

## 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

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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.

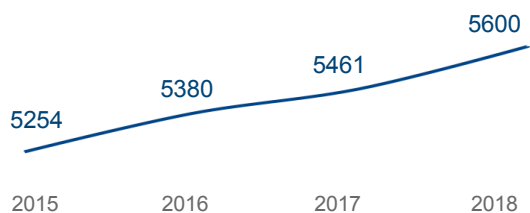
### ***Planning: Waltham implements and expands a dual language model***

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),<sup>1</sup> which opened in August of 2016 as a distinct elementary school.

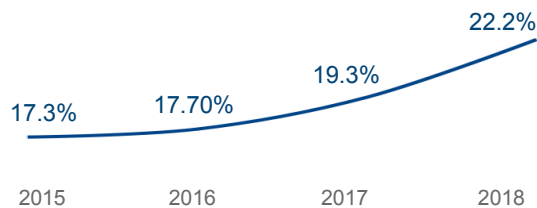
The Dual Language Program aimed to improve academic outcomes and English proficiency acquisition rates for enrolled ELs, while also ensuring that native English speakers in the program maintained performance consistent with district averages. Upon receiving the resource reallocation grant, the Waltham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

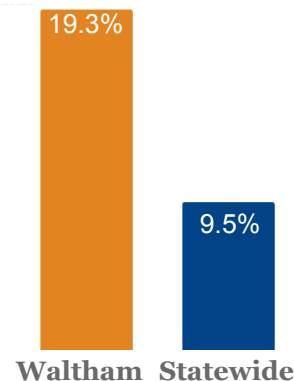
### ***Measuring: Waltham uses data to measure the impact of the dual language model***

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)*



<sup>1</sup> 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**

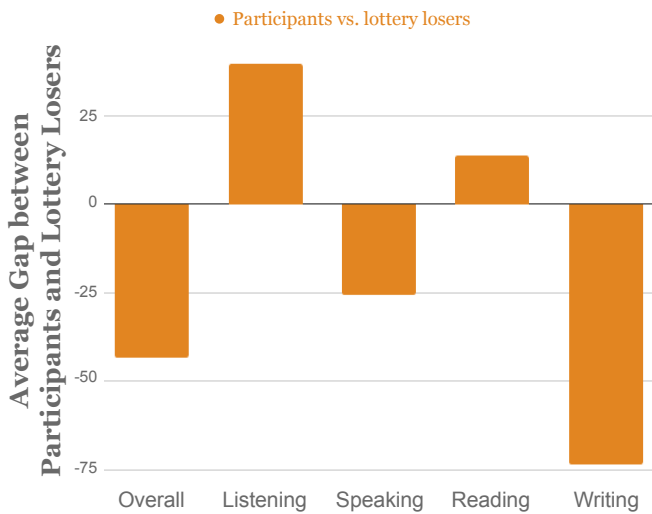
Waltham leadership monitored the impact of the Dual Language Program on students’ English and math proficiency. They had three main findings:

- 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.

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