



MARQUETTE UNIVERSITY ASSESSMENT

Problem-Based Assessment

AALHE Conference

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MARQUETTE
UNIVERSITY

Be The Difference.

“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.

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:

(Adapted from Maki, 2010)

1. Meet with program faculty to begin the investigative process.
2. Identify one or more problems you want to solve, and convert them into research questions.
3. Consult the research to see if others have investigated this issue.
4. Identify sources of data and evidence.
5. Re-design your assessment plan: Research question, student cohort, measures, responsible persons, timeline.
6. Implement changes and assess how those changes are affecting achievement. This becomes your new assessment report.
7. Share your findings!

Physician Assistant program:

Problem: Students struggle with evidence-based medicine (making sound medical decisions on the basis of current evidence in the medical literature.)

Research question: “What are the most effective instructional methods for teaching evidence-based practice in the health sciences curricula?”

Inquiry team: Faculty, Physician Assistant Studies program
Health Sciences Librarian
Library Research and Instructional Services Director
Assessment Director

Study design: Two cohorts, 55 students each, one with traditional face-to-face library instruction and the other with a flipped classroom learning experience.

Sources of evidence: Fresno Test (direct), student perception survey (indirect)

Physics program:

Problem: Students in upper-division classes do not retain important material from freshman and sophomore courses, although it was indeed covered. Students who take the Physics GRE achieve lower scores than expected, possibly because they do not retain foundational knowledge.

Research question: “How can we ensure retention of foundational knowledge from lower to upper division courses in physics?”

Study design

- a) Define core competencies for the physics major and create curriculum/content map;
- b) Review student assignments and exams to ascertain where knowledge is retained/not retained. If needed, create a junior-level instrument to measure this;
- c) Identify the topics that need additional coverage and decide where to address them in the curriculum;
- d) Incorporate teaching practices and materials into lower-division courses.

Sources of evidence: Student performance in upper-division courses and on GRE; faculty perceptions of learning.

Other examples of research questions:

Service learning: How can the service learning experience lead to future community involvement?

Political science major: Can the use of portfolios help students develop stronger analytical abilities?

But wait!!!

- How will we put the assessment report into our software program?
- Won't this program fall off the grid if we don't keep after them?
- What if everybody wants to do this – how can we keep up?
- What if the accrediting agency doesn't like it?

For a copy of the slides, please visit:

<http://www.marquette.edu/assessment/>

under Assessment Resources.

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