for RBT- and literacy-trained IAs with funds saved from LED lighting upgrades and solar net metering credits.

As part of the grant, the Andover team calculated the fully loaded cost of the IA training programs, using a structured protocol to capture expenses. For the RBT program, the team factored in the cost of staff time dedicated to the certification process and the cost of certification exams. The fully loaded cost also included BCBA and district leaders' time developing trainings and coaching the RBTs.

For the literacy training, the Andover team factored in the cost of the contract with MGH and staff time devoted to attending, developing, and facilitating trainings. They also accounted for time Andover's Grants Manager, Business Manager, and Director of Student Services dedicated to developing and facilitating the training.

Andover determined that the fully loaded cost was about \$226,000 for both programs, which equated to about \$870 for each student impacted by the programs. Staff time dedicated to the training programs accounted for approximately \$160,000 of the total cost. The remainder was spent on stipends, PD, trainings, and certification exams, and funded through the resource reallocation grant and repurposed PD funds.

Exhibit 3 | Fully Loaded Per Pupil Cost

Time Investment	
Category	Estimated Amount
Staff Time	\$160,000
Cash Investment	
Category	Amount
IA Stipends	\$27,750
Literacy Training	\$25,000
RBT Training/Exams	\$13,935
Estimated Cost Per Student	
Students Impacted	Amount
260	\$870

Evaluating: Andover saw positive outcomes in student learning across multiple measures, and positive IA response to training

DIBELS assessment: The share of K–2 students scoring below benchmark on the DIBELS assessment decreased ten percentage points from the beginning to the end of 2018-2019. While 28% of K–2 students initially scored below benchmark, this number dropped to 18% in the spring. First grade saw the most significant growth, with the percentage of students below

benchmark dropping from 28% to 13% from the beginning to the end of the year. The percentage of kindergarteners below benchmark dropped from 34% in the fall to 26% in the spring. For second graders, this decreased from 23% to 15%. Second graders below benchmark dropped from 23% in the fall to 15% in the spring. Stetson believes scores may be slightly lower in kindergarten in part because students enter at different reading levels, and anticipates more growth as small group, targeted literacy interventions continue.

Response to RBT training: Of IAs who participated in the RBT training, 96% rated every aspect of the training as “excellent” in an exit survey. 100% of IAs said they would recommend the training to other staff, and 100% indicated interest and enthusiasm for implementing strategies learned in the training. As of the fall of 2019, 90% of RBT-trained IAs passed their certification exam and support students as RBTs.

Student behavior goal attainment: RBTs tracked specific students’ instances of problem behaviors during behavior interventions. Four out of five students’ number of problem behaviors increased from baseline to the end of the intervention. Stetson remarked that it took time for the RBT-trained IAs to fully implement intervention skills from their training. Ultimately, leaders anticipate that intensive, proactive support from RBTs and BCBA’s can increasingly meet the needs of students with behavioral challenges in inclusive environments.

Out of district placements: In 2018-2019, 84 students were educated out of district, a 14% reduction compared to the past five years, when the average was 98 students per year. Stetson expects that the number of students educated out of district will continue to decline as Andover builds its capacity to support students with disabilities.

Looking ahead: Moving forward, trained IAs will continue to deliver intensive, small group support literacy and behavior interventions

Stetson and her team were pleased to see that the share of students with disabilities in grades 3 – 5 meeting or exceeding standards on the MCAS ELA assessment increased from 19% in 2017 to 39% in 2019. Stetson believes this growth, the DIBELS assessment gains, and the OOD placement reductions result from Andover’s broad effort to target services to students in early elementary grades and in specific areas of need. The district’s theory of action is that proactive support will yield stronger outcomes in later elementary grades and beyond. In 2019-2020, literacy-trained IAs have

Exhibit 4 | DIBELS growth

Percent of students at or above benchmark (DIBELS).

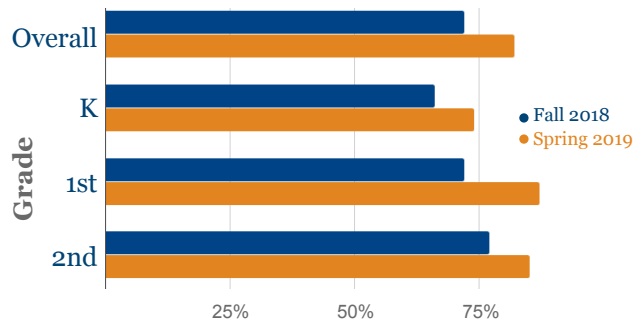
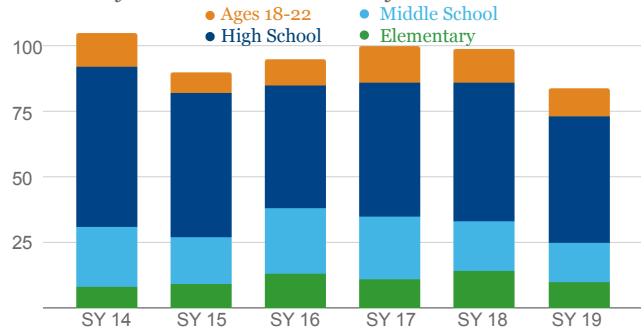


Exhibit 5 | Out of District Placements

Number of students educated out-of-district



continued to lead small group interventions to supplement teachers’ core instruction.

With regards to behavior, Stetson remarked that Andover’s central office has received fewer calls from schools to support students with severe behavioral needs in the fall of 2019, as compared to previous years. Most elementary schools now have dedicated classrooms where RBTs deliver interventions. Moving forward, Stetson hopes the RBT-trained IAs will allow BCBA’s to focus on students with the most severe needs. This will connect a broader group of students with behavior-trained staff and will free up BCBA time for students who need intensive behavioral services.

Stetson noted that training IAs involved both structural and cultural shifts in the district. Leaders and district staff collaborated to ensure IAs were successful in both programs as they were rolled out in 2018-2019. This collaboration included developing PLGs for IAs at each school and reallocating resources to reserve time and space for RBTs to work directly with students.

Andover hopes this work and their broader efforts to strengthen supports for students with disabilities will help schools tailor services to students’ areas of need. The district is pleased with the early outcomes of the IA training programs. Stetson and her team will continue to measure students’ growth in literacy and behavior over time to deploy resources to services that have a measurable, positive impact on Andover’s students.

Resource Reallocation to District Priorities

Case Study: Berkshire Hills invests in targeted professional development to embed inclusive practices



Executive Summary

- Berkshire Hills Regional School District leaders took part in a 2016 pilot of DESE's Resource Allocation District Action Reports (RADAR), and found that their high-needs students were achieving less growth than in similar districts. Looking at their own data, they further realized these students had lower college enrollment and completion than the district average.
- District leaders identified root causes for these inequities: classrooms grouped by level leading to low expectations, and a need for stronger co-teaching practices to reach all students.
- In response, leaders added more co-taught classes and implemented training on Universal Design for Learning and math instruction, using a combination of repurposed funds and a 2017 DESE grant that encouraged districts to repurpose resources.
- The math PD provided by the Teachers Development Group was well-received, "some of the best PD I've seen implemented in my entire career" according to the district's Director of Learning & Teaching. However, the UDL training got less traction, and district leaders have developed new collaboration structures focused on UDL for future years.
- MCAS results in math improved roughly five points, an encouraging early indicator, though other assessment measures showed mixed results. District leaders plan to monitor results as implementation continues in the years ahead.

FAST FACTS

Berkshire Hills
Public Schools

SY 2016-17

Schools

3

Teachers

114

Students

1,286

SWD

18.0%

EL

2.8%

Econ. Disadv.

26.0%

District Leadership

Kristi Farina, Director of Teaching & Learning

Peter Dillon, Superintendent

Sharon Harrison, CFO

Case Study Authors

Sarah Carleton, DESE | Sr. Dist. Policy Analyst

Sam Ribnick, DMGroup | Sr. Director

J. Luke Chitwood, DMGroup | Case Writer

Resource Reallocation to District Priorities Grant Program

A competitive two-year program supporting school districts to make substantial changes in resource allocation and direct more resources toward evidence-based improvement strategies. This grant program also encourages districts to use the new suite of Resource Allocation and District Action Reports (RADAR) tools to analyze how they use resources.



Overview of Grant

This case study is one of nine in a series showcasing the work of recipients of a 2017 DESE two-year grant for reallocating resources to align with district priorities. The case study explains how the participants used state data tools such as RADAR and DART to identify an area of need, determined an evidence-based investment, shifted resources in their existing budget to make the investment, and then evaluated the cost and impact of the investment.

Planning: Berkshire Hills invested in more inclusive practices for all students

Berkshire Hills Regional School District leaders participated in the 2016-17 pilot of DESE's Resource Allocation District Action Reports (RADAR), including superintendent Peter Dillon, CFO Sharon Harrison, and Director of Learning & Teaching, Kristi Farina. This team realized that their growing population of high-needs students – encompassing economically disadvantaged students, English language learners (EL), and students with disabilities (SWD) – underperformed their counterparts in comparable districts. For example, Berkshire Hills' student growth percentile (SGP) was 32 for high-needs students in 10th grade ELA, versus a statewide average of 45. More troubling, these students were less likely to attend college and less likely to stay enrolled.

District leaders talked about what equity would look like for these students, and determined that the existing leveled grouping structures reinforced low expectations for high-need students. They altered the schedule to introduce more heterogeneous groupings and decided to make a major investment in instructional practice. In particular, they decided to focus on math instruction and expanding and strengthening co-teaching.

The district repurposed some existing professional development dollars toward these efforts, and applied for the 2017 Resource Reallocation to District Priorities grant to pay for one-time training costs.

To strengthen co-teaching, Berkshire Hills selected Dr. Tanya Moorehead to provide training on Universal Design for Learning (UDL), with the hope that it would reach all Berkshire Hills teachers by the grant's second year, but low participation in the non-mandatory training forced a change in plans. Leaders decided to focus on a core group of teachers to receive intensive training and then coach additional teachers. After the first

Exhibit 1 | Berkshire Hills Enrollment

Exhibit 1.a Total district enrollment (students)

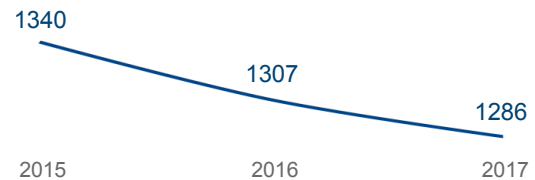
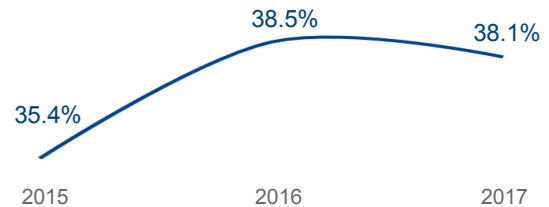


Exhibit 1.b High-needs students (includes SWD, EL, and economically disadvantaged; % of total enrollment)

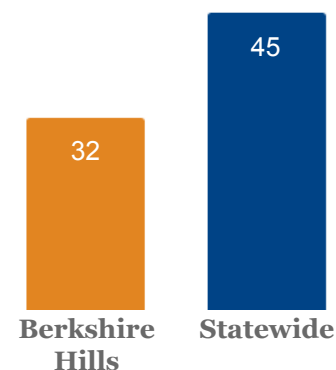


year of training, the district created a 2019 Summer Academy to engage more teachers and Instructional Learning Groups of teachers to develop UDL-aligned curricula and assessments.

To address math instruction, the district engaged Teacher Development Group (TDG) to provide training via their Math Studio approach. Math Studio begins with a “studio teacher” working directly with an external coach to plan a lesson. Other teachers observe the studio teacher delivering this lesson and provide feedback. Berkshire Hills created two teams of teachers for this collaboration (one of 4th-6th teachers, the other from grades 7-12). Early in 2018-19, some math teachers expressed concern that they felt “targeted” by the intensive approach to professional development exclusively focused on their subject area. This reluctance quickly shifted to enthusiasm, as teachers began to see positive effects in their classrooms from the initiative's best practices and coaching. Participating teachers were so excited about the work, they pushed the dis-

Exhibit 2 | RADAR Analysis – SGP

SGP for high-needs students, 10th grade ELA (2016-17)



trict to add two more days of PD in May of 2019 for elementary teachers.

Farina herself was pleased with the Math Studio workshops and coaching sessions, saying “this was some of the best PD I’ve ever seen implemented in my entire career.”

Measuring: The Berkshire Hills team set quantifiable goals for the impact of their investments

The team worked with consultants from District Management Group and staff from DESE to define how they would measure the success of the professional development. These definitions of success were developed by the team:

- 20% increase in number of high-needs students scoring proficient or advanced on the MCAS math assessment
- 10% gain in number of targeted SWD ranking above the 50th percentile for their grade level on the AIMSWEB math assessment
- Targeted economically disadvantaged students demonstrate 80% or higher proficiency on end-of-unit common assessments

With those long-term goals in mind, district leaders also conducted informal observations of teachers to gauge implementation of new practices from the coaching and training.

The team utilized resource reallocation grant funds to engage TDG and Tanya Moorehead in leading professional learning sessions in math and UDL, respectively. Grant funds also helped defray the costs of staff stipends and time invested in the PD initiatives, and covered the UDL summer academy. The team reduced the cost of this work by planning around district PD release time for some workshops and coaching sessions.

The remainder was funded through district cost savings and resource reallocation from other professional development projects and consulting contracts. In reconfiguring class schedules and the district’s academic program, the team used RADAR to analyze enrollment numbers and projections to create more balanced class sizes and eliminate any instances of overstaffing.

“When teachers saw the change in student behavior in the studio cycle, they went from skeptic to bought-in.”

Exhibit 3 | Fully Loaded Per Pupil Cost

Time Investment	
Category	Amount
Teacher Direct Service	\$165,000
Teacher Training	\$48,000
Principal Time	\$70,000
Administrator Time	\$37,000
Cash Investment	
Category	Amount
Fees for Training	\$27,000
Estimated Cost Per Student	
Students Impacted	Amount
375	~\$930

As part of the grant, the team set out to determine the fully loaded cost of their initiative. Using a structured protocol to capture expenses, they calculated a total per-pupil cost of roughly \$930, which included external trainers, stipends to release educators from other commitments to attend PDs, and the cost of administrators’ time planning the initiative and conducting observations.

Evaluating: Leaders assessed the shift in instructional culture and the impact on learning outcomes, focusing on high-needs students

Berkshire Hills’ investments aimed to achieve better outcomes for high-needs students and create more inclusive classrooms across the district, ultimately impacting 375 students. The district analyzed outcomes for each of the measures of success.

