

At Corvallis High School in Montana, incoming freshmen who have not yet mastered pre-algebra are catching up with their peers and getting ready for geometry in 10th grade through an intensive dual-block program that uses EdReady as a core component of the class.

INSTITUTIONAL PROFILE

Corvallis High School in Corvallis, Montana, is a rural public high school (9th-12th grades) that serves approximately 425 students from the surrounding area, 25% of whom qualify for free lunch. EdReady is made available to Corvallis High School and other schools throughout Montana thanks to the Montana Digital Learning Academy (MTDA) and a gift from the Dennis and Phyllis Washington Foundation.

IMPLEMENTATION

After taking a course in blended learning, math teachers Joanne Cleveland and Cory Soulliard chose EdReady as a program that could help them get incoming freshmen who were behind in math back on track by the end of 9th grade.

Using the Northwest Evaluation Association's Measures of Academic Progress (MAP) math scores or 8th grade teacher recommendations, they identified incoming freshmen who were not ready for algebra. Traditionally, these students would be enrolled in a year-long pre-algebra course, then spend the next year in algebra. But Cleveland and Soulliard created a new "back on track" math course that spanned a double block (90 minutes total) each day, 5 days per week. The goal was to get these students to complete algebra by the end of their freshman year so they would be ready to take geometry in their sophomore year.

Cleveland and Soulliard team taught the class, alternating days. On occasion, a special education teacher would also join the class. The student progress in EdReady was included as part of the grade for the course.



DETAILS

WHO WAS SERVED: High school freshmen who were not on track to complete Algebra 1 by the end of 9th grade

WHEN: Academic Year 2015-2016

NUMBER OF STUDENTS: 21

IMPLEMENTATION: In class, five days a week, with 30 minutes per day spent in EdReady

RESULTS: For the 15 students who completed both the fall and spring administrations of the MAP test, the average math score increase over the year was 7.33 points (the mean annual increase for 9th graders is 3.1 points)

INSTRUCTIONAL APPLICATION: In-class, accelerated remediation of pre-algebra and algebra skills to allow 9th graders to get back on schedule in their high school math series.

Daily class time started with correcting homework as a group and recapping what was covered, then they would split into two groups. Half used EdReady on Chromebooks for 30 minutes, and half worked with the teacher to get instruction on new material. Then the two groups switched. Finally, for the last 30 minutes, the group came together again to work on that day's homework assignment. Students working in EdReady worked at their own pace and often on topics different than what was presented to the class as a whole.

"EdReady helps those kids who need a little bit of extra instruction."

—Joanne Cleveland, Math Teacher, Corvallis High School



Cleveland and Soulliard looked at the 19 units of content available in EdReady and identified those units and topics that students should master by the end of their freshman year. They then grouped those topics into three sequential goals (each with its own diagnostic exam): Pre-Algebra Readiness, Algebra 1 Readiness, and Algebra Companion.

The students started the course by taking a diagnostic test for the Pre-Algebra Readiness goal in EdReady. That diagnostic (and subsequent study resources) covered 8 units: Whole Numbers; Fractions and Mixed Numbers; Decimals; Ratios, Rates, and Proportions; Percents; Measurement; Real Numbers; and Solving Equations and Inequalities.

Once a student reached an EdReady score of 90 in the Pre-Algebra Readiness goal, they moved on to the next goal,

Algebra Readiness. That diagnostic covered five units, with some overlap with Pre-Algebra both as a review and so the students could feel early success by already knowing some of the concepts: Real Numbers; Solving Equations and Inequalities; Exponents and Polynomials; Factoring; and Graphing. “Many of these students rarely have had the feeling of ‘I know how to do this’ or ‘I remember this,’ so this can be a real confidence booster,” explains Cleveland.

Again, reaching a score of 90 in Algebra Readiness allowed students to move on to Algebra I Companion, the final EdReady goal in the course. That diagnostic covered all the previous content from the first two diagnostics as well as Concepts in Statistics; Radical Exponents and Quadratic Equations; Functions; Exponents and Logarithmic Functions; and Trigonometry.

RESULTS

EdReady tracked the students’ progress in each of the three goals. EdReady is scored on a 100-point scale; for the Pre-Algebra Readiness goal, the 21 students’ median initial score on the diagnostic was 40 (Figure 1). By the end of the class, the score median had risen to 89, with an average score gain of 36 points per student.

Score Distribution ?

