

## 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

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### 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**

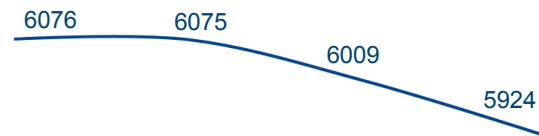
Andover Public Schools enrolls about 6,000 students across ten schools, including five elementary schools. In previous years, Student Services Director Sara Stetson prioritized training special education teachers and developing co-teaching models for students with language-based challenges. The district 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.

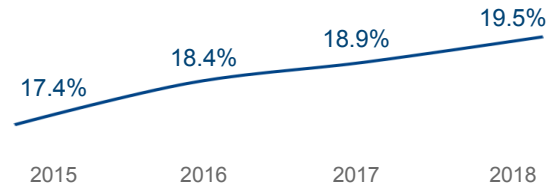
Stetson believed that the IAs could be more effective with better training on reading and behavior. This effort was part of a broader district strategy to provide more intensive support to students with disabilities at the elementary level, and use innovative strategies to build teacher and IA capacity 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)*



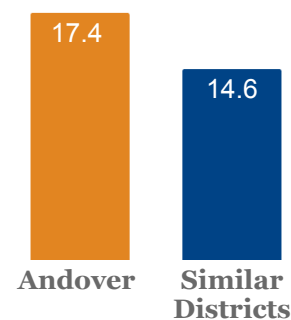
that prepared IAs to earn literacy microcredentials and lead K–2 literacy interventions, and one that prepared IAs to become Registered Behavior Technicians (RBTs) and deliver behavioral interventions.

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.

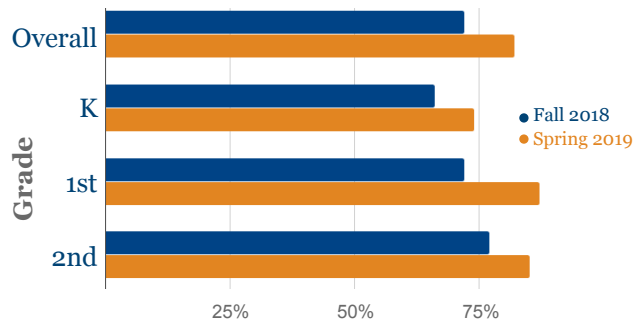
**Out of district placements:** In 2018-2019, 84 students were educated out of district, a 14% reduction compared to the past five years, when the average was 98 students per year. Stetson expects that the number of students educated out of district will continue to decline as Andover builds its capacity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

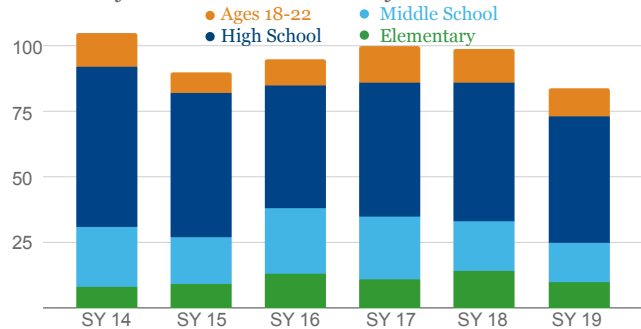
**Exhibit 4 | DIBELS growth**

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.