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IM: PACT: Course Redesign Theory and Practice

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IM:PACT: Course Redesign Theory and Practice

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December 11, 2012, West Lafayette, IN
The Large Lecture Experience

- Large space
- Isolation
- Group size
- Impersonal, remote instructor
- Theater setting

Gleason 1986
ACTIVE LEARNING IS..

A) Listening to the entire lecture

B) Being unable to sit still for an entire lecture

C) Engaging students through interactive activities

D) Not related to the IMPACT program
A non-traditional collaborative learning environment would make you feel:

A) Extremely comfortable and ready!

B) Somewhat comfortable

C) Fairly uncomfortable

D) Looking for the nearest exit sign
# Team-based Approaches

<table>
<thead>
<tr>
<th>Team-based (TBL)</th>
<th>Problem-based (PBL)</th>
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<tbody>
<tr>
<td>• Individual readiness test, followed by group test, both count</td>
<td>• Learn as problem is resolved, construct knowledge</td>
</tr>
<tr>
<td>• All teams, same problem, project</td>
<td>• Emphasis on the process, critical thinking</td>
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<tr>
<th>Case-based (TBL)</th>
<th>Student-Centered Active Learning Environment with Upside-down Pedagogies (SCALE-UP)</th>
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<tbody>
<tr>
<td>• Collaborate to address complex, realistic, specific problems.</td>
<td>• Short tasks in groups, all contributing to knowledge of larger problem</td>
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<tr>
<td>• May be sub-set of PBL</td>
<td>• Flipped class</td>
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</table>
HOW IS Amelia Earhart’s LEGACY PORTRAYED?

A) Aviation pioneer

B) One of history’s greatest mysteries

C) Champion for women
Amelia Earhart’s legacy is portrayed as...

1. an aviation pioneer
2. one of history’s greatest mysteries
3. an inspiration for women

**Group Challenge:** Make a consensus choice. It MUST be unanimous! Be ready to defend your choice and describe why the other two are not options.
Faculty Learning Communities

Support with campus-wide resources

Share results, reflect, renew

Best practices and sound research
Faculty learn about active and collaborative learning

Design activities for a student-centered learning environment

Outcomes: student engagement, confidence, and increases in specific learning outcomes and higher-order critical thinking
Campus-Wide Support
Redesigned Course FLC cohort community IMPACT support team Weekly participation in FLC sessions Course redesign plan Emphasis on learning outcomes and assessment Redesigned Course
Redesigned as a hybrid course with 2 credits online and 2 credits in class, the class integrates information technology to promote active learning, problem-solving, and online collaboration. Students engage in a variety of online activities, use Adobe Connect for group presentations, and work on problem-solving during class.

Students watch pre-lecture videos that contain quiz questions with feedback to prepare them for the upcoming lecture and to allow Hirsch to employ just-in-time-teaching based on student responses to the quiz questions. In lecture, students participate with iClickers. In future semesters, Hirsch plans to increasingly move towards a “studio model” similar to SCALE-UP.

Traditional lectures are supplemented with videos of Prof. French working out problems related to dynamics and other phenomena. Access to the videos is not reserved for IMPACT students alone but is also available to students around the world via French’s “Brain Waves” YouTube channel. French’s course culminates in a hands-on project wherein students build catapults and show the practical application of core principles learned throughout the course.
Role of technology
Clickers give faculty the ability to fine-tune their instruction based on student responses.
Role of technology
A thoughtfully designed physical space situates the learning process and nourishes connections among ideas and people.

Innovative Learning Spaces

Instructor Ellen Gundlach, Statistics 113
Does IMPACT work?

- Classroom
- FLC effectiveness
- Faculty
- Student Success
Learning Community

This site provides information about IMPACT's mission, goals, faculty, and stories to the Purdue community.

Quick Links:
- How does IMPACT work?
- What should I expect from IMPACT?
- How does IMPACT benefit me?
- How do IMPACT faculty get...?

Mission Statement

Our mission is to improve student competency and confidence through redesign of foundational courses by using research findings on sound student-centered teaching and learning.

Recent News

- Summer 2012 Cohort Selected
- Fall 2012 Cohort Selected

Upcoming Events

- Summer 2012 Cohort FLC Sessions-ongoing from June 20 until August 1. Sessions will be held each Wednesday between June 20 and August 1, EXCLUDING July 4 and July 11.