MCAS math: The percentage of students meeting or exceeding expectations rose to 41% in 2018-19 from 37% the prior year (grades 3-8). Among the targeted high-needs population, there was a similar increase to 27% from 22% the prior year, a significant improvement but one that left the achievement gap nearly unchanged. District leaders were pleased with the results as an early indicator of effectiveness, but reserved judgement until they had multiple years of results. Farina observed that grade 3, where outcomes declined in 2018-19, was the one grade whose teachers did not participate in the training. “It’s always hard to attribute things to a single cause, but that makes me wonder,” Farina said.

Exhibit 4 | MCAS Math

Percent of students meeting or exceeding on Math MCAS

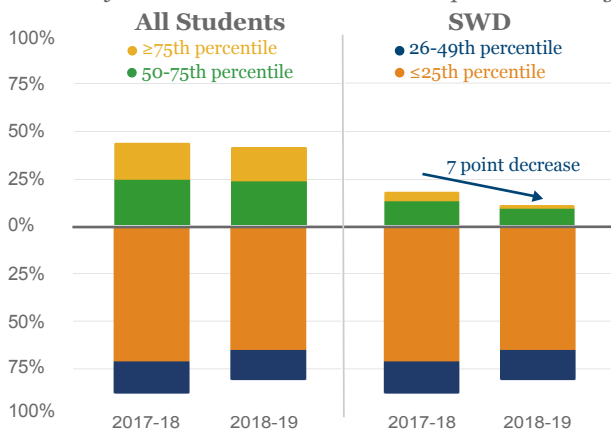
	Grade	SY 2017-18	SY 2018-19	Percentage Point Change
All Students	All	37%	41%	5%
	3	44%	25%	-19%
	4	36%	47%	11%
	5	34%	49%	15%
	6	41%	47%	6%
	7	33%	40%	7%
	8	35%	39%	4%
	All	22%	27%	5%
High-needs	3	31%	17%	-14%
	4	33%	33%	1%
	5	15%	38%	22%
	6	29%	24%	-5%
	7	15%	26%	11%
	8	12%	26%	14%

AIMSweb math: Overall, students in grades 1-4 had nearly identical performance on AIMSweb compared to the prior year. For students with disabilities, the portion of students above the 50th percentile actually declined in 2018-19, but district leaders were quick to note that this amounts to a change for only a handful of students. Overall, district leaders felt these were inconclusive.

Math end-of-course exams: The achievement gap on end-of-course exams increased in 2018-19, as overall student scores improved roughly five percentage points and economically disadvantaged students' scores declined by six percentage points. Through the analysis of the data, district leaders identified issues of consistency and validity in high school assessments. The results motivated leaders to put in place stronger assessments.

Exhibit 5 | AIMSweb Scores (Grades 1-4)

Percent of district students' scores in each percentile range



While the math PD received strong reviews from teachers, students, and administrators alike, the UDL and co-teaching PD was not as warmly received or successfully implemented. As noted previously, the team concluded that making these PD sessions optional ultimately limited their impact. Looking back, Farina reflected: “If you provide training on co-teaching after school when only one half of a pair can attend, that PD doesn’t provide the needed support.” Nonetheless, with this difficult work to build foundational buy-in around UDL done, the team anticipates greater future impact.

Looking ahead: The team takes action to improve programs in 2019-20

Changing a district’s instructional culture is never easy. Farina reflected that “the tension between providing meaningful PD and not pulling teachers away from students was really a challenge.” The district’s teachers consistently said they didn’t want to be pulled away from their classes, but the team ultimately concluded, “if, in reality, you are committed to the work for the long term, then the payback from the investment [in professional development] is so much greater.”

Superintendent Dillon echoed this sentiment, saying “If we make a commitment to looking at it in this way over time, it keeps us focused on initiatives so we don’t go after the next sparkly thing that comes up.”

The team continues to refine their plan to create more inclusive classrooms, continuing to expand co-teaching in 2019-20. After seeing limited turnout for the UDL training held outside of school, they plan to focus 2019-20 training on the district’s pairs of co-teachers, with remaining staff exploring UDL within mandated collaborative time working in ILGs or pre-existing grade level teams. In this way, the team anticipates realizing their initial vision for UDL to reach all teachers. For accountability, the team is embedding UDL and inclusion work into their supervision and evaluation procedures.

By participating in this grant program and the 2016-17 pilot for DESE’s RADAR tool, Berkshire Hills’ leadership developed deep expertise in using data to analyze problems and assess the impact of their solutions. The district is continuing implementation and plans to review multi-year data trends with a sense of optimism. As Dillon said, “I’m really excited to see what happens next year.”

Resource Reallocation to District Priorities

Case Study: Dighton-Rehoboth engineers initiative to align STEAM learning across grades PK–12



Executive Summary

- The Dighton-Rehoboth leadership team determined that their students were underperforming on the Science and Technology/Engineering MCAS, compared to students in similar districts.
- The team decided to focus on aligning learning experiences in science, technology, engineering, arts, and mathematics (STEAM) courses for all grades.
- Leadership invested in four major areas: (1) early elementary literacy curriculum that introduced science concepts, (2) a new curriculum and materials for middle school science teachers that included experiential learning methods, (3) a high school biology curriculum that aligned with MA standards, and (4) computer science and engineering pathways for grades 9–12.
- To pay for these initiatives, Dighton-Rehoboth used grant funds, reallocated resources from other professional development initiatives and operational savings, and employed assets from separately awarded grants.
- At the end of 2018-19, the Dighton-Rehoboth team saw positive trends in MCAS scores, course enrollment, and teacher feedback on the implementation of standards.

FAST FACTS
Dighton-Rehoboth
Public Schools
SY 2016-17

Schools	5
Teachers	237
Students	2,883
Econ. Disadv.	13.7%

District Leadership

- Anthony Azar**, Superintendent
- Kerri Anne Quinlan-Zhou**, Assistant Superintendent for Curriculum, Instruction and Professional Development
- Catherine Antonellis**, Business Administrator
- Jeremy Guay**, CTE Director
- Karen Rose**, STEAM Specialist & Biology Teacher

Case Study Authors

- Sarah Carleton**, DESE | Sr. Dist. Policy Analyst
- Sam Ribnick**, DMGroup | Sr. Director
- Simone Carpenter**, DMGroup | Sr. Associate
- J. Luke Chitwood**, DMGroup | Case Writer

Resource Reallocation to District Priorities Grant Program

A competitive two-year program supporting school districts to make substantial changes in resource allocation and direct more resources toward evidence-based improvement strategies. This grant program also encourages districts to use the new suite of Resource Allocation and District Action Reports (RADAR) tools to analyze how they use resources.



Overview of Grant

This case study is one of nine in a series showcasing the work of recipients of a 2017 DESE two-year grant for reallocating resources to align with district priorities. The case study explains how the participants used state data tools such as RADAR and DART to identify an area of need, determined an evidence-based investment, shifted resources in their existing budget to make the investment, and then evaluated the cost and impact of the investment.

Planning: Dighton-Rehoboth focuses its efforts on improving STEAM practices

Leaders from Dighton-Rehoboth Regional School District (DRRSD), a district of just under 3,000 students, reviewed RADAR data and DART comparisons during 2016-17 and found that their students scored lower on the Science and Technology/Engineering (STE) MCAS than similar districts. In response, leadership explored ways to improve instruction and outcomes in science, technology, and engineering for students in all grades, through a set of district-wide STEAM (Science, Technology, Engineering, Arts, and Math) initiatives.

The district had ambitious goals for improving STEAM outcomes. These goals included creating a vertically-aligned curriculum, updating standards and instructional models for high school biology, and creating computer science and engineering career pathways for grades 9–12. To support the start-up costs associated with bringing these plans to fruition, the Dighton-Rehoboth team applied for the Resource Reallocation to District Priorities grant.

Upon receiving the grant, the Dighton-Rehoboth team collaborated with District Management Group (DMGroup) and DESE to develop a plan to target investments and reallocate resources for STEAM and then track the impact.

The team set out a plan that began with their PK–4 elementary schools. In these grades, district leadership realized that not all teachers and school leaders were comfortable teaching science. To incorporate science concepts where teachers were more confident, the district’s assistant superintendent worked with their STEAM and literacy leads to select curriculum resources to integrate science in their literacy lessons. They also incorporated experiential learning lessons from the Wade Institute for Science Education (formerly

Exhibit 1 | Dighton-Rehoboth Enrollment

Exhibit 1.a Total district enrollment (students)

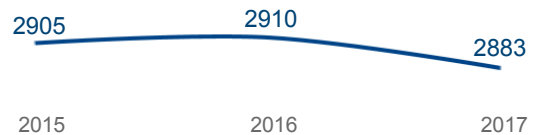
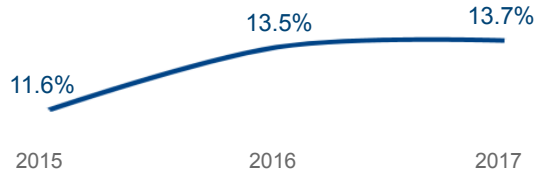


Exhibit 1.b Economically disadvantaged students (% of total enrollment)



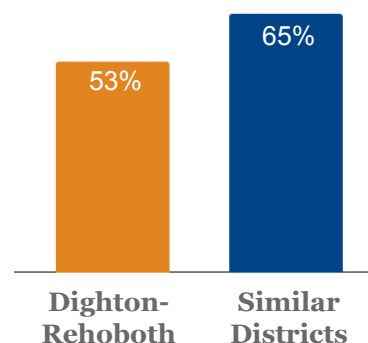
known as the Museum Institute for Teaching Science) into the curriculum.

At the middle school (grades 5–8), Dighton-Rehoboth implemented new science standards and coaching strategies. All grade 5-8 science teachers gathered for nearly five full days of mapping new standards, learning experiential pedagogical approaches, and developing “tasks” (multiple aligned and connected lessons on a given topic).

For grades 9–10, Dighton-Rehoboth developed a new biology curriculum that aligned with updated DESE standards. Lessons prioritized discovery and experiential learning by incorporating virtual labs, technology-assisted activities, case studies, and teacher-selected readings. The district implemented this new curriculum in a pilot model: three teachers developed and used the new curriculum and standards while three teachers continued to teach the current ones.

Exhibit 2 | RADAR Analysis – Science MCAS

Percentage of students scoring proficient or above (2016-17)



Simultaneously, district leaders created computer science (CS) and robotics courses at the high school, with plans to ultimately develop comprehensive computer science and engineering career pathways.

Measuring: Dighton-Rehoboth team gathers data to measure the impact and cost of their STEAM initiatives

As a part of the grant process, Dighton-Rehoboth worked with DMGroup and DESE to define success measures for their investments, which required them to think through the desired outcomes and the specific metrics they could use to assess these outcomes. The team developed the following definitions of success:

- Student achievement increases ten or more points on the Biology MCAS in grades 9–10.
- Student achievement increases on the STE MCAS in grades 5 and 8.
- Teachers increase their comfort and knowledge of the STE standards in grades PK–8, as measured by a teacher survey.
- Enrollment in computer science courses increases 100% in 2018-19 versus the prior school year.

To evaluate their investments, Dighton-Rehoboth collected Biology and STE MCAS scores, high school course selection data, and a teacher survey on comfort and knowledge of science standards in grades PK–8.

Dighton-Rehoboth paid for portions of curriculum planning time and professional development with grant funds. Grant funds also covered the costs of providing class coverages for collaborative planning sessions. District leadership repurposed staff time to support instruction and curriculum development from STEM specialists and district administrators, and reassigned one of their elementary school’s librarian positions to spend 50% of their time working as another STEM specialist. The remaining resources came from additional operational savings, other grant programs, and professional development funds from other initiatives.

Using a process from DMGroup, leaders first brainstormed all resources related to the investments, including staff time, administrator time, fees, stipends, consultants, materials, and operations. Costs included curricula and materials purchased, staff time developing lessons and curriculum, the hiring of a new com-

Exhibit 3 | Fully Loaded Per Pupil Cost

Time Investments	
Category	Amount
Staff Time	\$395,000
Administrator Time	\$105,000
Cash Investments	
Category	Amount
Fees, Stipends, Consultants	\$19,075
Materials	\$27,651
Estimated Cost Per Student	
Students Impacted	Amount
2,582	\$211

puter science teacher and other STEAM-related activities across their schools.

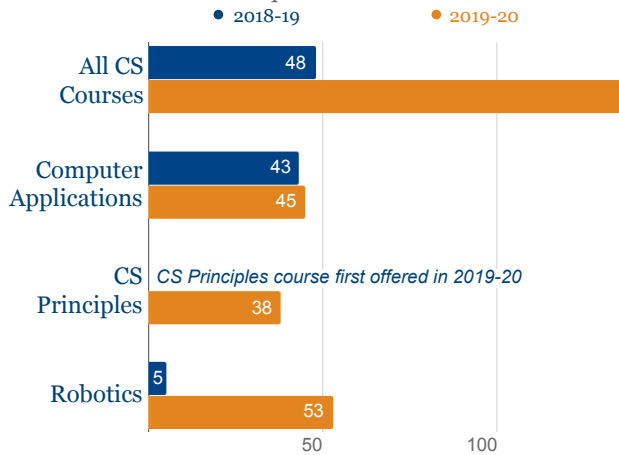
After cataloging all costs associated with the STEAM initiatives, the Dighton-Rehoboth team determined that the total cost was \$547,000, which equated to a per pupil cost of about \$200, given that these investments impacted all 2,514 PK–10 students and around 68 students from grades 11–12 who opted into the computer science courses. In addition to these expenses, DRRSD invested over \$1,000,000 in their fiber and WiFi project, an effort that is directly related to the computer science initiatives at the high school.

Evaluating: Dighton-Rehoboth team evaluates the impact of their STEAM investments

High school computer science course enrollment: From 2018-19 to 2019-20, Dighton-Rehoboth Regional High School saw a dramatic increase in enrollment in their three computer science courses: Computer Applications, Computer Science Principles (only offered in 2019-20), and Robotics. During 2018-19, Dighton-Rehoboth had 48 total students enrolled across the six sections of the two courses offered. During 2019-20, the school had 136 students enrolled across the six sections of the three courses offered, a 183% increase in enrollment. Additionally, sections were on average 60% fuller in 2019-20 than 2018-19. The most dramatic increase in enrollment was in the two sections of Robotics. During 2018-19, the high school had 5 students enrolled in Robotics; in 2019-20, 53 students enrolled, and sections were 91% fuller.

