

Implementation Strategies

City Academy, Independent
Salt Lake City, UT

Grade(s): 7 – 12

Scenario: One-to-One Laptop Program, Computers in Classroom, Home Access

Purpose: Intervention, Improve State Test Scores, Supplement

ALEKS Portion of Curriculum: 25%

Time Spent in ALEKS: 1 hour per week, 90 hours per term

ALEKS Course: Foundations of High School Math, Traditional Algebra 1, Math Review for AP Calculus

Usha Narra, Teacher

ALEKS is a great tool to have as a support resource for all math classes. I love the variety of courses that are available and the demand for mastery. At first, students seemed to think it was okay to have negative errors or calculations and wanted to argue that ALEKS was being unfair and marking it incorrect, even though they knew the process. Those complaints led to great discussions about the importance of accuracy and how the kind of training they are getting through ALEKS can help with standardized testing. It is always a treat when a student says, "Oh yeah! I learned that on ALEKS!" or when they think ALEKS is helping them with understanding concepts.

Scenario

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

1 day per week.

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

60 minutes.

Implementation

How do you implement ALEKS?

Once a week students are given class time to work on ALEKS. I print out topics from ALEKS that are related to what I am teaching in class and I go over the method that ALEKS presents. That way when students encounter that topic, they have already heard it explained and will have done some sample problems. The curriculum we use gets students to investigate and develop their own algorithms and formulas. Once they have done this, it is great to get them on ALEKS and have them practice and use what they have discovered.

Do you cover ALEKS concepts in a particular order?

Yes. I tell students to first go as far as they can with number sense slice of the pie. Our first quarter goal is to do that piece of the pie and once they do that, many topics open up in the other pieces of the pie. I then have them move to the linear functions piece. This piece is usually hard for them and takes a little more than number sense. Then we go into polynomials and quadratics. After that, it's up to them. However, students must finish 60 percent of the remaining pieces of the pie.

How do you structure your class period with ALEKS?

We have a long block period once a week and students have this period to work on ALEKS. I have a record sheet for each student to determine how much time they are spending on the program. Every day before they start, students put the date, their current total on their pie, and record the topics they work on that day. The goal is to complete at least five topics per class period.

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

I have come to realize that some students need steps and procedures laid out to them. So after they have had the opportunity to investigate, the students that cannot be successful with that approach find relief in being given a procedure. I have started to use ALEKS examples to give notes that they can use when they are working out problems. I have learned to differentiate the class better using ALEKS as one of the tools.

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

I don't assign any other homework on the day that students do ALEKS in class. Their homework for that day is ALEKS, which equals one hour per week at home and one hour per week at school. I don't think this is enough, but I feel that I will have better success if I make it seem like less work.

How do you cultivate parental involvement and support for ALEKS?

We have written ALEKS use into our class policy. We send home a note at the start of the year explaining what ALEKS is and how it will be used in the class, along with directions about how to load the plug-in on their home computer. We also include customer support information and things parents can do to help support their student if they are struggling with ALEKS. We make ourselves available to parents through email to answer any questions or concerns they have regarding ALEKS. Our computer lab is available all day until 5:00 pm for students to come in and work.

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?**

Once a week ALEKS is their homework. At least three ALEKS assignments are included in the assessed pieces of work. One is the percentage of completion of the designated piece of the pie for that quarter. Another is an End-of-Quarter comprehensive assessment. The third is their success and commitment with using class time and doing homework, so this portion is more about sincere effort on ALEKS.

How do you incorporate ALEKS into your grading system?

ALEKS is graded as effort put into using the time given in class as well as consistent homework completion, which I score out of a 100. I use the record sheets students complete in class to figure out what percentage of the time they meet the goal of having completed five topics per class period. I also look at how many times they do their ALEKS homework. I keep track of this by printing out the Time and Topic Report once every week. If they did their homework 75 percent of the time, they get a passing mark. So 75 percent in both categories is required for them to pass this assignment. I also use an End-of-Quarter comprehensive assessment, which students must not lose any more than three of the total topics learned in order to pass. The passing mark is again 75 percent. Additionally, the percentage completed on the designated piece of the pie is also calculated. Students must complete at least 75 percent of the designated piece of the pie for that quarter.

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

I don't require regular amounts of progress because I know that it will be different for every student. Some topics will be easy and some will be harder. I don't want to rush students, but instead want them to feel that they are truly making progress.

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

Students have improved their ability to do calculations with integers and rational numbers. Since ALEKS makes students learn number sense before they can move on to higher concepts, students are forced to master those concepts first. I would say that at least 25 percent of the students who were struggling with calculations before have shown progress after using ALEKS. Students feel a sense of pride when I have them pull up their report and show them that at the start of the year they were at 10 percent mastery and now they are at 40 percent. There is a feeling of elation after working hard on one topic and finally mastering it.

Best Practices**Are there any best practices you would like to share with other teachers implementing ALEKS?**

It is important to take your students into consideration and come up with a fair way of incorporating ALEKS into your grading. You might need to differentiate even the assessments. Additionally, teachers need to maintain a positive mind set about ALEKS and convey that to students.