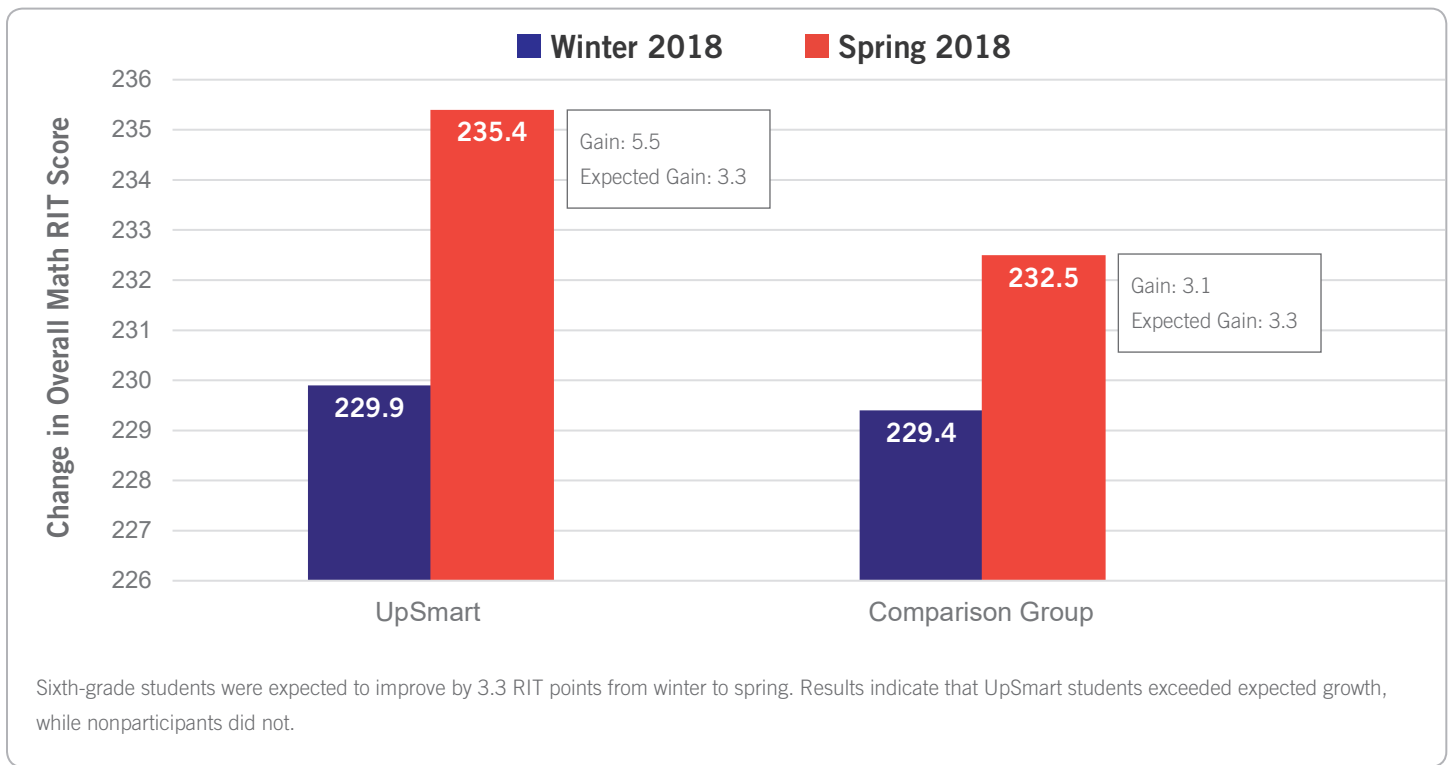


### UpSmart Students Outperform Their Peers by 44 Percent on the MAP® Growth™ Mathematics Assessment

From January to May 2018, Amphitheater Public Schools piloted UpSmart with 6th-grade students at Cross Middle School. Results show that UpSmart students achieved greater gains than a comparison group of peers who did not use the program (Figure 1). UpSmart students gained 5.5 Math RIT points on the NWEA MAP Growth Math Assessment from winter to spring, exceeding expected growth of 3.3 points based on national norms. In contrast, those who did not participate in UpSmart only improved 3.1 Math RIT points.