Exhibit 4 | Computer Science Enrollment

Students enrolled in computer science courses

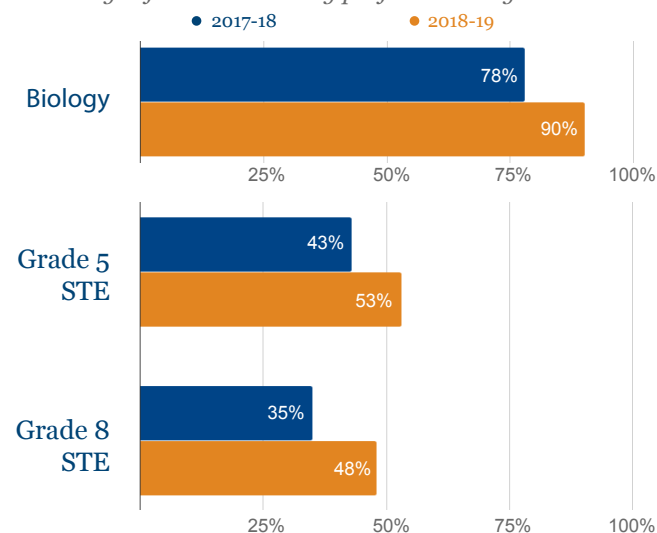


Biology MCAS: Dighton-Rehoboth reviewed MCAS data for high school students in grades 9–10 biology. Between 2017-18 and 2018-19, Dighton-Rehoboth Regional High School saw a 12 percentage point increase in students scoring proficient or higher on the MCAS test, from 78% to 90%. These results met the definition of success outlined by the team. Additionally, the Composite Performance Index (CPI) increased by 4.9 points, or 5% from 91.2 to 96.1, exceeding the target defined by the state.

MCAS, grades 5 and 8: MCAS scores for grades 5 and 8 STE also increased between 2017-18 and 2018-19. In 5th grade, the percent of students proficient or advanced grew by ten percentage points, from 43% in 2018-19 to 53% in 2019-20. Similarly, in 8th grade, the percent of students proficient or advanced on the STE MCAS grew by 13 percentage points, from 35%

Exhibit 5 | MCAS Scores (Bio & STE)

Percentage of students scoring proficient or higher



in 2018-19 to 48% in 2019-20. The growth in both of these grades met the goals set out by the district.

Teacher feedback: Finally, the Dighton-Rehoboth team surveyed teachers in grades PK–8 to gather feedback on the STE standards, STE professional development, and the incorporation of standards into their lessons. Of teachers surveyed, 56% reported that their knowledge of the new STE standards grew from the start of the year to the end of the year. These results show initial promise in the professional development, but the district will continue to put effort and focus working with teachers.

Looking ahead: Dighton-Rehoboth team improves and expands programs in 2019-20

Heading into 2019-20, Dighton-Rehoboth continues to analyze their 2018-19 data to identify how they can support teachers with the new science standards. Their work includes continuing to develop integrated lessons for PK–4 and tasks, or sets of lessons, for grades 5–8 with the support of technology and material integration into the classroom.

At the high school, the district is implementing the new standards for biology in grade 9 and is rolling up their pilot to all biology teachers next year. They continue growing their computer science coursework at the high school, adding Computer Science Principles in 2019-20, and plan to add Game and App design in 2020-21. Eventually, the district hopes to develop a full pathway program by adding Advanced Placement (AP) Computer Science, and expanding their robotics curriculum and engineering careers pathway.

Each investment made by Dighton-Rehoboth leadership required significant change in practice for classroom educators, and required the support of the district to implement. “Change is hard,” commented Dr. Kerri-Anne Quinlan-Zhou. “Flexibility is key, [and] we’re willing to change mid-course in order to get to the end goals.” The district will continue to provide sustained support and flexibility for teachers implementing these changes.

“Flexibility is key, [and] we’re willing to change mid-course in order to get to the end goals.”

Resource Reallocation to District Priorities

Case Study: Greater New Bedford Voc-Tech shifts funds to train teachers on formative assessments and measures the impact



Executive Summary

- Greater New Bedford Regional Vocational-Technical High School (GNBVT) wanted to improve teacher practice to support student growth in ELA and math as part of a commitment to strengthening academic offerings alongside their vocational programs.
- Leadership invested in training on the use of formative assessment data for academic teachers and added an ELA teacher for 9th and 10th grade to keep class sizes down.
- The team measured changes in teacher practice and student growth. After a year of training, the percent of teachers rated proficient on use of data went from 38% to 46%, and SGP results on MCAS improved for both ELA (2.0 points) and math (3.2 points).

FAST FACTS

Greater
New Bedford
Voc-Tech
SY 2016-17

Schools
1

Teachers
194

Students
2,154

Econ. Disadv.
36.9%

District Leadership

James O'Brien, Superintendent
Michael Watson, Academic Principal
Robert Watt, CVTE Principal
Helder Angelo, Dir. of Curriculum, Instruction, Assessment, and Accountability
Allen Duarte, Grant Writer

Case Study Authors

Sarah Carleton, DESE | Sr. Dist. Policy Analyst
Sam Ribnick, DMGroup | Sr. Director
Simone Carpenter, DMGroup | Sr. Associate
J. Luke Chitwood, DMGroup | Case Writer

Resource Reallocation to District Priorities Grant Program

A competitive two-year program supporting school districts to make substantial changes in resource allocation and direct more resources toward evidence-based improvement strategies. This grant program also encourages districts to use the new suite of Resource Allocation and District Action Reports (RADAR) tools to analyze how they use resources.



Overview of Grant

This case study is one of nine in a series showcasing the work of recipients of a 2017 DESE two-year grant for reallocating resources to align with district priorities. The case study explains how the participants used state data tools such as RADAR and DART to identify an area of need, determined an evidence-based investment, shifted resources in their existing budget to make the investment, and then evaluated the cost and impact of the investment.

Planning: Greater New Bedford Voc-Tech works to improve teacher use of data and student academic performance

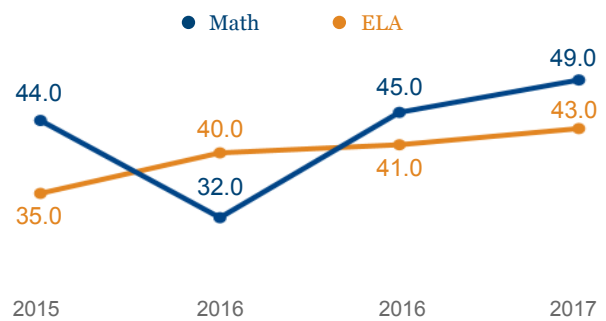
At the start of 2016-17, leaders at Greater New Bedford Vocational-Technical (GNBVT) High School reviewed their students' performance on MCAS relative to students at other vocational high schools. While the number of students proficient or above on MCAS was in line with peers, GNBVT students had lower growth scores (SGP). Leadership reviewed formative and summative data to identify reasons for the low growth and worked to establish a long-term strategic improvement plan rooted in SMART goals. They deployed a number of changes in their school environment to work towards the improvement plan. This began with an overhaul of the school's master schedule to build in literacy, math concepts, and strategies classes for all students in grades 9 and 10 to develop skills in ELA, math, and science. Leaders worked to build in time for teacher collaboration through professional learning communities (PLCs) and thoughtfully scheduled students based on performance and needs. To promote more rigorous instruction, they provided more targeted professional development and encouraged the use of technology within the classroom. Finally, members of the leadership team, including the principal, refocused time and energy towards classroom instruction, conducting more observations and providing coaching and feedback to teachers.

To make further investments in strengthening academics, the GNBVT leadership applied for and won the Resource Reallocation to District Priorities grant.

The team used grant funds to invest in PD focused on the use of data to inform instruction, engaging Dr. Nancy Love at Research for Better Teaching. She helped establish High Impact Teacher Teams (HITTs), who implement a four phase process to drive instruction and

Exhibit 1 | GNBVT Assessment Scores

Student growth (SGP) over time



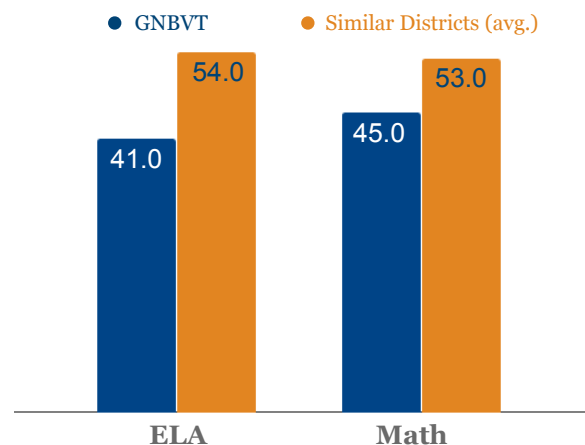
improve student learning. These four phases are: establish success criteria, infuse formative assessments, analyze the data, and take action through reteaching and reengaging.

In the summer and fall of 2018, Dr. Love trained 40 staff members from all academic departments during three full-day professional development sessions. The 40 staff members then trained their professional learning communities (PLCs) in six PLC sessions during the fall through a "train-the-trainer" model. Additionally, Dr. Love conducted three onsite visits from December to March to observe PLC meetings and classrooms and provide hands-on coaching to staff.

The leadership team also sought to reduce ELA class sizes given the lower ELA student growth. In reviewing research on class size, the team cited a Massachusetts brief which states: "While all students can benefit from smaller classes, there is evidence that students of color and low income students particularly benefit from well-designed class size reductions." Approximately 40% of GNBVT's students come from low income families. The team determined that reallocating resources to hire an additional ELA teacher for grades and 10 stu-

Exhibit 2 | RADAR Analysis – SGP

ELA and math SGP (2016-17)



dents would reduce class sizes from 22 to 18 and could help improve student growth.

Measuring: GNBVT assessed the impact on staff and student outcomes

The GNBVT team worked with DMGroup and DESE to define success measures for their investments, thinking through the desired outcomes and specific metrics. The team developed the following definitions of success:

- Teachers will apply the knowledge and skills obtained from the Data and Formative Assessment Workshops as measured by a 20% increase in the number of teachers rated “providing” and/or “sustaining” on the GNBVT learning walk protocol formative assessment indicator from 2017-18 to 2018-19.
- Teachers will apply the knowledge and skills obtained from the Data and Formative Assessment Workshops to improve student performance as demonstrated through a student growth percentile at or above 50 on ELA & Math MCAS.
- Reduced class sizes in grades 9 and 10 ELA will improve student performance as demonstrated through a student growth percentile at or above 50 on ELA MCAS.

The funds from the DESE grant were used to support the initial implementation of the scope for this project. GNBVT wanted to ensure that the work would be financially sustainable. While grant funds were critical in paying for the initial PD, leaders deliberately used PLCs and the train-the-trainer model to embed the knowledge throughout the staff, so they would not be reliant on an outside trainer in future years. Grant funds also paid a portion of the initial salary of the grade 9-10 ELA teacher hired to reduce class sizes. The district had identified a vocational/technical vacancy at the end of 2017-18 that would not be filled freeing up the funds to cover the full teacher salary in subsequent years.

After the formative assessment training, the district conducted learning walks to determine how teachers were applying the skills they learned in their training. The GNBVT team focused on Indicator 2 related to use of data to inform instruction. District leaders conducted 64 learning walks in 2017-18 as a baseline and then 90 learning walks in 2018-19 after the professional development.

Key Terms for Measuring Success

Learning Walk Protocol
Adapted from DESE’s Learning Walkthrough Implementation Guide, Indicator 2: Use of Data to Inform Instruction. *Providing* indicates a teacher has established routines, systems, and the use of assessment data to monitor what each student knows/is able to do. *Sustaining* signifies that students also take part in monitoring their own progress through formative assessments.

Student Growth Percentiles (SGP)
A measure of student progress developed by DESE, SGP compares changes in a student’s MCAS scores to changes in MCAS scores of their “academic peers” (students with similar scores in prior years). SGP aims to illustrate district or school impact on a student’s academic achievement.

GNBVT also collected and analyzed MCAS student growth percentiles broken down by content area (Math and ELA) over multiple years, before and after the formative assessment training and addition of the ELA teacher.

Using a process from DMGroup, the district leaders calculated the fully loaded costs of their investments. This included not only direct costs, such as trainer fees and the salary of the additional ELA teacher, but also indirect costs like administrator time supporting the training and time staff spent interviewing ELA teacher candidates.

After collecting all costs associated, GNBVT deter-

Exhibit 3 | Fully Loaded Per Pupil Cost: Formative Assessments

Personnel Costs	
Category	Amount
Staff Time	\$194,000
Administrator Time	\$1,000
Non-Personnel Costs	
Category	Amount
Consultants and Fees	\$17,700
Materials	\$4,000
Cost Per Student	
Students Impacted	Amount
2,139	\$100

mined that the total cost of their formative assessment investment was approximately \$216,700. All 2,139 students at the school were impacted by the training, equating to an estimated per-pupil cost of about \$100. Additionally, all 9th and 10th graders were impacted by the additional ELA teacher (1,120 students) equating to an estimated per-pupil cost of this investment of \$62. Of the total \$286,000, \$236,000 involved repurposed GNBVT time and expenditures; DESE grant funds covered the remainder.

Exhibit 4 | Fully Loaded Per Pupil Cost | Additional ELA Teacher

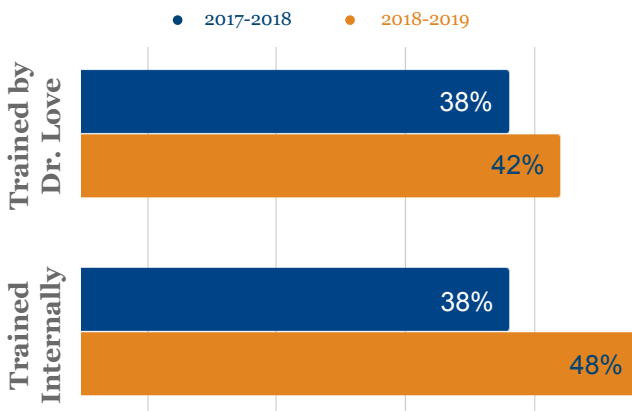
Personnel Costs	
Category	Amount
Staff Time	\$68,400
Administrator Time	\$800
Non-Personnel Costs	
Category	Amount
Consultants and Fees	\$250
Cost Per Student	
Students Impacted	Amount
1,120	\$62

Evaluating: GNBVT reviewed the results of their investments for staff and students

Learning walks protocols: During 2018-19, GNBVT saw an overall eight percentage point increase from 2017-18 in the number of teachers “providing” or “sustaining” on Indicator 2 (use of data to inform instruction). The team disaggregated data based on the form of training received by teachers: either trained by

Exhibit 5 | Learning Walks

Percent change (from 2017-18 to 2018-19)

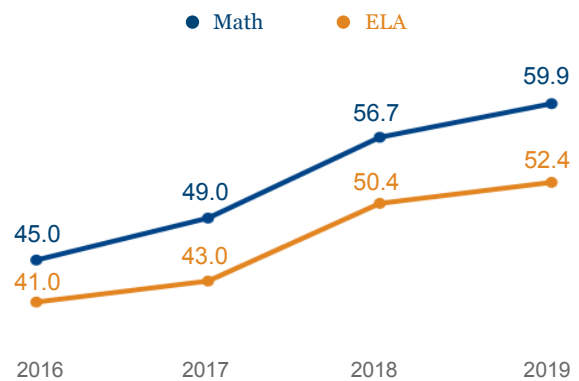


Dr. Love or trained by a teacher trainer. District leaders were pleased to see that teachers trained internally also showed improvements.

