

Impact of Zearn Math on Student Outcomes on the 2018 SBAC

By Shalinee Sharma & Shirin Hasim

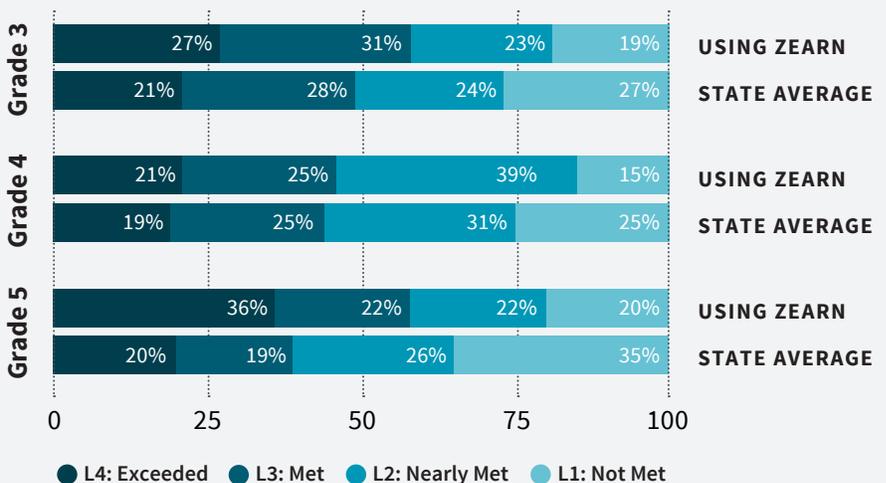
Shalinee Sharma is the CEO and co-Founder of Zearn. Shirin Hashim is a Doctoral Student at the Harvard Graduate School of Education and Zearn’s former Data & Analytics Manager.

We believe all children can love learning math. This simple vision is Zearn’s North Star and our motivation to relentlessly improve Zearn Math through data analytics and field research. An analysis of SBAC results for 10,000 students that completed 60 or more Zearn Math lessons during the 2017–18 academic year is found below.

We compared student achievement outcomes for grades that learned with Zearn Math to grade level weighted state averages.¹ Our analysis explored the outcomes of nearly 10,000 3rd through 5th grade students in grades that learned with Zearn Math for at least half the 2017–18 academic year.² These students spanned 131 schools in the five states that administer the SBAC assessment and had publicly available grade-level test results.³ Of the 131 schools included, 58% are eligible for Title I funds, in which 40% or more students are from low-income families. This compares to 49% of all schools in the five states being eligible for school-wide Title I funding.⁴

Overall, there was a positive shift toward greater proficiency in the distribution of students across achievement levels between 2015 to 2018 who learned with Zearn Math.⁵ Over the three-year period (2015–18), the percentage of students in the lowest score category (Level 1) on the SBAC decreased in each grade level and the percentage of students scoring proficient or higher (Level 3 and 4) increased. In other words, completion of 60+ Zearn Math lessons corresponded to a positive impact on student proficiency across all levels of proficiency, suggesting that Zearn Math is having an impact on student achievement.

% of Students by Achievement Level on Spring Smarter Balanced Assessments



In grades that learned with Zearn Math, the percentage of students in the lowest achievement category (Level 1) decreased. This held true among all the grade levels that used Zearn Math even when compared to the average grade-level performance across the five SBAC states (which demonstrated relatively fewer gains among the lowest performing students). In other words, in grades that learned with Zearn Math, the percentage of students scoring in the lowest achievement category (Level 1) declined significantly from 2015 to 2018. For example, across the 4th grades that learned with Zearn Math in the 2017–18 school year, the percentage of students who received a score that corresponds to Level 1 achievement decreased from 22% to 15% between 2015 and 2018. Across all schools in the five SBAC states, the corresponding change in students at Level 1 was 29% to 25%. A decline in the percentage of students performing at Level 1 is particularly noteworthy because it indicates progress toward proficiency among the lowest performing students, which is not captured by changes in proficiency rates alone, and provides a more complete picture of overall growth.

At the other end of the distribution, the percentage of students scoring proficient or higher (Level 3 and 4) increased between 2015 and 2018 in the 3rd, 4th, and 5th grades that learned with Zearn Math. These increases were comparable to or greater than the corresponding gains observed in each grade across the five SBAC states considered.

When comparing grades, 5th graders learning with Zearn Math demonstrated the largest achievement gains. Across the 5th grades that learned with Zearn Math, the percentage of students who demonstrated proficiency increased by 12 percentage points, compared to a decrease of 2 percentage points in the average 5th grade proficiency across the five SBAC states included. The percentage of students who demonstrated proficiency increased by 5 percentage points in 3rd grade and 1 percentage point in 4th grade in grades that learned with Zearn Math and on average across the five states included.

¹Statewide average achievement is weighted to reflect the distribution of students using Zearn Math in each state. For example, although 3rd–5th grade students in Washington state constitute 6% of the 3rd–5th grade students tested in the included five SBAC states, they constitute 11% of the 3rd–5th grade students in grades that used Zearn Math.

²Specifically, we analyzed the results for the schools' grade levels that spent more than 18 weeks on Zearn, completed at least 60 Independent Digital Lessons (~50% of the Independent Digital Lessons in the curriculum) on average per student, and where at least half the students in the grade used Zearn Math on a weekly basis. We did not systematically observe in these classrooms, so we do not know how the full curriculum was used.

³The states included in this analysis are CA, CT, MI, OR, and WA.

⁴Percentage of schools eligible for Title I funds across all five states (CA, CT, MI, OR, WA) calculated using publicly available 2015–16 data provided by the National Center for Education Statistics.

⁵Based on their scaled scores on the SBAC test, students fall into one of four categories of performance called achievement levels. In each grade, students performing at Levels 3 and 4 are considered to have demonstrated proficiency on their grade-level standards in math.

ABOUT ZEARN

Zearn is a nonprofit curriculum publisher and software developer on a mission to ensure all children love learning math. We work with teachers nationwide to build inclusive classroom communities where all students have equal opportunities to belong and deeply learn the math content of their grade. At the core of our mission is a belief that an understanding and love of mathematics is critical to helping all children realize their potential and to creating a generation of engaged learners who can change the world. In pursuit of that mission, Zearn publishes Zearn Math, a top-rated K–5 print- and software-based curriculum that transforms the daily math block to create engagement and differentiation for all students. In addition to curricular materials, Zearn Math offers comprehensive professional development and School Accounts to support district- and school-wide learning. For an in-depth overview of Zearn Math, please read the [Zearn Math Teaching & Learning Approach](#).



Learn more about achieving results in your school at zearn.org