Faculty Development Institute (FDI)
Course Redesign to Increase Student Success

Fall 2016 Orientation

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Name/email on sign up sheet.
Email to confirm interest and add to E-space.
1. Introductions
2. FDI description/overview, future meetings
3. Discussion of gateway/foundation courses
4. Strategies and practices for redesigning courses to increase student success
   – Example: Redesigning PSY100
5. Other factors predicting student success?
6. Topics for future meetings
Introductions

• Name
• College or department
• If in a teaching role, what courses do you teach?
• What inspired you to attend? What do you hope to learn or contribute?
FDI Description/Overview

• Explore the characteristics of “gateway” or “intro/foundation” courses and courses with high student failure rates.

• Investigate strategies and practices for redesigning courses to increase student success.

• Receive feedback on planning and implementation of course redesign.

Meeting dates for Fall 2016 (noon-1:30pm)
Tuesday, Sept 27 - Early alert and class timeline
Tuesday, Oct 11 - Constructive alignment and assessment strategies
Tuesday, Nov 1 - More assessment strategies and other high impact practices (e.g., Universal Design for Learning, flipped classes, writing assignments/rubrics for grading, etc.)
Tuesday, Nov 29 - Plans for implementation
What is a “gateway” course? Why redesign?

1) **Foundational** in nature – foundational courses may be non-credit bearing developmental education courses and/or college credit-bearing lower division courses;

2) **High-risk** – as measured by the rates at which D, F, W (for withdrawals) and I (for incomplete) grades are earned across sections of the course(s); and,

3) **High Enrollment** – as measured by the number of students enrolled across sections of the course(s).

These courses merit focus and transformation because they enroll large numbers of students and lack of success in these courses is directly correlated with poor performance in higher education and, in many cases, failure to complete a postsecondary degree or credential all together.

From John N. Gardner Institute
For Excellence in Undergraduate Education
### Freshmen

First semester

Prerequisites

Success rates:
% students w/ ≥ 2.0

Grade data from only FTIACs

In first semester

#### Success Rates

<table>
<thead>
<tr>
<th>Course</th>
<th>2015</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>WRT 160</td>
<td>92%</td>
<td>92%</td>
</tr>
<tr>
<td>WRT 150</td>
<td>90%</td>
<td>91%</td>
</tr>
<tr>
<td>PSY 100</td>
<td>77%</td>
<td>81%</td>
</tr>
<tr>
<td>MTH 154</td>
<td>67%</td>
<td>73%</td>
</tr>
<tr>
<td>MTH 141</td>
<td>71%</td>
<td>58%</td>
</tr>
<tr>
<td>MTH 121</td>
<td>73%</td>
<td>71%</td>
</tr>
<tr>
<td>HS 201</td>
<td>78%</td>
<td>85%</td>
</tr>
<tr>
<td>ECN 201</td>
<td>81%</td>
<td>86%</td>
</tr>
<tr>
<td>CHM 147</td>
<td>83%</td>
<td>84%</td>
</tr>
<tr>
<td>CHM 144</td>
<td>72%</td>
<td>74%</td>
</tr>
<tr>
<td>CHM 104</td>
<td>92%</td>
<td>89%</td>
</tr>
<tr>
<td>BIO 111</td>
<td>80%</td>
<td>78%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>2015</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTH 062</td>
<td>63%</td>
<td>64%</td>
</tr>
<tr>
<td>MTH 061</td>
<td>40%</td>
<td>62%</td>
</tr>
<tr>
<td>CIN 150</td>
<td>91%</td>
<td>89%</td>
</tr>
<tr>
<td>MUT 112</td>
<td>71%</td>
<td>75%</td>
</tr>
<tr>
<td>SOC 100</td>
<td>77%</td>
<td>81%</td>
</tr>
<tr>
<td>PS 100</td>
<td>74%</td>
<td>74%</td>
</tr>
<tr>
<td>PHL 103</td>
<td>83%</td>
<td>80%</td>
</tr>
<tr>
<td>PHL 101</td>
<td>80%</td>
<td>84%</td>
</tr>
<tr>
<td>EGR 141</td>
<td>95%</td>
<td>94%</td>
</tr>
<tr>
<td>AH 101</td>
<td>85%</td>
<td>87%</td>
</tr>
<tr>
<td>AH 100</td>
<td>85%</td>
<td>75%</td>
</tr>
</tbody>
</table>
FDI Description/Overview

- Explore the characteristics of “gateway” or “intro/foundation” courses and courses with high student failure rates.
- Investigate strategies and practices for redesigning courses to increase student success.
- Receive feedback on planning and implementation of course redesign.

