Implementation Strategies

Washington Mathematics Science Technology Public Charter High School, Independent
Washington, DC

Grade(s): 9 − 12
Scenario: Computers in Classroom
Purpose: Intervention, After−School, Special Education, At−Risk Students
ALEKS Portion of Curriculum: 40%
Time Spent in ALEKS: 1.25 hours per week
ALEKS Course: Essential Mathematics (with QuickTables), Pre−Algebra, High School Preparation for Algebra 1, Algebra 1, High School Geometry

Jason Holzheimer, Special Education Teacher
ALEKS is very effective at identifying and eliminating the gaps in my students' knowledge base. ALEKS allows me to work simultaneously with students working on mathematics curriculums as divergent as third and tenth grade. Most importantly, through ALEKS students are starting to be able to teach themselves. My students are much more confident and more independent learners.

Scenario

What challenges did the class or school face in math prior to using ALEKS?
My students come from a community and background where education, especially mathematics education, is not often valued.

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

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

Implementation

Do you cover ALEKS concepts in a particular order?
I let the students choose. This is not ideal, but it encourages exploration and significantly reduces their frustration when they don't understand a given topic.

How do you structure your class period with ALEKS?
First, students complete review from last topic(s) learned. Next, they work on QuickTables with a ten minute limit, and up to four games with all four tables 0−12 available. Students choose the table they will work on. Last, they must master a minimum of one new topic per 30 minute class.

How did you modify your regular teaching approach as a result of ALEKS?
ALEKS has allowed me to teach students with very divergent abilities, side−by−side. ALEKS has forced me to think deeply about the benefits of teaching math topics on extremely granular levels.

How often are students required or encouraged to work on ALEKS at home?
Very rarely. Lack of Internet access is a significant issue.

How do you cultivate parental involvement and support for ALEKS?
The parents and guardians of most of my students are not computer savvy. They have more limited math foundations than many of my students. Parental involvement has been limited.

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?
No, due to a lack of Internet access.

How do you incorporate ALEKS into your grading system?
Every class is 100 points. ALEKS is 40 of those points as follows: ten points for review of most recently mastered topic(s), 15 points for ten minutes of work in QuickTables, and 15 points for mastery of at least one new topic. The cycle repeats itself the next class.

Do you require students to make regular amounts of progress in ALEKS?
Not really. Because of the wildly divergent abilities of my students, I use ALEKS to encourage and define effort.

Learning Outcomes

Since using ALEKS, please describe the learning outcomes or progress you have seen.
My students come from a community and background where education, especially mathematics education, is not often valued. As a result, the most profound difference is also the most subtle: through ALEKS students are starting to be able to teach themselves. My students are much more confident and more independent learners. To be honest my students don't love ALEKS, but they enjoy it much more than their regular math classes. The clearest progress has been made in QuickTables.

