Professional Development Workshops for Program Assessment Leaders
Marquette University
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Alternative Approaches to Assessment

Material in this presentation is adapted from:
“Overall, our findings suggest that the productive use of learning outcomes assessment information...to inform decisions and to improve teaching and learning remains the most important unattended challenge...”

- George Kuh and Stanley Ikenberry, 2009

*More Than You Think, Less Than We Need: Learning Outcomes Assessment in American Higher Education.*
Benchmark: We expect 75% of our students to meet or exceed expectations for this assessment.

Evidence: We have met our benchmark for success.

Who were the students who performed well and why?

Who were the students who didn’t perform well and why?
Delving into how students learn as well as what they learn extends the parameters of assessment.

The problem-based approach to assessment represents a scholarly commitment to assessment that shifts this commitment into an investigative role, as opposed solely to an accountability role.

You might be a candidate for problem-based assessment if:

• You are ‘tapped out’ with your current assessment approach;
• You have identified (or are interested in identifying) problems, obstacles to learning or weaknesses that consistently show up in students’ work;
• Your faculty are not dismissive of action research;
• This approach does not conflict with your requirements for disciplinary accreditation;
• You are willing to commit to this approach for several years.
Case Study: Engineering program at Northwestern U

- Students unable to transfer writing learned in required core courses to writing assignments in engineering.

- Tried a standalone writing course offered by Communications faculty, and writing-across-the-curriculum.

- Study question: How can we effectively develop students’ writing abilities?

- Literature shows that writing is most effectively taught when integrated with genuine activities, and when students recognize a real need for the new skills.

Case Study: Engineering program at Northwestern U (cont.)

• Invited Communications faculty to help develop a first-year Engineering Design and Communication course.

• The new course integrated writing, speaking and visual communication with engineering content.

• Incorporated exercises like explaining a process or concept design to a real client.

• Next, the faculty moved on to incorporate writing into all other engineering courses, leading to the capstone.

Case Study: Physics program at U of Colorado

- Concept inventories repeatedly revealed that entering students lack a coherent understanding of physics and mathematical concepts.

- Students bring with them erroneous ideas about concepts like force, weight, buoyancy, that interfere with their ability to correctly learn physics content.

- Lectures, demonstrations, lab exercises, models have all been ineffective in moving them from their initial belief systems.

- Study question: How can we restructure entering students’ naïve understanding?

Case Study: Physics program at U of Colorado (cont.)

• Literature review reveals that sims may be the answer.

• Department designs interactive computer simulations that engage students in online scenarios to promote learning of electricity principles.

• As a result, students arrive at their own explanations and application of concepts, helping to restructure their beliefs.

• Additional sims are developed, student interviews are incorporated, NSF grant for redesigning science education is obtained.

Faculty commonly cite these learning problems:

*Students are unable to...*

- Transfer previous learning to higher-level courses;
- Advance beyond recall and recognition to higher levels of cognition;
- Synthesize, rather than just summarize;
- Transfer learning from their core courses into their major program of study.

Steps in creating a problem-based approach to assessment:

1. Identify an inquiry group or team to begin the investigative process.

2. Identify the learning outcome(s) that you will investigate.

3. Identify a problem you want to solve, and convert this problem into a research or study question.

4. Identify others invested in answering the question.

5. Read relevant research. Have others addressed this issue and published results?

Steps in creating a problem-based approach to assessment:

6. Identify sources of data and evidence. What kinds of direct and indirect evidence will you need to address your research question? What institutional data will you need?

7. Re-design your assessment plan: Research question, student cohort, measures, responsible persons, timeline.

8. Implement changes and assess how those changes are affecting achievement. This becomes your new assessment report.

9. Disseminate findings within and outside of the university.
How to request an alternative approach to assessment:

Contact Sharron Ronco, Assessment Director.  
Sharron.ronco@Marquette.edu

Complete nine-step form with responsible person(s) and timelines identified.

University Assessment Committee will review and act on request in a timely manner.
Contact Information:

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