

Course Redesign: Strategies Applied to Large Introductory Course with High Student Failure Rate

Keith Williams
Oakland University

Approach: Assessments

Past assessment structure

60% Exams (4 unit exams, 60 questions/exam)
15% Comprehensive Final Exam (50 questions)
20% Moodle quizzes (8 quizzes, 20 Qs/quiz)
5% Clickers
4% Extra credit from homework papers

Winter 2015 assessment structure

40% Exams (5 unit exams... 30, 50, 60, 60, 60 questions)
15% Comprehensive Final Exam (50 questions)
20% Moodle quizzes (8 quizzes, 20 Qs/quiz)
15% In-class activities/written assignments
10% Clickers
5% Extra credit from research participation

- **Altered exam structure/timeline**
 - More exam opportunities, less content per exam, smaller contribution to course grade
 - First exam... 2 weeks into class, 1 chapter, 30 Qs
 - Supplemented w/ Web Ex lecture
- **Added in-class activities/written assignments**
 - 5 in-class discussions (one prior to Exam 1)
 - Authentic assessments; graded w/ rubrics
 - Not listed in syllabus with specific dates

Results: Assessments

- Course grades

The impact of course redesign on overall course grades:

<u>Grade</u>	<u>Fall 2014 (n=143)</u>	<u>Winter 2015 (n=194)</u>	<u>Change</u>
A = 90-100% (3.6-4.0)	23.8%	32.5%	8.7% increase
B = 80-89% (3.0-3.5)	27.3%	28.4%	1.1% increase
C = 70-79% (2.0-2.9)	22.4%	23.2%	0.8% increase
D = 60-69% (1.0-1.9)	11.9%	6.2%	5.7% decrease
F < 60 (0.0)	13.3%	8.8%	4.5% decrease
W and I	1.4%	1.0%	

- Decrease D's and F's in course from 26.6% to 15%
- Increased course “success rate” from 73.5% to 84.1%

- In-Class Activities/Written Assignments

- Complete assignments.... Pass the course!
 - 165 of 194 students completed all 5 assignments
 - Only 6 of those 165 students received D or F for course

Approach: Early Alert

- Poor performance early predicts later performance
 - Fall 2014... 20 of 143 students (14%) failed Exam 1
 - 15 of 20 students (75%) received D, F, or W
 - Winter 2015... 18 of 194 (9%) students failed Exam 1
 - Time consuming personalized approach to early alert

Hi _____

I noticed that you failed the first exam last week. I'd like to meet with you to discuss how we can get you back on track in this class. You have a lot of resources available to help you (e.g., the GTA Ashley Cox, the tutoring center, meeting with me). Together, we can help you with your study approach to this class so that you can get the best grade possible.

Can you meet with me or contact me to let me know that you will attempt to meet with Ashley or go to the tutoring center?

Dr. Williams

Results 3: Early Alert

- Winter 2015... 18 of 194 (9%) students failed Exam 1
 - 9 of 18 responded to email [50% response rate!]
 - 8 of 9 passed course (1 W, lowest grade 69%)
 - 5 of 9 face-to-face meetings
 - 8 of 9 completed all 5 written assignments
 - Attended class and engaged material
- What happened to the early alert non-responders?
 - 7 of 9 received F for course
 - 2 of 9 received C for course
 - How do we reach these students?

Strategies for Course Redesign

- What are the effective and efficient strategies that are sustainable across semesters?
 - Assessment strategies
 - Altered timeline for exams
 - Less weight given to exams
 - Authentic group assessments
 - Early alert