

Implementation Strategies

South Decatur Junior–Senior High School, Decatur County Community Schools
Greensburg, IN

Grade(s): 7 – 12

Scenario: Computer Lab

Purpose: Improve State Test Scores

ALEKS Portion of Curriculum: 50%

Time Spent in ALEKS: 2–3 hours per week, 30–40 hours per term

ALEKS Course: Pre–Algebra, Algebra 1

Kay Smith, Teacher

I find the ALEKS system very easy to use, and we have had great success with remediating our students who have not passed the Indiana End-of–Course Assessment (ECA) for Algebra 1. At the end of the first semester, 14 of 18 students passed the ECA and four even passed at the highest level. They were all very excited, and frankly, I was amazed because these were students who were not very fond of math!

Scenario

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

I believe that our students have difficulty in higher level math classes because they do not have good foundational skills. Since we are a small school, if a student is failing first semester, they can't restart the class second semester. The math lab has become a good alternative for that situation.

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

2–3 days per week.

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

2–3 periods per week.

Implementation

How do you implement ALEKS?

I did a pilot last spring and then convinced my principal to purchase subscriptions for the math lab this year. Next year, we plan to purchase additional subscriptions for teachers to use with students in Pre–Algebra and Algebra 1.

Do you cover ALEKS concepts in a particular order?

Not really. However, I always follow this order in helping students prepare for the ECA: solving equations and inequalities; equations of line and graphs; systems of equations and word problems; polynomial operations and factoring; quadratics; radicals and radical equations (we usually don't get to this.); and rational expressions (we never get to this, but some of my ALEKS students have!).

How do you structure your class period with ALEKS?

We alternate days in the computer lab working on ALEKS with days in the classroom where I teach review lessons to the whole class on topics specifically geared to the ECA. We also use one individualized worksheet every 1–2 weeks.

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

I can use information from ALEKS to determine which review lessons my students are ready for. I also use ALEKS to give them short quizzes afterward.

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

I do not require it because many of my remedial students do not have Internet access at home. However, I do have some students working on ALEKS this summer.

How do you cultivate parental involvement and support for ALEKS?

Primarily because the students tell their parents about it, and then the parents want to talk to me!

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?

It is approximately 60 percent of their grade in math lab.

How do you incorporate ALEKS into your grading system?

I give an ALEKS grade every two weeks. I want them to complete 15 topics over a two week period, and then award 45 points (three points per topic) every other week. Each worksheet of 16 questions each is worth 16 points. I have the students do the worksheet and turn it in. Then, I mark the questions that are wrong and hand them back for corrections. I do not score the worksheets until after the corrections are made. Otherwise, the students would not look at the problems they missed.

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

Students are required to complete 15 topics every two weeks. If I use ALEKS again with a regular course, I will probably use the computer lab one day per week and require students to complete five topics. If they cannot complete five topics in that one hour, they can use the computers in the library or at home to fulfill the requirement. At least, that is the plan I have envisioned so far!

Learning Outcomes

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

Most of the students really like the individualized program and the ability to work at their own pace. As a result, I have seen their confidence grow. Many of our students have passed the ECA. A few of my students who passed the ECA first semester asked to stay in the math lab course because it was helping them to do better in their regular math class. Many have made excellent progress in their skills, even if they have not yet passed the test. One unique situation this semester was that I had four students who were still taking Algebra 1 but asked to enroll in the math lab and use ALEKS. Three of these four students completed 100 or more topics on ALEKS, and all had completed over 150 topics by the end of the semester. They all showed remarkable progress in their confidence in doing math. I am quite anxious to see their ECA scores!

Best Practices

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

I believe that using ALEKS as part of the learning process is the best. I have some students who could never work on a computer everyday; they would not do well. I also have periodic reward days when I bring in treats for the students who met their goal of 15 topics per two weeks and let them play games. I have several puzzle games that the students love. They are having fun, yet improving their problem solving skills at the same time!