MCAS: GNBVT reviewed MCAS scores in ELA and math to see the impact on student performance of the formative assessment training and the addition of an ELA teacher. In ELA in 2018-19, the school-wide student growth percentile (SGP) was 52.4, a two point increase from the 2017-18 SGP of 50.4. In math, the schoolwide SGP was 59.9, a 3.2 point increase from the 2017-18 SGP of 56.7. In ELA, where smaller class sizes were targeted for higher-needs students, SGPs increased for DESE-designated high-needs and economically disadvantaged subgroups. Students in both subjects met their definitions of success.

Exhibit 6 | MCAS Scores: Changes in SGP

ELA and math SGP



Looking ahead: The GNBVT team continues to improve practice in 2019-20

From 2016-17 to 2018-19, the GNBVT team saw momentum building among the staff to improve student growth and performance. With all of the large-scale changes, including the schedule overhaul, professional development, and administrator supports that took place across these years, leaders cannot attribute their success to any single initiative but rather to the comprehensive and cohesive focus on improving student growth and supporting staff. Looking to 2019-20, the team continues to maintain and sustain their focus on instruction and student performance without implementing any new major initiatives. One administrator summarized the district’s focus by repeating their motto for the year: “Stay the course, keep running.”

Resource Reallocation to District Priorities

Case Study: Marblehead improves differentiated supports for students at the Village School.



Executive Summary

- Despite a decrease in enrollment, Marblehead Public Schools experienced an increase in students with disabilities from 2013 to 2017.
- Marblehead decided to improve differentiation and small group instruction at their Village School, the district's intermediate school (grades 4-6) to address student needs.
- The district won a DESE grant to cover some of the start-up costs associated with implementing changes, but the district also had to reallocate other resources to make the investment sustainable.
- The district and school tracked the impact of their investment through a staff survey, formative intervention assessments, and the number of special education referrals.
- After the RTI initiative's investments, 96% of staff reported that they understood their roles in the RTI process, and the vast majority also indicated increased comfort in delivering small group instruction.

FAST FACTS

Marblehead
Public Schools

SY 2016-17

Schools

7

Teachers

264

Students

3,114

SWD

19.3%

District Leadership

Eric Oxford, Special Education Director

Amanda Murphy, Village School Principal

Stephen Gallo, Asst. Principal, Village School

Rebecca Brand, Interventionist

MaryEllen Hart, Interventionist

Case Study Authors

Sarah Carleton, DESE | Sr. Dist. Policy Analyst

Sam Ribnick, DMGroup | Sr. Director

Simone Carpenter, DMGroup | Sr. Associate

J. Luke Chitwood, DMGroup | Case Writer

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A competitive two-year program supporting school districts to make substantial changes in resource allocation and direct more resources toward evidence-based improvement strategies. This grant program also encourages districts to use the new suite of Resource Allocation and District Action Reports (RADAR) tools to analyze how they use resources.



Overview of Grant

This case study is one of nine in a series showcasing the work of recipients of a 2017 DESE two-year grant for reallocating resources to align with district priorities. The case study explains how the participants used state data tools such as RADAR and DART to identify an area of need, determined an evidence-based investment, shifted resources in their existing budget to make the investment, and then evaluated the cost and impact of the investment.

Planning: The Village School in Marblehead shifts to meet student needs through differentiation and targeted support

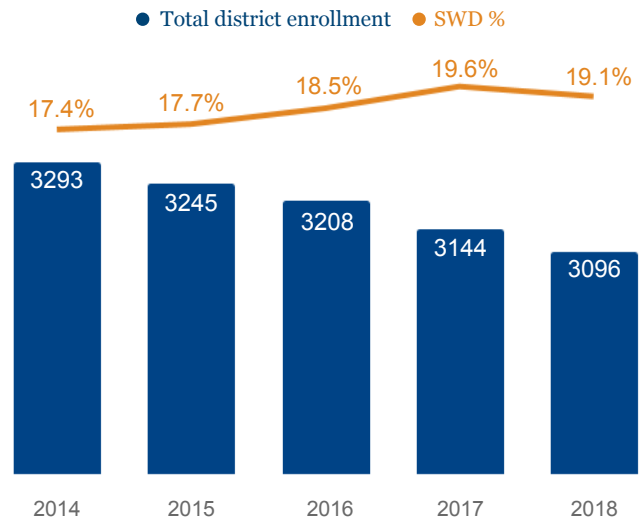
From 2013 to 2017, Marblehead Public Schools saw an 8% increase in students with disabilities (570 to 616), despite a 3% decline in enrollment. Schools were referring more students for special education evaluation and identification than in the past. Leaders wanted to better equip teachers and staff to support struggling students in their classrooms by providing targeted interventions and systematizing a process of formative assessments and close review of student data. The district applied for a DESE grant to fund this work.

District leaders, including the assistant superintendent, decided to target their work at the Village School, Marblehead's intermediate school. The focus at the Village School was on supporting staff in providing differentiated instruction to students through a school-wide Response to Intervention (RTI) system. Within this, the school implemented three six-to-eight week intervention cycles in which students were identified for intervention on specific standards based on formative assessments, then provided with small group instruction and reassessed at the cycle's end to see if they had mastered the standard.

This process began during 2016-17 with the implementation of the intervention cycles, and through small and deliberate steps school and district leaders worked to implement more ambitious changes over the next few years. In 2017-18, the Village School RTI team, consisting of the principal, assistant principal, and interventionists, led the school's work by working with teachers on how to review student data, find targeted interventions, and provide small group instruction. Teachers already met weekly in professional learning

Exhibit 1 | Marblehead Enrollment

Total district enrollment (students) and students with disabilities (% of total enrollment) over time



communities, and the team repurposed two meetings a month to focus on a review of student data and differentiation through small group instruction. The RTI team also participated in PLC meetings, did classroom observations, and provided coaching, modeling, and feedback to teachers. The school chose Galileo assessments as the tool to implement the intervention process.

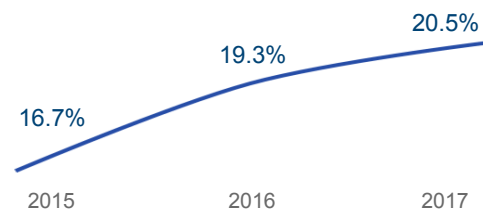
In 2018-19, the Village School rolled out a new schedule that allowed for intervention and flexible groupings of students in the same grade. The team hired a consultant, Martha Starr, to provide additional professional development and coaching to teachers on co-teaching, differentiation strategies, small group instruction, and the use of data. She conducted observations of class-

Exhibit 2 | The Village School

Exhibit 2.a Total enrollment (students)



Exhibit 2.b Students with disabilities (% of enrollment)



rooms, modeled for teachers, and provided real-time feedback. She and the RTI team worked with teachers on increasing collaboration across classrooms, encouraging teachers to model for one another and review each other's data to learn new strategies. The interventionists and administrators covered classes when necessary to encourage cross-classroom collaboration, observations, and coaching.

Throughout the grant's two years, the leadership team encouraged staff culture that was collaborative, data-driven, and student-focused. "This has been about getting people on board and building buy in," noted one team member.

Measuring: District leaders assess the impact on staff and student outcomes

As a part of the grant program, Marblehead and Village School leaders collaborated with District Management Group and DESE to evaluate the efficacy of Marblehead's investments in differentiation and RTI at the Village School. They established definitions of success, or outcomes they wanted to see in 2018-19:

- 85% of teachers self-report an increase in comfort and knowledge of RTI on staff survey.
- 75% of students receiving math interventions meet standards on end-of-cycle formative assessments.
- 75% of students receiving ELA interventions meet standards on end-of-cycle formative assessments.
- Referrals for special education students decrease in 4th and 5th grade in 2018-19, compared to the prior year.

The team then set out to gather data. In February 2019, the RTI team administered a survey to evaluate staff comfort and knowledge of the school's RTI system of assessments, data review, and small group instruction. The special education team also collected special education referral data across two years. Finally, the team mapped and calculated the costs associated with their investment. Grant funds helped cover some start up costs, including hiring a consultant to restructure the school's schedule, provide professional development to staff, and purchase licenses for Galileo. However, leaders repurposed staff time to sustain this change in practice. As part of the grant, the team set out to determine the fully loaded cost of their initiative, using a structured protocol to capture expenses such as teacher and administrator time, substitute coverage and op-

erational costs. Overall, the Village school has a total budget of about \$3,000,000, a majority of which goes to staff; it is estimated that about 15%, or \$450,000, was repurposed to focus on this work with staff and students. Of existing meeting time, about 30% has been repurposed towards this work. The resources repurposed for this initiative translate to approximately a \$700 per pupil investment, based on the number of students impacted.

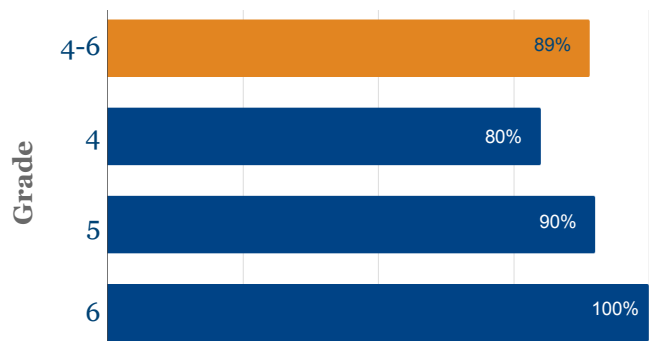
Evaluating: Marblehead reviewed the results of their RTI investments

District and school leaders saw the initiative gain momentum through 2017-18 and 2018-19, including an increase in teacher comfort not only with differentiation and small group instruction, but also with modeling for other teachers and collaborating to provide what's best for students. This was reflected on the staff survey, demonstrating an overall shift in culture at the Village School.

Staff survey results: 96% of staff at the Village School agreed or strongly agreed that they understood their role in the RTI process, with 64% strongly agreeing. 100% of staff agreed that data was used to identify students for interventions, and 86% agreed data was used to monitor students as a part of classroom based instruction. Finally, most staff agreed that they felt more comfortable with small group instruction (89%) and with looking at data (86%) than they did 18 months ago.

Exhibit 3 | Staff Survey Results

Percent of teachers (2018-19) reporting that they agree or strongly agree with the statement: "My comfort level with small group instruction has increased over the past 18 months."

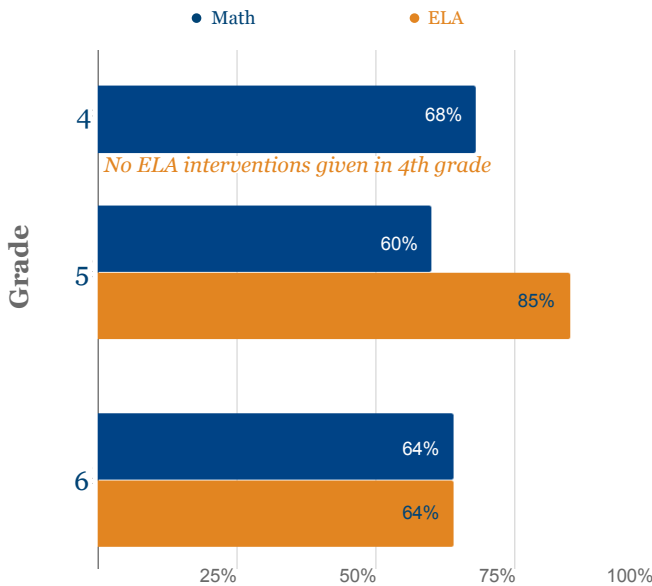


Impact of intervention cycles: Of all students receiving intervention during the first two cycles in 2018-19, 71% demonstrated proficiency on the intervention

standard assessment. In ELA, 79% of students met proficiency on standards, whereas in math, 64% of students met proficiency on standards.

Exhibit 4 | Impact of Intervention

Percent of students receiving interventions meeting standards on end-of-cycle assessments (2018-19)



Special education referrals: Between 2017-18 and 2018-19, the Village School saw a 15% reduction in special education referrals, from 41 in 2017-18 to 35 in 2018-19. This remained true when controlling for enrollment. However, leaders at the school level were cautious to attribute changes in one year to this initiative alone and hope to review future years’ data before drawing conclusions about reductions in special education referrals.

Looking ahead: The Village School sustains focus on differentiation and small group instruction

At the end of 2018-19, school and district leadership saw promising results at the Village School and believe that the work around intervention cycles has gained traction and momentum among staff. Leaders will continue the work, building upon the foundation established in the prior years.

Leaders will continue their work in three areas: (1) meeting students’ needs through co-teaching and small group instruction, (2) impacting student learning, and (3) fostering a positive, engaging, and collaborative school culture.

As they continue into 2019-20, one leader said “This has been all about the small steps that lead to the big changes. We’re keeping our focus there.” Another observed that “We’re shifting from asking teachers ‘are you doing small group instruction?’ to ‘what is happening in your small groups?’”

“This has been all about the small steps that lead to the big changes. We’re keeping our focus there.”

Case Study: Maynard Public Schools shifts funds to enhance SEL supports in grades K-3



Executive Summary

- Maynard Public Schools' leadership team noticed an increase in behavior referrals during unstructured time at the district's elementary school, Green Meadow.
- Few staff who monitor students at recess, lunch, and transitions received training around behavioral de-escalation.
- Maynard had a higher ratio of paraprofessionals to students with disabilities than most districts and few were trained.
- The district also recognized that many students were referred to special education evaluations for behavior and SEL-related challenges.
- The district hired two SEL-specific paraprofessionals who received training around social thinking and SEL strategies, and supported students through positive behavior management during coverages.