CROSS MIDDLE SCHOOL DEMOGRAPHICS:			
<b>Enrollment:</b> 677 Students			
White:	60%	American Indian:	1%
Hispanic:	31%	Two or more races:	1%
Black:	4%	Hawaiian Native:	1%
Asian American:	2%		

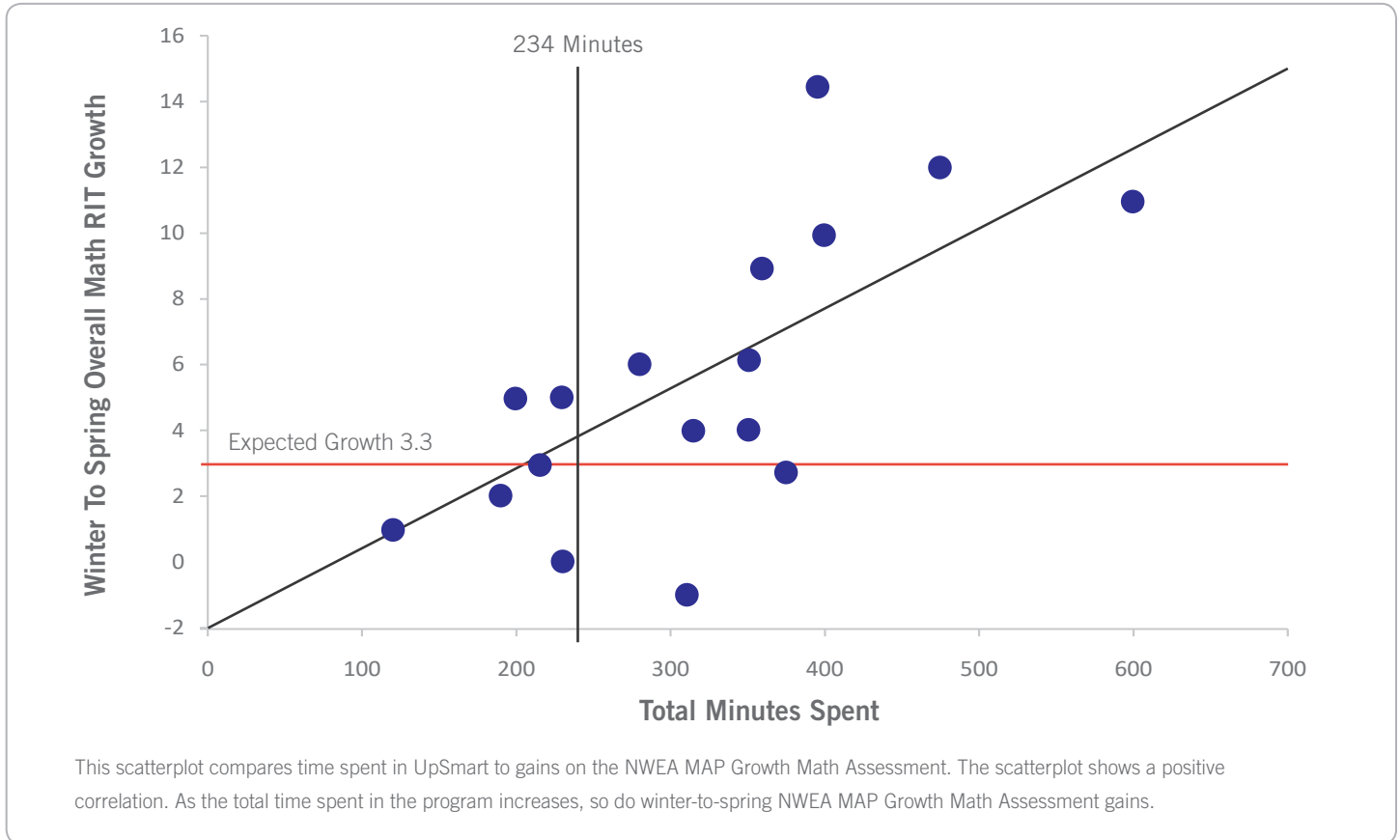
**Figure 1: Cross Middle School Edgenuity Students and Comparison Group, Grade 6**  
Performance on the NWEA MAP Growth Math Assessment, Winter 2018 to Spring 2018