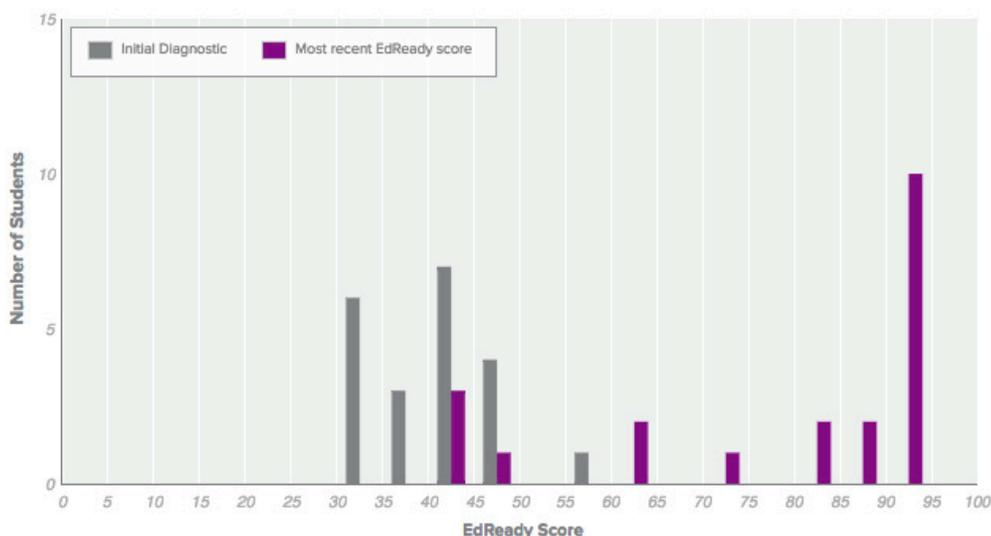


FIGURE 1: Corvallis student score progression and average score gains for the first (Pre-Algebra) goal in EdReady.

For the 18 students who went on to complete the diagnostic for the second goal, Algebra Readiness, the median initial score was 48. By the end of the class, the score median had risen to 87 (Figure 2), with an average score gain of 29 points per student. “We were excited about the score gain,” says Cleveland. “It was our way of sharing with the students that they were learning more than the average student, which once again is a confidence booster. It’s one thing for a teacher to tell a student they think the student can improve, but something else to have hard evidence to show the student they have improved.”

Score Distribution ?

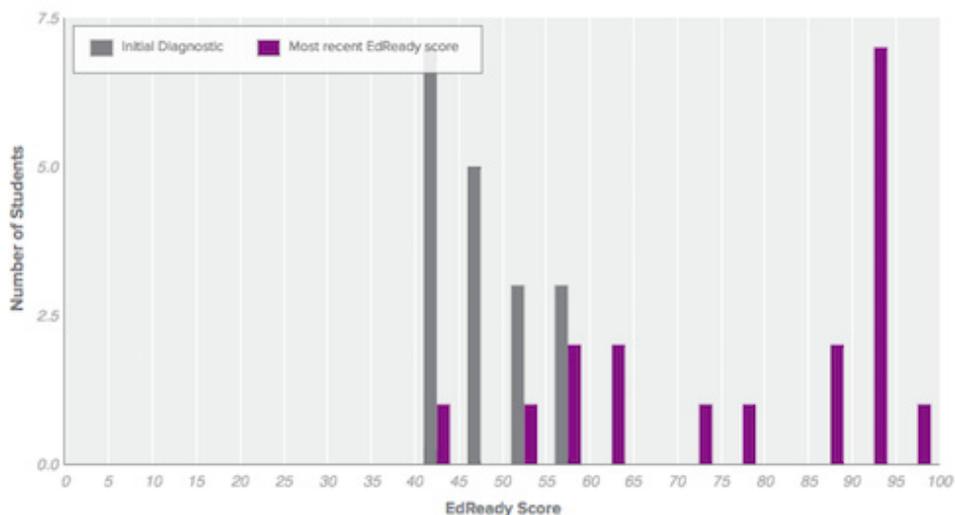


FIGURE 2: Corvallis High School student score progression and average score gains for Algebra Readiness in EdReady

For the 8 students who went on to complete the diagnostic for the third and final Algebra I Companion goal, the median initial score was 45. By the end of the school year, the score median had risen to 65 (Figure 3, with an average score gain of 20 points per student).

Score Distribution ?

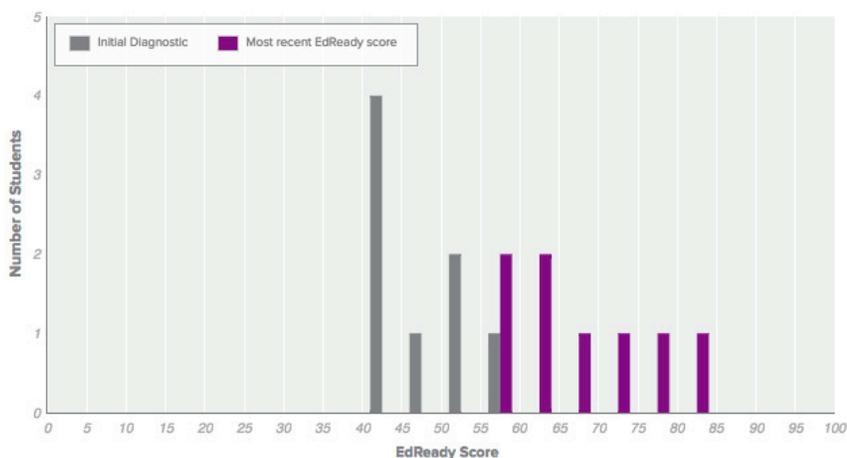


FIGURE 3: Student score progression and average score gains for the Algebra 1 Companion goal in EdReady.

Three times during the school year (fall, winter, and spring), Corvallis High also administers the MAP test. For the 15 students in this class who sat for both the fall and spring administrations, the average score gain on the math section of the MAP was 7.3 points (the mean annual increase in math MAP scores from fall to spring is 3.1 points). One student increased by 19 points; five other students also made double-digit (10 to 15 point) gains. Another student made a 13-point gain from fall to winter, but missed the MAP assessment in the spring.

WHAT'S NEXT?

Cleveland and Soulliard are continuing to run the course in the 2016-2017, refining their implementation strategies so that even more students can be helped to get back on track in math.