FAST FACTS

Maynard Public Schools

SY 2016-17

Schools

3

Teachers

110

Students

1,439

SWD

17.0%

District Leadership

Robert J. Gerardi, Superintendent

Jennifer Gaudet, Asst. Superintendent

Carol Gahan, Director of Student Services

Michelle Resendes, Business Manager

Case Study Authors

Sarah Carleton, DESE | Sr. District Policy Analyst

Sam Ribnick, DMGroup | Sr. Director

Brianne Rok, DMGroup | Sr. Associate

J. Luke Chitwood, DMGroup | Case Writer

Resource Reallocation to District Priorities Grant Program

A competitive two-year program supporting school districts to make substantial changes in resource allocation and directing more resources toward evidence-based improvement strategies. This grant program also encourages districts to use the new suite of Resource Allocation and District Action Reports (RADAR) tools to analyze how they use resources.



Overview of Grant

This case study is one of nine in a series showcasing the work of recipients of a 2017 DESE two-year grant for reallocating resources to align with district priorities. The case study explains how the participants used state data tools such as RADAR and DART to identify an area of need, determined an evidence-based investment, shifted resources in their existing budget to make the investment, and then evaluated the cost and impact of the investment.

Planning: Maynard developed a plan to proactively support elementary students' SEL needs by hiring SEL-specific paraprofessionals

Assistant Superintendent Jennifer Gaudet, Director of Student Services Carol Gahan, and Business Manager Michelle Resendes had led efforts to improve social-emotional learning (SEL) before. Prior to 2017-18, Gaudet and the leadership team recognized that Green Meadow, the only elementary school in the district of 1,400, employed more paraprofessionals for their number of students with disabilities than other schools, and that these paraprofessionals were often responsible for providing tier three behavior interventions. However, students' behavior had not improved - bullying referrals and suspensions often happened during recess, lunch, and transitions - and increasingly more students were being referred to special education for behavioral challenges.

At the beginning of 2017-18, Maynard rolled out Positive Behavioral Interventions and Supports (PBIS) at Green Meadow. This included training teachers to use zones of regulation and de-escalation strategies. Then, later in the fall of 2017, Gaudet, Gahan, and Resendes applied for and received grant funding to cover the cost of hiring two paraprofessionals who would be trained in strategies to address students' social-emotional needs. This investment in paraprofessionals was part of the larger PBIS effort to strengthen behavior and social-emotional services at Green Meadow.

The SEL-trained paraprofessionals would receive training to use targeted SEL strategies to encourage positive student behavior. The grant would cover the cost of online trainings for the paraprofessionals and their annual salaries. The SEL-trained paraprofessionals would be hired in the winter of 2018 and would deliver mini-lessons on social thinking, and monitor students during unstructured times of the day. Separate from the grant, in 2018-19, district leaders also amended

Exhibit 1 | Maynard Enrollment

Exhibit 1.a Total district enrollment

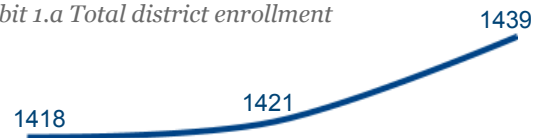
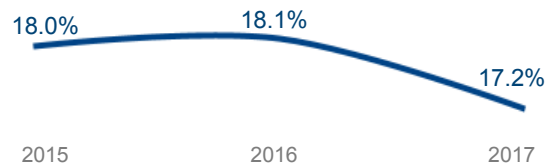


Exhibit 1.b Students with disabilities (% of total enrollment)



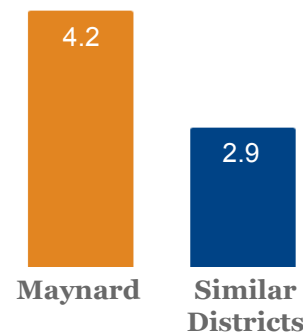
Green Meadow teachers' contract to include daily recess duty so teachers could embed positive behavior supports during time previously monitored by untrained staff.

After hiring the SEL-trained paraprofessionals in the winter of 2018 with RADAR grant funding, Green Meadow's leadership team adapted the plan for the SEL-trained paraprofessionals when they realized paraprofessionals needed to provide classroom coverage for absent teachers due to staffing constraints. Although this meant the paraprofessionals were not leading mini-lessons, SEL paraprofessionals built relationships with most Green Meadow students through lunch monitoring and classroom coverage. Leadership developed a schedule for the SEL-trained paraprofessionals that allowed them to observe the guidance counselor implementing mini-lessons on social thinking and SEL in classrooms, then infuse these strategies in their interactions with students during their duties and coverages.

By the spring of 2019, district and school administration made it a goal to develop a schedule that would allow the SEL-trained paraprofessionals to deliver SEL mini-lessons in alignment with the original plan. Green Meadow administration reduced the paraprofessionals' classroom coverages, and the SEL-trained paraprofessionals

Exhibit 2 | RADAR Analysis – Staffing

Paraprofessional staff (FTE) per pupil (2016-17)



professionals began to deliver mini-lessons to groups of four to five students in pull-out settings with oversight from the guidance counselor.

Measuring: Maynard used data to measure the impact of the two SEL-trained paraprofessionals on student behaviors in grades K–3

The Maynard team worked with DMGroup and DESE to define success for these two SEL-trained paraprofessionals. The team developed the following definitions of success for K–3:

- 50% decrease in suspension rates from 2017-18 to 2018-19.
- 30% decrease in the number of bullying referrals from 2017-18 to 2018-19.
- 20% decrease in the number of behavior referrals to the student support team for special education evaluation from 2017-18 to 2018-19.
- Reduction in special education inclusion paraprofessional support for behavioral needs as measured by 30% reduction in IEP minutes for paraprofessional support from spring 2018 to spring 2019 for students in grades K–3.

The team collected data from grades K–3 at Green Meadow, in which there were 430 students in 2018-19 school year. Historically, Green Meadow tracked most data on paper. To analyze changes in student behavior, Gahan developed an interactive Google Drive spreadsheet where she input related behavior data. The team could then reference all data in one location and quickly track changes in student behavior.

Using a process from DMGroup, the team brainstormed the fully loaded cost related to the SEL-trained paraprofessionals’ work, including staff time devoted to the program. Resendes calculated the cost of the SEL-trained paraprofessionals, their professional development, and the time administration dedicated to recruiting, on-boarding, and supervising the SEL-trained paraprofessionals.

The cost of teachers’ time dedicated to recess duty was included in the fully loaded cost. Amending teachers’ contracts to include recess duty and hiring SEL-trained paraprofessionals were both part of an effort to infuse positive behavior support in unstructured time. Leadership hoped both changes would have positive impacts on student behavior. Because adding structure

to recess likely impacted the identified outcomes, the team included this cost in the analysis.

After calculating these costs, the Maynard team determined that the total cost was \$270,000, which equated to a per-pupil cost of about \$630.

Exhibit 3 | Fully Loaded Per Pupil Cost

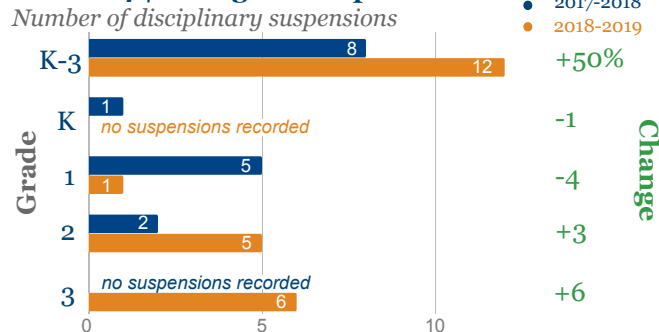
Time Investment	
Category	Amount
Staff Time*	\$160,000
Administrator Time*	\$53,386
*includes time spent in direct service, trainings, meetings, and recess coverage	
Cash Investment	
Category	Amount
SEL-Paraprofessionals’ Annual Salaries	\$36,000
Professional Development	\$21,000
Estimated Per-Pupil Cost	
Green Meadows K-3 Students (2018-19)	Annual Cost Per-Pupil
430	\$630

Evaluating: Maynard observed growth in two of the four metrics identified

Recognizing anecdotally the positive changes in school culture, district and school leaders reviewed the data DMGroup collected on each of their measurable goals for the year to assess how well the SEL-trained paraprofessional program met its objectives.

Suspension rates: The number of K–3 suspensions increased from eight to 12 between 2017-18 and 2018-19. Suspension rates tend to vary by grade level cohort. Maynard plans to reduce suspensions over time through equipping teachers to use preventative measures to support positive behavior in the classroom.

Exhibit 4 | Change in Suspensions



Bullying referrals: Bullying referrals in grades K–3 dropped from eight to four between 2017-18 and 2018-19, meeting the district’s goal of a 30% decrease. Leadership plans to continue to track data to understand when and why bullying occurs, hoping to reduce this number further over time.

Behavior referrals to student supports team: The number of behavior referrals to the student support team for potential special education evaluation decreased from 11 to six over the two school years. Maynard hoped to see a 20% decrease, and met this goal. Moving forward, the team hopes to see a higher percentage of referrals resulting in evaluation and an IEP.

Special education inclusion minutes with paraprofessional support: In grades K–3, the number of IEP minutes with paraprofessional support in an inclusion setting increased by 2% between 2017-18 and 2018-19. Leadership plans to explore the amount of paraprofessional support students with different disability types receive, aiming to adjust the classroom environment so students learn to manage their own behavior better.

Looking ahead: The Maynard team takes action to improve programs in 2019-20

In 2019–20, the SEL-trained paraprofessionals will continue to deliver SEL mini-lessons to small groups of students in pull-out settings. The paraprofessionals will begin pushing into classrooms and leading mini-lessons during elementary centers early in the school year so that more students can learn the SEL and social thinking strategies.

Maynard plans to pay for ongoing social-emotional professional development by reallocating professional development funds. Long term, the district hopes to reduce the number of non-SEL trained paraprofessionals needed to support behavior in classrooms.

Gaudet and Gahan shared that investing in SEL-trained paraprofessionals required operational changes to Green Meadow’s staffing and scheduling process, as well as mind-set changes among staff about the importance of embedding behavioral supports in inclusive environments. District leaders plan to continue to adapt school structures to meet the needs of students with behavioral challenges, using PBIS and the SEL-trained paraprofessionals as part of this effort.

Gaudet and Gahan believe the grant evaluation process forced them to develop and execute a clear plan for the SEL-trained paraprofessional role. The team

Exhibit 5 | Change in Bullying Referrals

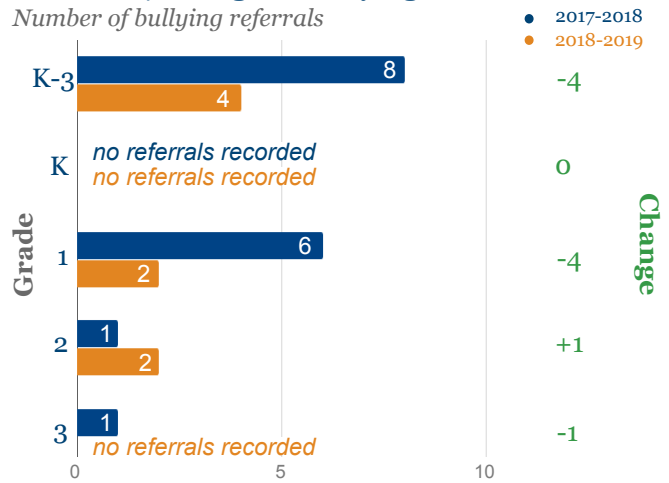
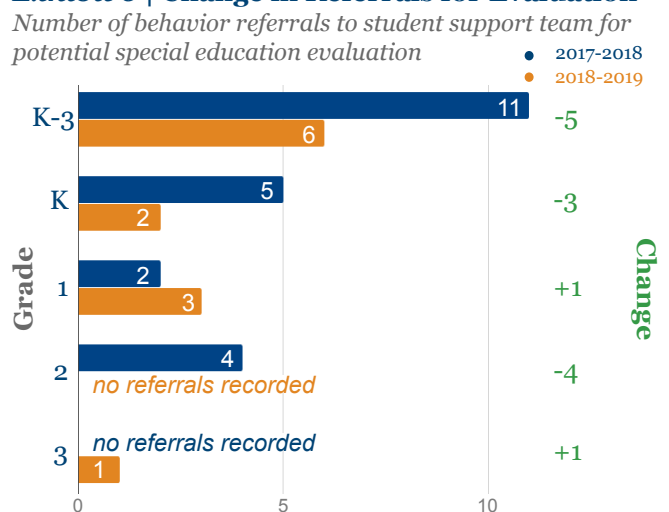


Exhibit 6 | Change in Referrals for Evaluation



appreciated the process of analyzing specific data to track outcomes and impact. Gaudet noted “We want to continue to track the impact [of changes] and be disciplined about how the administrative team uses data to make decisions.” Although the sample sizes were small, leadership wants to move away from making decisions based solely on anecdotal feedback about programs, and to introduce data as part of the discussion. Moving forward, the team hopes to build strong behavioral supports at Green Meadow through widespread investment in SEL and inclusion, and continue to track the impact of their work through thoughtful analysis of outcomes.

“Investing in SEL-trained paraprofessionals required operational changes [...] as well as mind-set changes.”

Resource Reallocation to District Priorities

Case Study: Three northern Berkshire County districts shift resources towards inclusive PK-2 student support



Executive Summary

- Three districts in northern Berkshire County decided to work together to improve inclusive practices for students in grades PK-2 through a special education audit and professional development.
- These districts won a DESE grant to cover some of the start-up costs, but the districts also shifted existing funds to make the investment sustainable, ultimately investing \$143,000 in total (or roughly \$240 per pupil).
- The three districts agreed on how they would measure the impact of their work, setting targets for student language and literacy learning indicators and the implementation of integrated services.
- North Adams and Clarksburg implemented a universal services model where the occupational therapist pushed into PK and K classrooms to work with any student in need and provide consults with the teacher.
- Looking ahead, all three districts are working to deepen and embed inclusive practices within and beyond early childhood grades, both together and as individual districts.

