Scaling Up: Hybrid Instruction

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Scaling Up, Not Spreading Thin

Using Hybrid Online/Offline Instruction to Meet Critical Issues Facing Today's University

Ilana Barnes
Mary Dugan
Roland G. Parrish Library of Management & Economics
What if....

... you were given 40 management freshmen students for 8 weeks?

What would you teach them?
But then what if....

... you had to transform that class into a smart, scalable, and relevant, experience for 500 students?
<table>
<thead>
<tr>
<th>Outcome</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Written Communication (level 1)</td>
<td>One course</td>
</tr>
<tr>
<td>2. Information Literacy (level 1)</td>
<td>One course</td>
</tr>
<tr>
<td>3. Oral Communication (level 1)</td>
<td>One course</td>
</tr>
<tr>
<td>4. Science, Technology and Mathematics</td>
<td>Two courses in Science, Technology and Society, One course in Quantitative Reasoning (minimum College Algebra)</td>
</tr>
<tr>
<td>5. Human Cultures</td>
<td>One course in Humanities, One course in Behavioral/Social Sciences</td>
</tr>
</tbody>
</table>
IM:PACT Instruction Matters: Purdue Academic Course Transformation

- Financial support
- Support staff and faculty including Libraries
- Assessment resources
A Unique Opportunity

- Weekly participation in FLC sessions
- IMPACT support team
- Emphasis on learning outcomes and assessment
- Faculty Learning Community (FLC) cohort
- Redesigned Course
- Course Redesign Plan
Redesign

- **Before IMPACT**
  - 40 students
  - 11 sections per year
  - 1 computer per student
  - Problem-based
  - Business Information Literacy

- **After IMPACT**
  - 70 students
  - 7 sections per year
  - 1 computer per 6 students
  - Problem-based
  - Business Information Literacy
  - Hybrid
Why Flipped?

- Combination of online/offline instruction
- Allows for more time in class for activities
- Quizzes lead to more robust assessment

Parrish Library Playlist:
http://www.youtube.com/watch?v=jfxclslRQPOQ&list=PLfiLH31ZZsO3KRZmk-eSfL3YmF8OZL4sh

Introduction to Industry Analysis
http://www.youtube.com/watch?v=5DFd-ZNbxN4&list=PLfiLH31ZZsO3KRZmk-eSfL3YmF8OZL4sh
Why Hybrid?

• We can do more with our 1 credit course load without overwhelming students’ time

• Online lecture -- more time for exploration of resources.

• Class time -- more focused on active learning and group work.
The Pilot Class

• 8 classes
  – Covering market research, company information, articles
• 3-5 videos between every class with quiz
• Teams of five
• 3 assignments all on same case (beer or solar panels)
  – 2 individuals memos
    • Market Research
    • Scholarly/ Trade Articles
  – 1 group final presentation
Assessment

• Pre- and Post-Test
• Focus Groups (Small Group Instruction Diagnosis)
• Weekly Quizzes, Individual and Team Assignments
Focus Groups

Instructor Characteristics (+)

Course Content (+)

Teaching Techniques: (+ -)

Assessment and Grading (+ -)
Weekly Quizzes

- Low response rate initially on first quiz from international students

Average Grade on Weekly Quizzes

Quiz 1 | Quiz 2 | Quiz 4 | Quiz 5 | Quiz 6 | Quiz 7
All Assignments

• Improvement in grades from first to second assignment

Average Grade on All Deliverables
Pre- and Post- Test

- Students did much better
- Lower confidence in answers
- Better understanding of articles but still room for improvement
- Less reliance on Google
# Pre and Post- Test

If you have to solve a problem having to do with the sorting and distribution of recyclable plastics, what is the first web site you would go to?

<table>
<thead>
<tr>
<th>Database</th>
<th>n</th>
<th>Pre- %</th>
<th>n</th>
<th>Post- %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ABI/Inform Global</td>
<td>2</td>
<td>7%</td>
<td>12</td>
<td>43%</td>
</tr>
<tr>
<td>2 Google</td>
<td>21</td>
<td>78%</td>
<td>8</td>
<td>29%</td>
</tr>
<tr>
<td>3 Google Scholar</td>
<td>3</td>
<td>11%</td>
<td>2</td>
<td>7%</td>
</tr>
<tr>
<td>4 Libraries catalog</td>
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<td>0%</td>
<td>3</td>
<td>11%</td>
</tr>
<tr>
<td>5 Mintel</td>
<td>0</td>
<td>0%</td>
<td>3</td>
<td>11%</td>
</tr>
<tr>
<td>6 Wikipedia</td>
<td>1</td>
<td>4%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>27</td>
<td>100%</td>
<td>28</td>
<td>100%</td>
</tr>
</tbody>
</table>
If you have to solve a problem having to do with the features of iPhone 4, what is the first web site you would go to?

<table>
<thead>
<tr>
<th>Database</th>
<th>n</th>
<th>Pre- %</th>
<th></th>
<th>n</th>
<th>Post- %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ABI/Inform Global</td>
<td>0</td>
<td>0%</td>
<td></td>
<td>1</td>
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<tr>
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<td>25</td>
<td>89%</td>
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<tr>
<td>3 Google Scholar</td>
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<td>1</td>
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<td>4 Libraries catalog</td>
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<td>6 Wikipedia</td>
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<td>27</td>
<td>100%</td>
<td>28</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>
You are expected to find a market research report on the chocolate industry: Which database should you search first?

<table>
<thead>
<tr>
<th>Database</th>
<th>n</th>
<th>Pre- %</th>
<th>n</th>
<th>Post- %</th>
</tr>
</thead>
<tbody>
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<td>37%</td>
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<td>Academic Search Premier</td>
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<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Mintel</td>
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<tr>
<td>Factiva</td>
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<td>0%</td>
</tr>
<tr>
<td>Economic Census</td>
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<td>15%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>27</td>
<td>100%</td>
<td>28</td>
<td>100%</td>
</tr>
</tbody>
</table>
Lessons Learned

• Teach students good study habits while teaching them information literacy

• Students falter at first with online quizzes, but improve with practice and repetition and did generally reach learning outcomes

• If given a quiz, students will learn databases without in-class instruction and let you focus on troubleshooting
Summary

• Offered an opportunity to teach a required class to 500 students
• Participated in IMPACT program
• Redesigned Course (Summer)
• Successfully piloted course
• Currently teaching course to 210 students, 240 in spring
Thank You!
Questions?

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Parrish Library of Management and Economics

lib.purdue.edu/parrish

http://www.youtube.com/user/PurdueLibraries?feature=watch