

Implementation Strategies

Ishi Hills Middle School, Oroville City Elementary School District
Oroville, CA

Grade(s): 6 – 8

Scenario: Computer Lab

Purpose: At-Risk Students, Supplement

ALEKS Portion of Curriculum: 85%

Time Spent in ALEKS: 2.66–7 hours per week

ALEKS Course: Essential Mathematics (with QuickTables), Pre-Algebra

Ken Petlock, Teacher

I just completed my third year using ALEKS as a vital component to mathematics instruction for middle and high school math courses. ALEKS provides a revolutionary new pathway for students and teachers to travel down as we use this amazing technology tool to deliver an incredibly robust learning environment in mathematics. ALEKS has completely changed how I approach teaching and learning mathematics.

Scenario

What challenges did the class or school face in math prior to using ALEKS?

Upon arrival into a temporary teaching assignment several months into the school year, half of my approximately 80 math students were receiving a failing grade on their first progress reports. Acceptance by my colleagues and administration to a new program was also lukewarm. However, interest in ALEKS began to build as evidence of student interest, motivation, and achievement began to emerge. Further evidence of student learning and achievement also emerged at the end of the school year when students who had used ALEKS scored significantly higher on an Algebra readiness test.

How many days per week is class time dedicated to ALEKS?

4–5 days per week.

What is the average length of a class period when ALEKS is used?

40–85 minutes.

Implementation

How do you implement ALEKS?

ALEKS was piloted as new program upon my arrival as a temporary teacher. Because I had used ALEKS in prior teaching assignments, I was allowed to proceed with the program. I used district and state adopted textbooks for some whole class lessons, and used an ALEKS curriculum for small groups and one-on-one instruction.

Do you cover ALEKS concepts in a particular order?

I have used both the textbook-aligned and ALEKS syllabi.

How do you structure your class period with ALEKS?

I use data from ALEKS reports, in conjunction with my overall observation of student productivity of on-task behavior, to create whole class lessons, small group instruction, or one-on-one help on an as needed basis.

How did you modify your regular teaching approach as a result of ALEKS?

ALEKS has completely changed my approach to mathematics instruction. ALEKS has the ability to create an ongoing Individualized Education Plan (IEP) for each student. I use ALEKS assessments, in conjunction with other assessments, to identify what a student is ready to learn and then focus on moving the student forward from that point. I continue to use ongoing multiple assessments to evaluate current student progress and to steer ongoing instruction.

How often are students required or encouraged to work on ALEKS at home?

Students are constantly encouraged to use ALEKS at home, and before/after school during computer lab time. Students are told that any topics mastered outside the daily assignment (usually three topics) are counted as extra credit.

How do you cultivate parental involvement and support for ALEKS?

Any time I have an opportunity to have a face-to-face, telephone, or email conversation, I heavily promote strategic parental

involvement.

Grading

Is ALEKS assigned to your students as all or part of their homework responsibilities? If so, what part of the total homework load is it?

I do not assign ALEKS as homework, because not all of my students have a computer or access to the Internet at home.

How do you incorporate ALEKS into your grading system?

ALEKS assessments are 60 percent of the grade, progress in the learning mode is 20 percent, and traditional assignments are 20 percent of a student's grade.

Do you require students to make regular amounts of progress in ALEKS?

I link assessment progress to the school year. For example, students are assigned the goal of completing 25 percent by the first quarter, 50 percent of the course by the end of the first semester, and so on. However at the end of the year, I use 80 percent as my end-of-year completion goal. Students are not advised of this until nearly the end of the year. So for grading purposes, if a student has completed 45 percent at the end of the first semester, I create an assignment in my grade program for 50 points and enter 45 points for the students' grade. I also assign students the task of mastering three topics per class day for each day they have access to the computer in class. For each grading period I add up the days students have access to the computer in class, and use this number as the assignment for the number of topics to learn in the learning mode per day. Because the two courses I used had about 300 topics, 1 percent roughly equals three topics which is my per day assignment. I can then use the green number on the ALEKS performance graph for each student as the number to record the amount of topics learned for that grading period.

Learning Outcomes

Since using ALEKS, please describe the learning outcomes or progress you have seen.

This year in particular, I have collected a substantial amount of data to document student achievement independent of ALEKS report data which shows substantial student growth and achievement. This year has been the best year as far as positive, enthusiastic support of ALEKS by my students. This past year ALEKS was well received and enjoyed by the vast majority of students I taught in a traditional public school setting. My three classes of eighth graders were among the lowest performing students during their seventh grade year. However, through systematic use of ALEKS the following year, my students went from being well below district, county, and state averages on the California Standards Test (CST) in the seventh grade, to being well above these averages in the eighth grade. For example, only 22 percent of my students scored proficient or higher in seventh grade, which was 17 percentage points below the number statewide. However, after using ALEKS for a year, 44 percent of my students scored proficient or higher in eighth grade, which was 12 percentage points above the number statewide. As exciting as these numbers are, they don't compare to the excitement that occurs almost daily when students spontaneously exclaim "Yes!" when they master a topic. It is in those moments that students achieve not only the mastery of that particular skill, but also a confidence that continues to grow daily as they learn math skills at a deep level of understanding. The numbers also don't compare to the newfound excitement and enjoyment I am able to experience as a teacher when I can finally point to an approach to mathematics instruction that works great for not only the bright students, but for all ability groups. ALEKS does a marvelous job of reintroducing the fun factor to the vast majority of my students, while simultaneously building a solid framework of mathematical skills mastery and knowledge.