

Implementation Strategies

Andrews University, MI
4 Year University / Private

Scenario: I use ALEKS in an individualized lab course.

Purpose: Core Curriculum

ALEKS Course: Intermediate Algebra

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I am pleased with my experience using ALEKS. ALEKS provides the tool instructors need to accommodate multiple levels of understanding in the same classroom, while providing information on student participation. This allows me to identify if a student is truly struggling or is having difficulty due to lack of motivation, or both.

Scenario

Course Term:

Fall 2008

What challenges did your students or institution face prior to using ALEKS?

Students vary widely in levels and areas of understanding. In the traditional classroom, most students overestimate their understanding of math. Most students are either bored or lost when the lecture is aimed at the median understanding. Students often take shortcuts on homework and become frustrated and discouraged with poor grades.

Was ALEKS used in your course with all students or with targeted students?

All students.

Number of students who used ALEKS for the course and term:

Number of sections: 4

Number of students per ALEKS section: 29

Total students enrolled in this ALEKS course: 109

How do you structure your course periods with ALEKS?

Every day is ALEKS lab time. Students who progress to an exam will take, or retake, an exam during class time.

How often are students encouraged or required to use ALEKS?

Days per week: 3

Hours per week: Approximately 6–7

Hours per term: 80

For the sections that do NOT use ALEKS during this specific term, what do they work on in place of ALEKS?

All sections used ALEKS.

Implementation

Please describe how you implement ALEKS into your course curriculum.

According to their math placement exam score, students start in either the Basic Math or Intermediate Algebra pie. I have limited both of the pies to a focused curriculum. In each pie there is one Intermediate Objective set up a bit over halfway through the pie. At each Intermediate Objective and at the end of each pie there is a paper exam that must be passed with at least 85 percent. Students go through two pies and take four exams.

Do you cover ALEKS topics in a particular order?

I use two pies: Basic Math and Intermediate Algebra and create Intermediate Objectives. At the end of an Intermediate Objective and at the completion of each pie, there is a paper/pencil exam for the student to take. This is the only sequencing done.

Do you integrate a textbook with your course using ALEKS Textbook Integration? Please describe how you set up your chapter completion dates.

No.

How often do you use the ALEKS Instructor Module?

I use the Instructor Module daily throughout the term.

How do you incorporate ALEKS Quizzes into your course?

ALEKS quizzes are available for students to prepare for taking or retaking exams. They are not part of the grade, but must be passed at a 90 percent level to demonstrate readiness to take the paper exam.

How do you modify your regular instructional approach as a result of ALEKS?

I don't lecture. I instruct individual students on the topic they are currently working on and also review paper/pencil exams with students and explain concepts that are assessed as lacking.

How do you use information from ALEKS to focus your teaching?

I use the report feature to see who would benefit from a review session before the exams.

How do you use ALEKS in conjunction with any other learning management systems, course management programs, etc.?

I use ALEKS to keep track of hours and progress. I use Excel to calculate grades based on hours, notebook score (guidelines followed, not graded problems), and exams passed.

Grading

How do you incorporate ALEKS into your grading system?

The minimum requirements for an A in the course are for the student to pass Exam four OR pass three exams and have attendance of at least 90 percent and a notebook score of at least 90 percent. The minimum requirements for a C in the course are for the student to pass Exam four and have attendance of at least 70 percent and a notebook score of at least 70 percent. There are also grade variations between these two levels that are based on the number of exams passed, attendance, and notebook score.

Is ALEKS assigned to your students as all or part of their homework responsibilities?

All students.

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

Students must pass at least one exam during the semester.

How do you track student progress in ALEKS?

I use the Detailed Progress Report to track hours and to calculate if students were taken back by assessments.

Do you notice that students who spend more time in ALEKS perform better in the course than those students who spend less time in ALEKS?

Yes, time in ALEKS is the backbone of the course.

Would you attribute any improved student performance in the course to ALEKS methodology or to some other factor?

ALEKS contributes to higher retention due to the comprehensive nature of assessments. Students use more math vocabulary due to their needing to refer to questions by topic rather than number. Some students are motivated by the visual incentives for completion of items. Many students are able to learn primarily from the ALEKS explanations.

Learning Outcomes

Please describe the learning outcomes your students have achieved using ALEKS.

Some students completed two semesters of review work in one (or less than one) semester. Most students gain a fairly accurate picture of their skills in math, and most students learn to use more math vocabulary by reading and referring to the item descriptions.

In general, how do the students feel about their progress in ALEKS?

Students are working consistently on ALEKS and feel positive about their progress. It is common to hear students express satisfaction at completing items or entire sections of the pie. When students are trying to shortcut the learning process or work half heartedly, they become frustrated at the lack of progress.

Best Practices

What challenges did you encounter when first implementing ALEKS and how can other instructors avoid these pitfalls?

We did not provide enough lab assistants, resources, or enough time in class. Motivating students to spend time learning is a challenge for remedial math. Students claim ignorance of policies at the end of the semester, so now we require a five to ten minute

consultation with the instructor during the second week of class to clarify anything in the syllabus or about the course.

What will you do differently when you implement ALEKS in your future course(s)?

We would like to have more hours of attendance required but without using more instructor time. However, this would require more computer lab resources so we are trying to think creatively on this. I would also like to incorporate more motivational materials and tools for approaching math or addressing math anxiety.

Which ALEKS course product(s) have you used in the past?

Basic Math, Intermediate Algebra

What best practices would you like to share with other instructors who are implementing ALEKS?

Decide on your objectives and make them clear. Explore how ALEKS can be used as a tool to meet those objectives. There are many options to use ALEKS creatively.

Additional Insights:

Attach a copy of a syllabus for others to view if interested.