Edgenuity also investigated the relationship between time spent in UpSmart and overall Math RIT growth. A scatterplot showed that students who spent more minutes in UpSmart were more likely to exhibit greater gains on the NWEA MAP Growth Math Assessment (Figure 2).

**Figure 2. Cross Middle School UpSmart Students and Comparison Group, Grade 6**

Gains on NWEA MAP Growth Math Assessment by Minutes Spent in Program, Winter 2018 to Spring 2018



## Challenge

Located in Tucson, Arizona, Amphitheater Public Schools (APS) serves 20 campuses and more than 13,000 students. The district is committed to offering a challenging academic curriculum that helps each and every student reach their highest academic potential. While recent NWEA MAP Growth Assessment data revealed that the math test scores of low-ability students were rising, data also indicated that the math performance of middle-ability students was relatively stagnant. APS wanted to find an online solution that would boost the math achievement of students performing closer to grade level.

## Solution

APS examined a number of different test preparation tools and selected Edgenuity UpSmart because of its targeted assessment, highly adaptive tasks, supportive scaffolding (topic introduction videos, hints, answer-specific feedback, and modeling), and digital badging motivation system. Students scoring at the 58th or 59th percentile on the NWEA MAP Growth Math Assessment were placed in UpSmart, where they were expected to use the program in a computer lab, 50 minutes per week, after they received teacher-led instruction on a math topic.

## Lessons Learned

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Anecdotal and quantitative evidence reveal that UpSmart had a meaningful impact on student learning. The program helped:

- **Generate impactful results:** Edgenuity compared the math achievement of students enrolled in UpSmart to the achievement of an equivalent group of students who did not use the program. NWEA MAP Math Growth Assessment data showed that both the UpSmart and the comparison group of students had statistically equivalent overall Math RIT scores in winter 2018 (229.9 and 229.4, respectively). However by spring, the overall Math RIT score for UpSmart students was higher than the comparison group (234.5 and 232.5, respectively). While UpSmart students gained on average of 5.5 Math RIT points, the group of students who did not use the program improved by only 3.1 Math RIT points. UpSmart students outperformed their peers by 44 percent on the MAP Growth Math assessment
- **Promote a productive disposition:** UpSmart deliberately teaches generalizable strategies to approach math problems and provides immediate, explanatory feedback that encourages persistence, resilience, and a learning growth mindset. Lead Teacher Valerie Wirth says the program “supports the development of productive struggle through rigorous tasks.” Students are taught to ask themselves questions such as, “What is the question asking? What information is provided? What part might give me trouble?” As Wirth notes, “Rather than feeding students the answer to problems they are struggling with, students receive strategies and hints that help them carry out tasks until they are able to do so independently. These supports teach independence. Students learn how to learn.”
- **Make teaching more efficient:** UpSmart provides actionable data and reports that give immediate feedback to teachers, allowing them to view data by standard and by skill. Wirth believes that the data from the program enabled her to immediately pinpoint which students were struggling, rather than having to do a lot of additional grading to figure it out. Additionally, she notes that the program “helped me realize what I was teaching well and areas where I need to teach differently.”
- **Make instruction more accessible:** UpSmart accommodates students of all learning styles and allows students to spend more time on the topics that are challenging for them—and less time on the ones they master more easily. “UpSmart uses a variety of instructional formats, including video lectures, graphic displays, simulations, video captions, and text to convey the same information to students. It actually gave me some new ideas about how to teach math concepts,” says Wirth.