District Leadership

Barbara Malkas, Superintendent, North Adams

Aaron Dean, Superintendent, Hoosac Valley

John Franzioni, Superintendent, Clarksburg

Kim Roberts-Morandi, Director of Curriculum, Instruction, and Assessment, North Adams

Tom Simon, Director of Student Support Services, North Adams

Deb Rosselli, Director of Pupil Services, Clarksburg



North Adams



Hoosac Valley Regional



Clarksburg Elementary

FAST FACTS

Three Participating Districts
SY 2016-17

Schools

8

Students

2,956

Teachers

219

SWD

24.3%

Case Study Authors

Sarah Carleton, DESE | Senior District Policy Analyst

Sam Ribnick, DMGroup | Senior Director

Simone Carpenter, DMGroup | Senior Associate

J. Luke Chitwood, DMGroup | Case Writer

Resource Reallocation to District Priorities Grant Program

A competitive two-year program supporting school districts to make substantial changes in resource allocation and direct more resources toward evidence-based improvement strategies. This grant program also encourages districts to use the new suite of Resource Allocation and District Action Reports (RADAR) tools to analyze how they use resources.



Overview of Grant

This case study is one of nine in a series showcasing the work of recipients of a 2017 DESE two-year grant for real-locating resources to align with district priorities. The case study explains how the participants used state data tools such as RADAR and DART to identify an area of need, determined an evidence-based investment, shifted resources in their existing budget to make the investment, and then evaluated the cost and impact of the investment.

Planning: Three districts in the northern Berkshire region collaborate to improve early childhood inclusive practices

North Adams School District (three elementary schools), Hoosac Valley Regional School District (one elementary school), and Clarksburg Elementary School District (one elementary school) had a common set of challenges: declining enrollment, increasing poverty, and high rates of identification for special education (24% vs. state average of 17%). District leaders had worked together in recent years to improve inclusive practices and interventions, but felt that long-term success would require deeper work in grades PK-2 to reduce referrals. They wanted to see more students on grade level, better interventions and inclusive supports within the general education classroom, and all students being better prepared for success in elementary grades. The three districts applied for and won a DESE grant that encouraged districts to reallocate resources to their priorities.

The districts used grant funding to hire SchoolWorks to conduct an audit of PK-2 special education services and to pay for professional development services. The special education audit included classroom observations, interviews, and document review, culminating in a presentation of findings and recommendations. The audit confirmed the need to focus on approaches to intervention and inclusive practices. The findings helped district leaders, teachers, and related service providers (speech and language pathologists, occupational therapists, and physical therapists) prioritize their efforts on professional development and creating a model for inclusive services moving forward.

After completing the audit, district leaders knew that they wanted to focus on improving inclusion, but needed the right partner to help. “Professionally, we don’t have enough models on what good inclusion is. We needed to create a shared vision for that here,” noted one administrator. The team was very deliberate about selecting a partner, taking their time to vet a range of options, and

Exhibit 1 | Participating Districts’ Enrollment

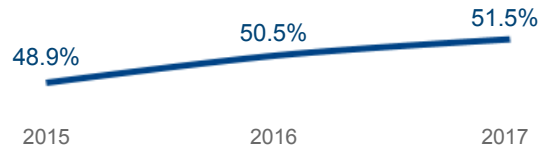
Exhibit 1.a Total combined enrollment



Exhibit 1.b Students with disabilities (% of total enrollment)



Exhibit 1.c Economically disadvantaged students (% of total enrollment)

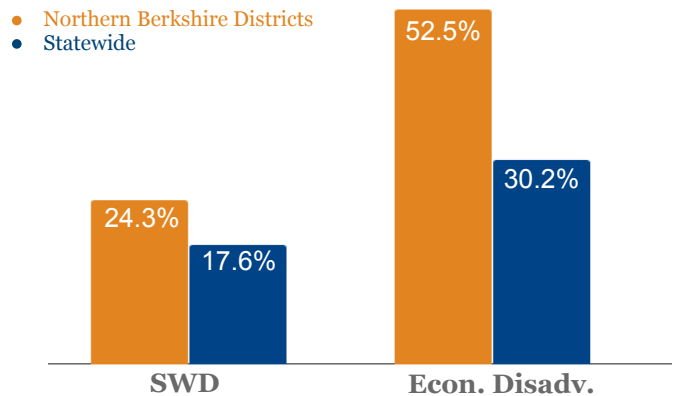


ultimately hiring Dr. Lisa Dieker and Dr. Rebecca Hines to provide cross-district professional development for PK-2 teachers and service providers. After conducting onsite observations, the consultants offered training, coaching, and modeling focused on changes to the instructional environment and interventions. They reviewed materials across classrooms and coached school and district leaders on ensuring environments are inclusive and appropriate for all students. They also supported related service providers to create more effective schedules.

The consultants connected the three districts with the Bailles School, a top-performing school in Florida for supporting students with specialized needs. A PK general education teacher, a PK special education teacher, a speech pathologist, and an occupational therapist, representing

Exhibit 2 | RADAR Analysis – Demographic Data

Comparison of northern Berkshire districts with statewide averages (2016-17)



the three districts, traveled to Orlando to visit the Bailles School and met with educators and administrators there. At first, it seemed that Bailles had far more staff, but the team realized the difference was about how the staff used their time. They learned that a therapist could walk into a classroom and informally work with many kids and give advice to teachers, with the result that more kids got help and teachers saw the therapists model how to help students. One therapist visiting described it as “an intervention SWAT team - they come in quickly, provide help and then they move on.”

This trip proved to be a turning point for the practitioners who attended. At the Bailles School, the service providers saw first-hand how a school can successfully serve students with disabilities in an inclusive model and saw strategies that they could bring back to their respective districts, schools, and classrooms to better serve students. The attendees not only came back with energy and enthusiasm to incorporate what they saw, but also came back with an excitement to continue partnering across districts to implement these practices. “Our teachers who went to the Bailles School came back ready to hit the ground running and helped us engineer our consult model that we now use to work with students,” noted one administrator. Another commented, “The [team that travelled to the Bailles School] wants to get together two to three times a year to problem solve and work together on improving our inclusive practices.”

“We don’t have enough models on what good inclusion is. We needed to create a shared vision for that here.”

One of the biggest changes inspired by the Bailles visit was a shift to a universal services model for occupational therapists. In the new North Adams and Clarksburg model, occupational therapists have a weekly consult in the general education classroom for thirty minutes to one hour. During this time, the OT can model for the teacher, provide differentiated or small group skills, observe and provide feedback for the teacher, and support the teacher in integrating developmental skills into core instruction. The OT still has a caseload and provides services to students with IEPs, but can also provide quick services for any student in the classroom. OTs served as a starting point for the consult integrated services because of the strength of the practitioners and the needs of students in early grade classrooms.

Finally, the three districts provided targeted professional development to paraprofessionals and teaching assistants (TAs) in social-emotional learning (SEL) and behavior sup-

port. Thirty-five paraprofessionals and TAs participated in a training on “Zones of Regulation,” a framework from Kuypers Consulting, to provide consistent language around student behavior. All elementary schools provided follow-up training for TAs and paraprofessionals to apply this framework in their classrooms. This framework has created a team approach and common language for student needs. A new administrator commented, “You walk into our younger grade hallway and classrooms and [you] can see the ‘Zones’ framework being implemented.”

Measuring: Districts use data to measure the impact on students and staff

A team representing all three districts worked with District Management Group consultants and DESE staff to define success measures for their investments. This process was challenging for the districts because ultimately, the districts planned implementation over three to five years and expected to see real results for students later in that timeline. Nonetheless, the districts wanted to set measurable goals that would show earlier whether the initial implementation was leading to the change they hoped to see in three to five years. They identified two leading measures of success:

- The number of students at benchmark for language and literacy learning indicators and meeting readiness targets for the next grade will increase.
- 100% of the PK-1 classes will have regularly scheduled speech services (and potentially occupational therapy) incorporated into the weekly calendar by 2019-20 and shift towards full inclusion from more restrictive placements.

While setting specific targets for success poses a challenge for any district evaluating the impact of an investment, collecting the relevant data is especially challenging across three districts. The districts use different language and literacy assessments and screeners (FastBridge and DIBELS) to track the performance of students over time. Because raw scores cannot be compared between the two assessments, the districts measured growth using each assessment’s comparison to grade-level standards for fall, winter, and spring testing for the 2017-18 and 2018-19 school years.

Using a process from DMGroup, the district leaders calculated the fully loaded costs of their initiatives, including staff and administrator time, fees, stipends, consultants, and materials. The professional development and audit of special education services included not only the consultant

costs, but also the time of administrators and staff working with consultants. All districts made a significant investment of staff and leadership time planning, participating in, and providing professional development.

After collecting all associated costs, the three districts invested an estimated \$143,300. This investment impacted all students in PK-1 in North Adams (311) and Hoosac Valley (219) and all students in grades K-2 in Clarksburg (63), for a total of 593 students and a per pupil cost of about \$240.

Exhibit 3 | Fully Loaded Per Pupil Cost

Time Investment	
Category	Amount
Staff Time	\$25,000
Administrator Time	\$17,000
Cash Investment	
Category	Amount
Consultants / Fees	\$93,300
Materials	\$8,000
Estimated Cost Per Student	
Students	Per-pupil
593	\$240

Evaluating: The northern Berkshire County team assessed the impact of their investments

Language and literacy indicators: The northern Berkshire county districts reviewed the percent of students in grades K-1 (North Adams, Hoosac Valley) and K-2 (Clarksburg) who met grade-level standards on language and literacy indicators in 2017-18 and 2018-19. Each district saw slightly different results (noted below).

Hoosac Valley: Overall, 83% of K-1 students in Hoosac Valley met grade-level language and literacy standards on DIBELS composite scores at the end of 2018-19, nearly flat compared to the end of 2017-18 (82%). The percent of students who grew from below grade level to at grade level remained fairly stable from 2017-18 (16%) to 2018-19 (14%).

Clarksburg: 71% of K-2 students in Clarksburg met or exceeded grade-level language and literacy standards on the FastBridge assessment at the end of 2018-19, 10 points below the end of 2017-18 (81%). However, the percent

Exhibit 4 | Language and Literacy Assessments

Exhibit 4.a Hoosac Valley: Percentage of students (K-1) meeting benchmark and readiness targets (on DIBELS)

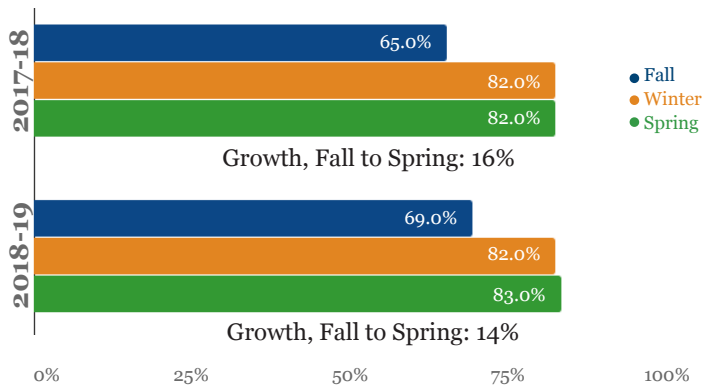


Exhibit 4.b Clarksburg: Percentage of students (K-2) meeting benchmark and readiness targets (on FastBridge)

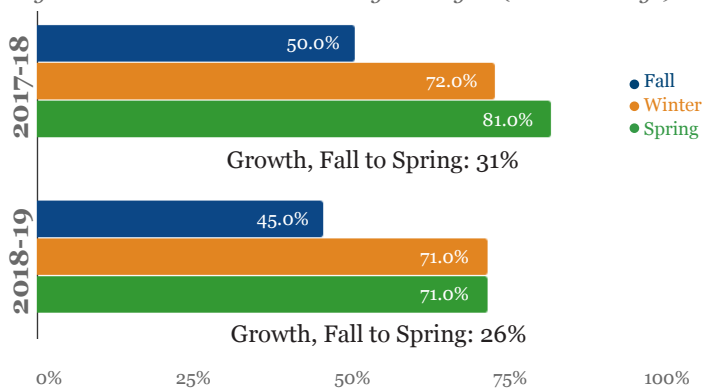
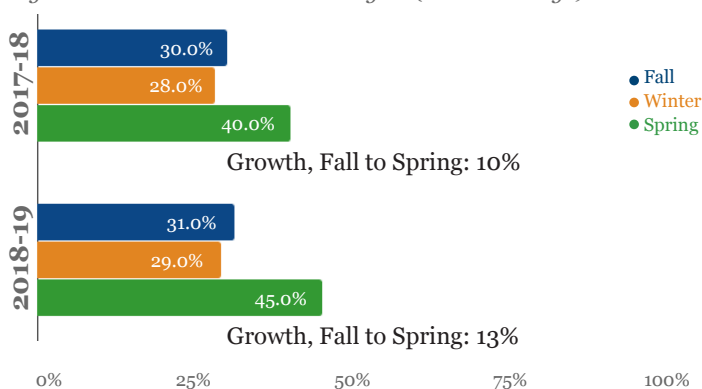


Exhibit 4.c North Adams: Percentage of students (K-1) meeting benchmark and readiness targets (on FastBridge)



of students who grew from below grade level to at grade level remained fairly stable from 2017-18 (31%) to 2018-19 (26%). Fewer students started the school year at or above grade level. For Clarksburg, it is important to note that there is only one cohort of students per grade.

North Adams: Overall, 45% of K-1 students in North Adams met or exceeded grade-level language and literacy standards on the FastBridge assessment at the end of 2018-

19, five percentage points higher than the end of 2017-18 (40%). Similar to the other districts, North Adams saw stable growth from below grade level to at or above grade level between 2017-18 (10%) and 2018-19 (13%).

Because 2018-19 was the first year of implementation, the districts did not expect to see large gains, but hope to see larger increases in 2019-20 and beyond.

Integrated services for core instruction: During 2019-20, all PK and K classes in North Adams and all K classes in Clarksburg have occupational therapy embedded into classrooms. “With this consult model, our students are getting far more time on skill activities - they’re getting 30 hours a week rather than 30 minutes on OT skills,” noted one district administrator. The teachers eagerly incorporated the tips and tricks from the OTs and PTs, gaining a better understanding of the development range for young students and more strategies to redirect student behaviors. As the teachers learned to address disruptions themselves, they reported much calmer classrooms and felt less need for extra TA support.

To make the model work, the three districts also hired a Certified Occupational Therapy Assistant (COTA). With their tight budgets, it was a challenge to find the funds, but leaders later reflected that the COTA was a critical part of their success and an effective use of resources. This individual supports the OT with their clerical and service responsibilities, which freed up time for the OT to consult in general education classrooms.

“With this consult model, our students are getting far more time on skill activities – they’re getting 30 hours a week rather than 30 minutes on OT skills.”