OU Scorecard PSY100

<table>
<thead>
<tr>
<th>Year Range</th>
<th>Success Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012-2013</td>
<td>78%</td>
</tr>
<tr>
<td>2013-2014</td>
<td>71%</td>
</tr>
<tr>
<td>2014-2015</td>
<td>81%</td>
</tr>
<tr>
<td>2015-2016</td>
<td>77%</td>
</tr>
</tbody>
</table>
PSY100 Redesign

• Typical characteristics
  – Large lecture hall 150-200 students (1050 HHB)
  – Multiple choice exams 75-100% of course grade
  – 50-question comprehensive final exam
  – May or may not have graduate teaching assistant
Approach to Redesign

1) Constructive alignment
2) Assessment strategies
3) Early alert
Approach 1: Constructive Alignment

• Match specific learning outcomes to teaching approach and assessment
  – Specific observable and measureable learning outcomes
    • Conveyed to the students
  – More purposeful learning
  – Provides clear expectations for students
  – Ensure learning outcomes consistent with in-class activity, homework, quizzes, tests, etc.

Example next

CETL Workshop- Thurs, Sept 22
Learning Outcomes/Objectives (students will be able to):

1. Summarize the 3 basic types of learning

2. Describe the basic process of classical conditioning (e.g., UCS, UCR, etc.) and the principles/factors that influence conditioning. Describe the contemporary additions to the older view of classical conditioning.

3. Describe the basic process of operant conditioning (e.g., reinforcement, punishment) and the principles/factors that influence behavioral output (including schedules of reinforcement, the role of reinforcement vs. punishment in behavior modification). Describe the contemporary additions to the older view of operant conditioning.

4. Describe the basic process of observational learning and the classic experiments that lead us to the basic elements of observational learning.

5. Use knowledge to solve applied (real-life) problems
Approach 2: Assessment Strategies

<table>
<thead>
<tr>
<th>Past assessment structure</th>
<th>Winter 2015 assessment structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>60% Exams (4 unit exams, 60 questions/exam)</td>
<td>40% Exams (5 unit exams... 30, 50, 60, 60, 60 questions)</td>
</tr>
<tr>
<td>15% Comprehensive Final Exam (50 questions)</td>
<td>15% Comprehensive Final Exam (50 questions)</td>
</tr>
<tr>
<td>20% Moodle quizzes (8 quizzes, 20 Qs/quiz)</td>
<td>20% Moodle quizzes (8 quizzes, 20 Qs/quiz)</td>
</tr>
<tr>
<td>5% Clickers</td>
<td>15% In-class activities/written assignments</td>
</tr>
<tr>
<td>4% Extra credit from homework papers</td>
<td>10% Clickers</td>
</tr>
<tr>
<td></td>
<td>5% Extra credit from research participation</td>
</tr>
</tbody>
</table>

• Redesign 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
Approach 2: Assessment Strategies

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

- Redesign 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
- Redesign included in-class activities/written assignments
  - 5 in-class discussions (one prior to Exam 1)
  - Authentic assessments… “real life” tasks
  - Not listed in syllabus with specific dates

Example next
OU Parking Problem Activity/Written Assignment (PSY100 Williams)

Parking on university campuses can be a problem. Oakland University is not an exception. Aside from paving new parking lots or building new parking structures, other solutions may be apparent when approaching this issue from a behaviorist perspective.

Your assignment:

1) Form groups of 3-4 people and choose a secretary to take notes. You might want to consider choosing someone using a laptop to take notes in class. Exchange names and email addresses.

2) Discuss the parking problem on Oakland University’s campus. Is it actually a problem for students? Consider verbalizing why, when, and how parking is a problem or not a problem. Rate the problem on a scale of 1-10 (1= no problem at all; 10= severe problem requiring immediate attention).

3) From a behaviorist perspective (i.e., apply techniques that increase or decrease certain behaviors), brainstorm solutions to the parking problem. Think about how other universities or workplaces attempt to solve the problem. Be creative!

