

Title: College Algebra Chapter 1 Success Rates

Project Member(s): Heather Gamber

Describe the problem, issue, or area of interest and the context. Students had very low scores on my first test in College Algebra Fall-04. This test covers material they should have mastered before this course. My project involved helping students to learn this material through group work and through working on their study skills

Define your desired goals, or “outcomes.”

- 1: Improve student study skills
- 2: Incorporate group work into my lessons
- 3: Increase student mastery of material

Describe your “indicators” of success.

- 1: Improved scores on test 1
- 2: Minute paper written by students describing their response to the class

Describe your project

During Fall-04 I asked my students to write a minute paper telling me what could have been done differently to succeed on the first test. They all told me that they needed to study more. During my first class in Spring-05 I included a discussion of the habits of a good student. I used a PowerPoint presentation that also included the material in my course syllabus. I didn't feel as though I was harping when I talked from the slides. For homework I sent my students on a scavenger hunt, which included finding my office, the tutoring center, my web site, emailing me, and getting contacts from three other students in the class. I also gave them some review problems. As a result of this, the tutoring center reported that my students were using the center from the beginning of the semester. I did not see an increase in attendance at my office hours or in my email. I also gave them a schedule and asked them to block out homework time. A couple of students immediately dropped the class because they couldn't fit homework into their schedules. Several of the students planned to do their homework in one 6 hour block of time on Sunday afternoon. I discussed the problems of with this strategy in class.

I incorporated some form of group work into almost every class, thanks to all the “Here's Something That Works” ideas. I noticed that there was a more relaxed and contented atmosphere in my classroom as students worked on concepts during class time.

During Fall-04 I assigned all homework online through MyMathLab. I thought there may have been a disconnect between computer homework and the pencil-&-paper test. During Spring-05 I assigned a combination of traditional homework, which I collected weekly for a completion grade, and a few problems from MyMathLab, due test day. The students that survived the S-05 course reported that they loved the tutorial help in MyMathLab. The students who were most vocal in their complaints about having to do MyMathLab homework were also the students that failed to turn in any pencil-&-paper homework.

Describe your results.

	TEST 1 SCORES		
	Fall 04	Spring 05	Fall 05
Mean	44.1%	52.7%	56.6%
Median	47.0%	56.0%	56.0%
A	0	4	6
B	3	2	3
C	5	4	4
D	8	6	5
F	40	25	28
Total # students	56	44	48
% Passing Test 1 (A, B, C)	14%	23%	27%
End of semester retention	37 (66%)	32 (73%)	32 (67%)

In Fall-04 my first test score had a mean of 44.1% & median 47.0% (56 students in 2 classes). In Spring-05 the mean was 52.7% & median 56.0% (44 students in 2 classes). Although the scores were higher, the difference was not statistically significant because of huge between class differences each semester: In S-05, 13 students in my 11:30 TTh class scored lower on their first test than all the students in my 10:00 TTh class!

In a minute paper given after the first test Spring-05 students still said they needed to study more. They reported that they liked the group work. Some complained about the MyMathLab homework but most liked its tutorial assistance.

This semester (Fall-05) my college is piloting an extra hour in College Algebra. This allows for a slower pace with more in-class work. First test grades had mean 56.6% & median 56.0% (48 students, 2 classes). Again, any improvements were masked by huge between class differences (7am MWF, 11:30 TTH). Because of the number of problems students can now work in class, I plan to try to having students do all homework through MyMathLab again next year.

Describe your evaluation methods.

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