Looking ahead: District and school leaders plan to continue and deepen work on inclusion across the districts

This process helped district leaders focus time, resources, and energy. The special education audit made it clear to district and school leaders that improving inclusive services would be critical. “This [process] pushed us to catch up with others who are getting results,” noted one district leader. “[Our educators] don’t feel like [they] have time to wait.”

Another leader added: “In our first year, we were trying to

fit things into expected outcomes, but we learned that it’s about building professional capacity and teacher ownership in the first year. There are multiple ways to get to the expected outcomes, and we needed to expand our thinking.”

For North Adams, the discoveries made throughout this work continue to support their turnaround work and budget process moving forward. One district leader noted that a greater understanding of their challenges allowed them to redeploy resources from less efficient areas toward areas of highest need. She shared, “We’re able to leverage this process to support our turnaround work that we knew we needed to do.”

Hoosac Valley is focusing their work on growing inclusive practices both within and beyond early childhood grades. One administrator noted, “I see how this work has been integrated into our early grades, but want to see our later grades grow their inclusive practices to serve students within the classroom.”

For Clarksburg leaders, the outcomes of this process helped them think about how they can make better use of existing resources. An administrator summarized by saying, “In such a small district, we need to make the best use of our resources to support students’ social-emotional and academic needs within and beyond early childhood.”

These three districts continue to work together in 2019-20 through cross-district professional development on inclusion and differentiation. Not only do district administrators continue to partner on and deepen this work, but the service providers who helped develop the consult model continue to work together to understand how this work takes shape and can be improved across the schools and classrooms across the northern Berkshire region.

“We were trying to fit things into expected outcomes, but we learned that it’s about building professional capacity and teacher ownership [...] There are multiple ways to get to the expected outcomes, and we needed to expand our thinking.”

Resource Reallocation to District Priorities

Case Study: SEEM Collaborative harnesses collective resources to enhance inclusion across its districts



Executive Summary

- Seven districts in the SEEM Collaborative pooled resources to hire a shared inclusion coach and provide common training to general education and special education teachers across districts.
- Working together across seven districts was initially challenging, and SEEM had to coordinate three different coaching models.
- The team won a DESE grant to cover some start-up costs and the districts also shifted funds to make the investment sustainable.
- Districts had to agree on the measures they would use to assess the success of the coaching and training, and decided to set targets for staff satisfaction with the coaching, improvements in students' feelings of inclusion, and a long-term reduction in special education referrals.
- In the first year, most districts had strong results for teacher satisfaction and students' feelings of inclusion. Some districts saw the anticipated reduction in referrals while others experienced increases. The districts are now continuing the coaching and spreading successful practices.

SEEM Collaborative Leaders

Cathy Lawson, Executive Director

Emily Patt, Inclusion Coach

And representatives of:



Melrose



North Reading



Reading



Stoneham



Wakefield



Wilmington



Woburn



FAST FACTS

Seven Participating Districts

SY 2016-17

Schools

43

Students

24,528

Teachers

1,870

SWD

15.4%

Case Study Authors

Sarah Carleton, DESE | Senior District Policy Analyst

Sam Ribnick, DMGroup | Senior Director

Brianne Rok, DMGroup | Senior Associate

J. Luke Chitwood, DMGroup | Case Writer

Resource Reallocation to District Priorities Grant Program

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Overview of Grant

This case study is one of nine in a series showcasing the work of recipients of a 2017 DESE two-year grant for real-locating resources to align with district priorities. The case study explains how the participants used state data tools such as RADAR and DART to identify an area of need, determined an evidence-based investment, shifted resources in their existing budget to make the investment, and then evaluated the cost and impact of the investment.

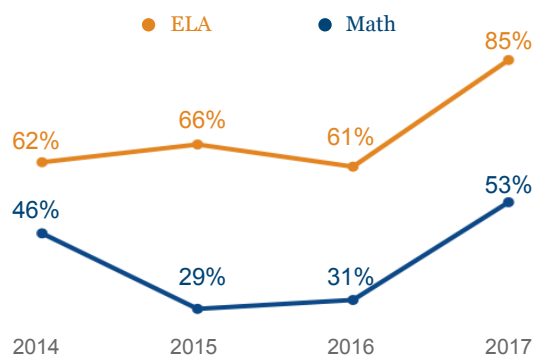
Planning: Seven districts collaborate to hire an inclusion coach

Through SEEM Collaborative, ten districts in northeastern Massachusetts (combined enrollment 33,961) share resources and provide educational programs serving students with disabilities. A group of leaders from each district that met regularly at SEEM sought reflected on the low achievement of students with disabilities in many of the districts. To strengthen instruction for students with disabilities included in general education classrooms, they decided to provide training directly to general education teachers.

One member district, Wakefield Public Schools, offered compelling evidence for the positive impact of inclusive practices. Since investing in a co-teaching model starting in 2014-15 that increased students' time in general education classrooms, Wakefield saw improvements in both ELA and math scores for students with disabilities in 2017, along with a reduction of paraprofessional support. Recognizing they did not have the budget for a dedicated coach in each district, the SEEM Collaborative team and leaders from Melrose, North Reading, Reading, Stoneham, Wakefield, Wilmington, and Woburn applied for the grant to hire a shared inclusion coach (Lynnfield, Saugus and Winchester are part of SEEM but did not participate).

Exhibit 1 | Wakefield MCAS Proficiency

Percent of SWD scoring proficient or higher



SEEM contracted with Katie Novak (Founder and President of Novak Educational Consulting) to provide a professional development session on Universal Design for Learning (UDL) to lay the groundwork for coaching throughout the year. District leaders found that this training was integral to developing interest and excitement about inclusion among the staff who would go on to receive coaching. Leaders were pleasantly surprised by the amount of momentum the UDL training created around inclusive practices. Reflecting on the training, SEEM's executive director Cathy Lawson remarked that it "ignited something in [teachers] and was a nice hook for people. Anytime you start a large-scale initiative, an important piece of the work is buy-in," and the training built that interest in inclusive practices among teachers. Nearly 200 staff participated in the UDL training with Novak, including general and special education teachers, psychologists, instructional coaches, principals and members of each district's child study team.

To hire an inclusion coach, Lawson had to coordinate the hiring processes and coaching models to meet the needs of the seven districts. When the initial hiring round proved unsuccessful, the districts nearly abandoned the plan before finding a strong applicant in Emily Patt (hired in June 2018). Six of the seven districts agreed that UDL was the top priority for coaching, and one district focused on behavior. Given the strong momentum behind UDL, Patt planned to use DESE's UDL framework as a basis for the instructional strategies she shared with teachers. "People were buzzing [about inclusion] when I got to schools in the fall," Patt shared.

Leaders in the participating districts had differing visions for how to structure the coaching for teachers. SEEM allowed each district to choose from one of three support models: (1) teachers receive in-class coaching once every seven weeks, used in five districts; (2) teachers receive a single, intensive week of coaching once during the year, used in one district; (3) the coach trains in-district coaches through PD sessions throughout the year, and coaches

Exhibit 2 | Participants' Roles and Grade Spans

Participant Role	Elem.	Middle School	High School
Special Education Teachers	16	5	3
General Education Teachers	44	13	6
Staff, Paraprofessionals, and Administrators	5	1	2

then share UDL strategies with teachers through in-class coaching, used in one district. Patt visited each district once every seven weeks, and leaders chose the frequency and type of coaching support teachers would receive. Patt decided to arrive in each district on a Friday to meet with teachers and set up the coaching work for the following Monday through Thursday, a decision that proved especially effective in helping her maximize the impact of a single week.

Each district identified schools to receive coaching and up to 15 interested teachers self-selected to take part, with the expectation that they could later serve as mentors for others in the building who had not received coaching. Reflecting later, leaders agreed that the voluntary and non-evaluative nature of the coaching was critical to building initial buy-in.

Measuring: Districts use data to measure the impact of UDL practices on student learning and feelings of belonging

As part of the grant, SEEM leaders worked with consultants from District Management Group and DESE to assess the impact of their work. District leaders collaborated to identify relevant measures that could be used across the seven districts, ultimately agreeing on four measures:

- All coaching and training sessions are delivered as expected
- 85% staff satisfaction with the training or coaching as measured by a spring 2019 survey
- 10% increase in students’ feelings of inclusion as measured by a student survey
- 5% reduction in special education referrals in classrooms of teachers who were coached

Tracking these results required coordinating and collecting data across districts and designing uniform surveys of staff and students to ensure comparability. District leaders wanted to learn from surveys if staff valued the coaching support they received, or if sharing the position spread the coach too thin. The survey also asked teachers about the amount of coaching and training they received to help gauge whether the single coach could support so many teachers.

District leaders also calculated the total cost of the initiative using a process from DMGroup, including staff and administrator time, fees, stipends, consultants, materials, and operations. SEEM Collaborative managed the \$100,000 in

DESE grant funds, which covered the UDL summer institute led by Novak, staff’s time for attending the institute, \$600 stipends for the over 100 teachers who received coaching, and materials and supplies.

Each of the seven districts then reallocated \$13,546 from their budgets to cover the inclusion coach’s annual compensation. These funds were typically reallocated from other professional development, instructional supplies, and contracted services. Districts hoped to see reduced costs for special education over time as teachers learned to meet more students’ needs in the mainstream classroom.

DMGroup worked with districts to calculate the cost of staff time dedicated to the coaching work over the course of the year. Each district shared the average hourly rate of all staff involved in the program, and the average time dedicated to the coaching work annually. Using this information, DMGroup calculated the total investment in staff time allocated to the coaching work in all seven districts, which was approximately \$390,000.

After collecting all costs associated with the new inclusion coach role, which included the coach’s salary, teacher stipends, related professional development, and staff time dedicated to the program, the team determined that the total cost of the program was approximately \$580,000. DMGroup estimated that approximately 2,500 students in the seven districts worked with a staff member who received coaching support and calculated a per-pupil cost estimate of about \$230.

Exhibit 3 | Fully Loaded Per Pupil Cost

Time Investment	
Category	Amount
Staff Time	\$390,000
Cash Investment	
Category	Amount
Investment in Coach	\$94,822
Stipends	\$83,200
PD/Trainings	\$15,600
Materials and Supplies	\$1,000
Estimated Cost Per Student	
Students	Per-pupil
2,500	\$230

Evaluating: The SEEM Collaborative assessed the impact on staff and students, reflecting on what made the coaching successful

Lawson and district leadership representatives are excited about the success of the coaching program and early results. “The large majority of teachers were really bought into this work from the get-go [...] the inclusion coach program was successful because teachers who participated were invested and interested in the work,” Lawson observed.

Recognizing the importance of the summer UDL training institute led by Katie Novak, SEEM leadership concluded “teachers needed a baseline understanding [of inclusion] going into the year.” Teachers had mostly entered the training familiar with UDL vocabulary but reported on the survey that seeing the concepts in action during the training was eye-opening.

Leaders attributed much of the program’s success to Patt giving staff the opportunity to reflect on their own practice and identify the type of coaching support that would benefit them. As part of the coaching model, Patt asked teachers and school leaders to set goals for themselves using DESE’s UDL framework, and then worked with them in the classroom and provided strategies directly relevant to the identified needs. Reflecting on this approach, Patt felt that “teachers appreciated having this opportunity built into their day rather than out-of-school training. This is truly job-embedded PD. [...] This has been pretty essential to keep people interested.” Patt remarked that using DESE’s UDL framework ensured that there was an “anchor to direct teachers back to the [UDL] focus of coaching.”

In addition to the training and coaching, the districts reiterated the importance of inclusive practices and highlighted the coaching work. Patt created a Twitter account that allowed her to easily share resources with many teachers and highlight individual educators’ use of inclusive practices across districts. She developed a website that spotlighted specific teachers’ work, and connected teachers from across districts via email when they had similar areas of

“Teachers appreciated having this opportunity built into their day rather than out-of-school training. This is truly job-embedded PD. [...] This has been pretty essential to keep people interested.”

interest or could share resources. Teachers who worked with Patt also presented at faculty meetings, building buy-in among their peers.

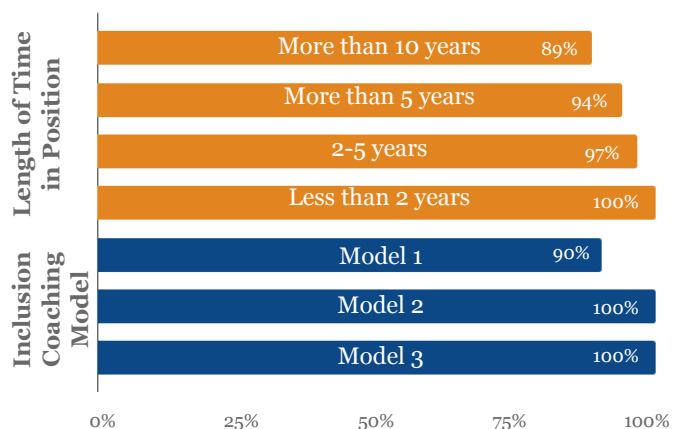
District leaders sensed that teachers had a positive response to the coaching, with one leader reflecting “She was so good at customizing her work at every school and meeting teachers where they were.” They reviewed the data that was collected by DMGroup on each of their goals for the year to assess the measurable impact.

Delivery of coaching: Based on an end-of-year staff survey, all inclusion teachers indicated that they worked with Patt at a frequency aligned with their districts’ coaching model. SEEM leadership shared that the biggest implementation challenge initially was scheduling and time management, given the three different models and the need to divide coaching time as evenly as possible across seven different districts. Teachers also indicated that they would benefit from more time with the coach. However, survey data shows that the three distinct coaching models allowed Patt to allocate her time to districts based on their priorities and PD needs.

Staff satisfaction: Surveys of participating staff showed that 93% of mentors would opt to receive coaching support again, exceeding the goal of 85%. Teachers with less experience in their current role responded slightly more positively to coaching support than staff with more longevity in their current role, but leaders were pleasantly surprised that 89% of teachers who served in their current position for more than ten years would opt to receive coaching support in the future. Especially given the stigma around coaching in some districts, leaders were pleased with these positive results.