4) The group will turn in 1 paper for the entire group. Each person in the group will receive the same score. However, the secretary will receive an extra point for his/her extra effort. The written portion should include:
   a. Summary of your discussion about the parking problem on Oakland University’s campus. Realistically describe why, when, and how parking is a problem and give your group’s rating of the problem [2pts].
   b. Clear description of your top 3 solutions to the parking problem. If you decide parking is not a problem, explain 3 ways you think it can be improved [2pts for each solution = 6pts total]. Try to provide at least 1 novel idea/solution/improvement (i.e. – one that is creative or unique). You should strive to have at least 1 novel or unique idea [2pts]. You should use at least a few sentences to describe each of your solutions in behaviorist terms (e.g., reinforcement, punishment, schedules of reinforcement). Hopefully, your group has a new and innovative solution not discovered by the groups around you.

5) You may continue your discussion outside of class via email or some other method. Because you will have each other’s email address, you should have the secretary email the group a copy prior to turning it in to allow for proofreading and feedback (and all members have a copy).
**Ch. 5 - Learning: In-Class Discussion Assignment**
Behaviorist approach to OU’s parking problem

<table>
<thead>
<tr>
<th><strong>Scoring Guide Rubric</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Component</strong></td>
</tr>
</tbody>
</table>
| Summary of group’s perception of the parking problem  
  Clear description of why, when, how  
  Rated the problem on scale 1 – 10  
  1 = no problem; 10 = severe  
  2 pts | |
| Clearly explained 3 solutions to the problem  
  Described each solution in behaviorist terms (e.g., reinforcement, punishment, schedules of reinforcement)  
  6 pts | |
| Had at least 1 idea the could be considered unique or novel  
  2 pts | |
| Does not follow paper formatting instructions  
  Minus 2 pts | |
| **Total points possible = 10** | **Total Points Earned =** |
| **Extra 1 pt for secretary** | |

Papers returned w/ minimal comments
“Excellent” papers posted on Moodle

**CETL Workshop - Thurs, Sept 29**
Approach 3: 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 195 (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

Lack of success correlated w/ poor college performance/retention?
Results 1: Constructive Alignment

- Constructive alignment was most valuable component
  - “Content drift” across my 14 years teaching PSY100
  - Improved the focus of class
- Difficult to measure quantitatively
- Qualitative comments on course evaluations
  - “clearly focused”
  - “was not surprised by exam questions”
  - “you made exams relevant to what you talked about”
Results 2: Assessments

- Course grades and Exam 1

The impact of course redesign on overall course grades:

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

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

The impact of changing the content and timing on performance for the first exam:

<table>
<thead>
<tr>
<th>First Exam Details</th>
<th>Fall 2014</th>
<th>Winter 2015</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean grade</td>
<td>76%</td>
<td>79%</td>
<td>3% increase</td>
</tr>
<tr>
<td>Median grade</td>
<td>77%</td>
<td>82%</td>
<td>5% increase</td>
</tr>
<tr>
<td>Failure rate</td>
<td>14%</td>
<td>9%</td>
<td>5% decrease</td>
</tr>
</tbody>
</table>

- Improved scores on Exam 1
Results 2: Assessments

• 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
  – Fail to complete all assignments… Fail the course
    • 17 students failed course
    • Only 2 of 17 students turned in all papers
Results 3: Early Alert

• Winter 2015… 18 of 195 (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?

How to improve Faculty Feedback System?
PSY100 Redesign- Conclusions

• Constructive alignment

• Assessment strategies
  – First exam... less content, early in semester
    • Allowed better performance
    • Allowed early alert to be effective
  – Authentic assessments
    • Time-consuming, but efficiency increases w/ experience
    – Need GTAs to help with grading
    • Increases student engagement
    – Pass course, better retention

• Early alert (Faculty Feedback System)
  – Personalized approach most effective, but time-consuming
  – How to make it effective and efficient?
Strategies for Course Improvement

• Engaging, Evidence-Based Pedagogies
• Supplemental Instruction & Peer Support
• Predictive Learner Analytics
  – Other characteristics matter?

From John N. Gardner Institute
For Excellence in Undergraduate Education
All courses at least 30 underrepresented minority students (URM)

How do we support/retain underrepresented minority students, low income students, and first generation students?
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