Exhibit 4 | Staff Satisfaction

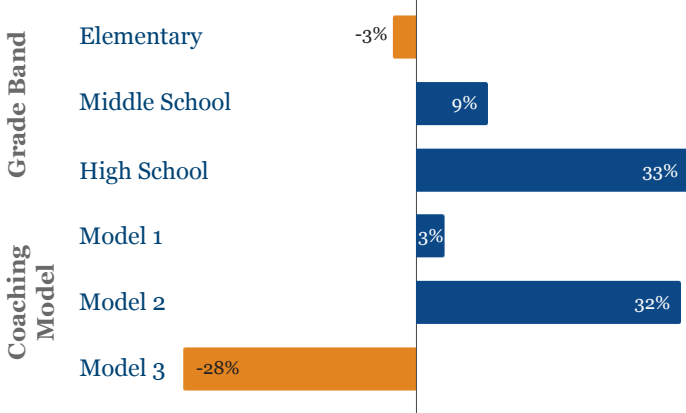
Participants rating the PD opportunities ‘valuable’



Special education referrals: Overall, in schools supported by the inclusion coach there was a 1% increase in school-based referrals to special education between 2017-18 and 2018-19, which didn't meet the definition of success set at the beginning of the year. While some districts saw a reduction in referral rates to special education, others saw a more significant increase. District leaders believe a decrease in referral rates is a long-term outcome and anticipate seeing more movement in this indicator in future years.

Exhibit 5 | Special Education Referrals

Percent change in referrals from 2017-18 to 2018-19



Feelings of inclusion: The districts had originally set a goal to see a ten percentage point increase in students' response to inclusive practices over the course of the year. However, the initial baseline survey in October 2018 found that 89% of the over 1,400 students surveyed agreed or strongly agreed with the statement, "Students get different kinds of help depending on what they need in my classroom." Leaders acknowledged that a ten point increase was unlikely on such a strong baseline. In May 2019 they found 92% of the approximately 1,200 students surveyed agreed or strongly agreed, an increase of three percentage points. Leaders took away a lesson that goal-setting should be done with baseline data in hand.

Reflecting on the survey, Patt noted that administering it across seven districts and all grade levels was a complex and time-consuming task. Patt communicated with teachers she supported to ensure smooth administration of the survey and data collection. Some teachers administered paper surveys, while others administered surveys online. Patt remarked that collecting survey data was a significant time investment, and it was necessary to have a point person responsible for coordinating survey administration and data collection.

Looking ahead: SEEM Collaborative plans to expand direct training and coaching based on initial success

All of the seven participating SEEM districts are continuing to work with Patt in 2019-20, given teachers' overwhelmingly positive responses to inclusion coaching. District leaders chose to continue to pool their resources to fund the shared inclusion coach position. SEEM's district leaders see potential to continue tracking the impact of their investment in coaching, focusing on longer-term outcomes like special education referrals in the coming year.

Although in the first year of coaching, teachers who were directly coached received a \$600 stipend, some districts are unable to sustain funding for staff stipends in 2019-20 school year. One district reduced the stipend to \$500, which was achievable given their budget, while other districts eliminated the stipends altogether. Leaders remarked, however, that the vast majority of teachers, even in districts that would be able to provide stipends, have opted to continue to work with Patt. The original plan was for teachers who received coaching to share inclusion strategies with other teachers. However, teachers responded so positively to Patt's direct, in-class coaching, that most leaders plan to continue with direct coaching in 2019-20. In future years, the districts may consider implementing a structured train-the-trainer model, whereby Patt supports in-house coaches who then deliver instructional coaching to teachers.

Reflecting on keys to success, one Leader commented that there were "differences in understanding and embracing the work among principals, and they should have been included more from the start." Leaders remarked that they will work with principals in schools that receive coaching early in 2019-20 to lay the foundation for the coaching model.

SEEM leadership and participating districts noted that rolling out coaching in seven districts simultaneously was at times messy and led to intense discussions among leaders about what coaching should look like and how its success would be measured. However, the process of developing a shared coaching model was a beneficial learning experience and one that districts believe will inform shared programming in future years. Leaders are encouraged by teachers' positive response to coaching, the shifts they've witnessed in teachers' willingness to share strategies, and in the excitement coaching has built around inclusive practices.

Case Study: Waltham Public Schools reallocates resources to support growing EL population



Executive Summary

- Waltham Public Schools' EL enrollment swelled to over 19% of the student body, more than double the state average. These EL students lagged academically behind their peers, especially on foundational literacy measures and ELA assessments.
- Waltham established a new elementary school to implement a dual language immersion program.
- Leadership used grant funds to invest in a literacy professional development for the dual language program's teachers, and created a summer program for dual language students.
- The district settled on a randomized, lottery-style admission process, which allowed the district to compare performance between students who participated and those who did not get in.
- The district funded their investments by repurposing resources from other professional development initiatives and reducing operational costs.

FAST FACTS
Waltham Public Schools
SY 2016-17

Schools
10

Teachers
514

Students
5,461

EL
19.3%

District Leadership

- Drew Echelson**, Superintendent
- Catherine Carney**, English Language Learners Director
- Marianne Duffy**, Asst. Dir. - English Language Learners
- Rochelle Nwosu**, Dual Language School Principal
- Leanne Wilcinski**, Business Administrator
- Shelly Chin**, Grants Administrator
- Diana Serrano**, Data Analyst

Case Study Authors

- Sarah Carleton**, DESE | Sr. Dist. Policy Analyst
- Sam Ribnick**, DMGroup | Sr. Director
- Chris Cleveland**, DMGroup | Sr. Associate
- J. Luke Chitwood**, DMGroup | Case Writer

Resource Reallocation to District Priorities Grant Program

A competitive two-year program supporting school districts to make substantial changes in resource allocation and direct more resources toward evidence-based improvement strategies. This grant program also encourages districts to use the new suite of Resource Allocation and District Action Reports (RADAR) tools to analyze how they use resources.



Overview of Grant

This case study is one of nine in a series showcasing the work of recipients of a 2017 DESE two-year grant for reallocating resources to align with district priorities. The case study explains how the participants used state data tools such as RADAR and DART to identify an area of need, determined an evidence-based investment, shifted resources in their existing budget to make the investment, and then evaluated the cost and impact of the investment.

Planning: Waltham implements and expands a dual language model

In 2015, district leaders from Waltham analyzed DESE data and found that their percentage of EL students vastly outpaced that of socioeconomically-similar districts. This reflected a larger trend for the district, which had become increasingly more diverse over the past decade. As part of a broader strategy to address the shifting student population, Superintendent Drew Echelson and his team created a two-way, dual language program (Dual Language Program),¹ which opened in August of 2016 as a distinct elementary school.

The Dual Language Program aimed to improve academic outcomes and English proficiency acquisition rates for enrolled ELs, while also ensuring that native English speakers in the program maintained performance consistent with district averages. Upon receiving the resource reallocation grant, the Waltham team

Exhibit 1 | Waltham Enrollment

Exhibit 1.a Total district enrollment (students)

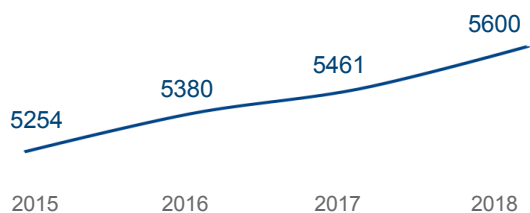


Exhibit 1.b EL percentage of total enrollment



developed a plan to reallocate resources to improve literacy instruction in the Dual Language Program. These investments included:

- Expanded use of the Developmental Reading Assessment (DRA) and the Estrellita program.
- A new curriculum and offered professional development from the American Reading Company for all Dual Language Program classroom teachers.
- A “Language Acquisition Team” (LAT) to monitor progress, design individualized support for each student in the Dual Language Program, conduct regular instructional observations, and provide feedback to the school’s mentor educators.
- An expanded summer program, delivered in English and Spanish throughout the day for each grade level, for Dual Language Program students in July 2019

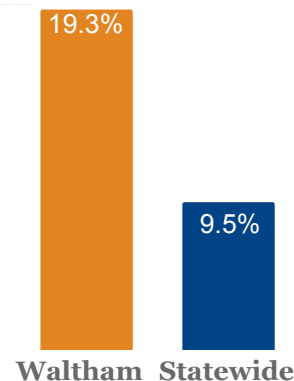
Measuring: Waltham uses data to measure the impact of the dual language model

Thinking through the desired outcomes and specific metrics to assess these outcomes, the Waltham team worked with DMGroup and DESE to define success measures for their investments. The team set these definitions for success in 2017-18:

- More than one year of growth in one year, following the Estrellita Scope and Sequence
- 80% of K–1 will read on grade level as measured by end-of-year ACCESS / DRA assessments (Fountas & Pinnell level C for kindergarten and level J for 1st grade).
- Students will gain more than 10% in ACCESS levels compared to district averages.

Exhibit 2 | RADAR Analysis – EL Enrollment

EL percentage of total enrollment (2016-17)



¹ Dual language is an instructional approach in which students are taught academic content in two languages, with the goal of each student becoming bilingual and biliterate. A two-way immersion model includes equal numbers of ELs and students whose first language is English.

As the Waltham team reconvened at the start of 2018-19, they reconsidered their initial focus on DRA data and opted to monitor changes in ACCESS ELA and ANet Math scores instead.

Since students apply to Waltham’s Dual Language Program by lottery, leaders had a rare opportunity to conduct a randomized study to test the impact of program participation on students’ English proficiency. The district could then compare the results for students who participated in the Dual Language Program with students who applied but did not get accepted to the Dual Language Program.

As part of the resource reallocation grant, the Waltham team calculated a fully loaded cost associated with their investments to improving Dual Language Program literacy instruction. Using a process from DMGroup, the team brainstormed all resources related to the investments, including staff time, administrator time, fees, stipends, consultants, materials, and operations. These included (but were not limited to):

- The initial costs of educator professional development and expanded summer programming in 2018 and 2019
- Staff time and materials involved in literacy professional development and the Language Assessment Team
- Salaries for summer program facilitators and the materials used in the instructional periods in July
- Costs for recruiting, vetting, and on-boarding educators to facilitate the summer program, along with resources used in marketing it to families and enrolling students

Waltham’s Business Office led efforts to catalog all resources invested in the grant initiatives. Across two school years, the team determined the total cost was \$1.089 million, which equated to a per pupil cost of about \$5,300. Of the total cost, only \$50,000 was an expense for the summer programming and ARC training for teachers. To cover these costs, Waltham planned to repurpose professional development funds and reduce operational costs, including increased resource sharing and reducing coordinator and transportation costs between district facilities.

Exhibit 3 | Fully Loaded Per Pupil Cost

Cash Investment	
Category	Amount
Fees, stipends and consultants	\$11,288
Materials	\$21,000
Time Investment	
Category	Amount
Staff Time*	\$663,360
Administrator Time*	\$144,000
Operations	\$256,176
*includes time in direct service, trainings, and meetings	
Dual Language Program Per-Pupil Cost	
Dual Language Program Students (2018-19)	Approximate Annual Per-Pupil Cost
120	\$5,300

Evaluating: Waltham finds mixed results in Dual Language Program student performance

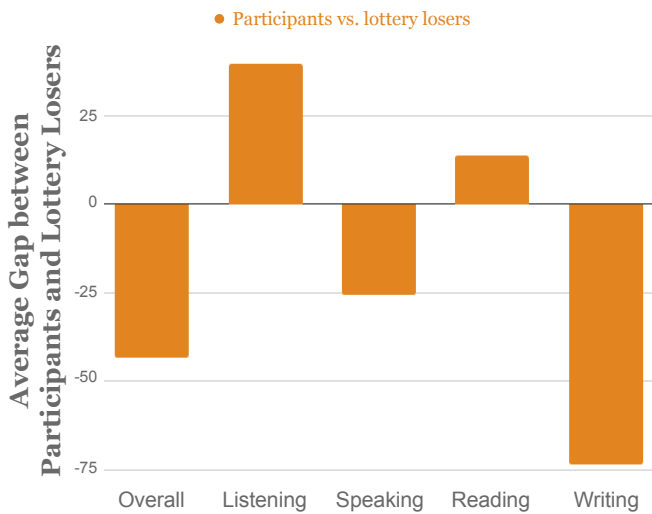
Waltham leadership monitored the impact of the Dual Language Program on students’ English and math proficiency. They had three main findings:

- Participating in the Dual Language Program did not hinder students’ growth in listening and reading according to ACCESS scores.
- On the ANet math assessment, students in the Dual Language Program outperformed those not in the program on some math domains, but in other domains they performed below those not in the program.
- Gaps in math performance between EL and non-EL students were often smaller in the Dual Language Program than the gaps between ELs and non-ELs outside the Dual Language Program, based on ANet results.

Exhibit 4 | Second Grade EL Students' English Proficiency Outcomes (ACCESS)

Second grade Dual Language Program EL students compared to EL students not granted access to the program

Chart depicts gaps between these two groups on ACCESS tests



Thanks to the lottery-based assignment, Waltham had the chance to compare results for students under true random assignment. Out of the entire pool of students who applied to take part in the Dual Language Program, they compared the students who actually participated (students who both won a seat in the lottery and chose to enroll) to the students who applied to the lottery but did not win a seat.

Results showed some bright spots in listening and reading, with participants in the Dual Language Program outperforming their peers on those sub-scores on the ACCESS test. District leaders had hoped to see across-the-board performance at least at the level of students who did not take part, but recognized that they might see a dip in results in the first year of implementation. Indeed, the analysis also showed that students in the Dual Language Program had lower overall performance on the ACCESS test, driven primarily by significantly lower scores in writing.

These were not the results the district had hoped to see, but leaders agreed that the analysis provided clear guidance about how to strengthen the program. One district leader commented: “The 2018-2019 school year was our first time having a 2nd grade Dual Language Program. These results suggest we need to be very planful in preparing for the upcoming 2nd grade cohort as well as planning our first 3rd grade experience.”

While outcomes from Waltham’s expanded summer programming in 2019 were not available at the time of publication, leaders anticipated that participating DLP students would enter the 2019-2020 school year with increased engagement and learning retention.

Looking ahead: Waltham takes action to improve Dual Language Program programs in 2019-20

As the DLP grows each year, district leadership will have new opportunities to further evaluate how resources are invested. In the first two years of the program, district leaders convened during the summers of 2018 and 2019 with their data to evaluate and adjust resource allocation. With the continued expansion of staff, curriculum, and materials to serve the eventual 250 students, Waltham will continue to evaluate results and adjust programming and resource allocations.

Waltham’s leaders learned lessons that they hope to apply to other work in the district in the years ahead. Leaders remain excited about alternatives to traditional EL instruction, but acknowledge the challenges of building and implementing a two-way immersion program. Nonetheless, district leaders remain committed to the program, with one saying, “National literature suggests dual language programming can be great for students compared to other EL instruction models. Our current results suggest we need to better support our teachers on the dual language instruction model.” With the deeper understanding of implementation successes and challenges, they are confident about making improvements in the years ahead as the program continues to grow.

“National literature suggests dual language programming can be great for students compared to other EL instruction models. Our current results suggest we need to better support our teachers on the dual language instruction model.”