

## Engaging Students in their Learning

### Top 25 Project – Assessment Methods & Preliminary Results

#### Overview

The Top 25 Project was launched in 2006 by President Hodge and Provost Herbst as one part of Miami University's effort to become "The Engaged University." The project supported re-design of the largest enrollment classes in order to engage students as more active participants in their learning. Three rounds of classes have been revised, and a fourth round is in progress. This newsletter offers a brief overview of the assessment methods that are involved in the Top 25 project along with a snapshot of preliminary results.

#### Characteristics of the New Learning Model and Expected Outcomes

The project emphasized characteristics of new learning models that were built into the planned course revisions. Central among those from the proposal call are "approaches to learning that:

- are student-centered and use active learning and inquiry-driven approaches to learning;
- use methods to engage students in their learning and with other learners;
- use specific approaches that result in improved student critical thinking or problem solving skills;
- reduce the amount of class time spent on low-level memory or descriptive material by incorporating innovative approaches to facilitate students learning this material outside of class;
- are built on specific student learning outcomes tied to assessment that continuously monitors student learning and modifies the course as necessary.
- deploy resources in efficient and cost effective ways, using faculty, graduate students, and undergraduate students for instructional tasks most suited to their levels of expertise, and by using technology and other resources as appropriate; and
- will effectively measure costs and provide superior learning outcomes at a cost per student equal to or less than current levels."

The expected learning outcomes from this approach include ***gains in content mastery, improvements in student critical thinking, and increases in student satisfaction.*** Assessment methods focus on these characteristics and expected outcomes.

#### Assessment Methods

Part of the program assessment is conducted by CELTUA and the Top 25 Coordinating Team, and part of the assessment is designed and carried out by each Top 25 team based on the specific needs of their individual course. Each team is responsible for evaluating student outcomes focused on content mastery, and those assessment efforts vary according to discipline. Most have adopted common questions on final exams, student portfolios of work and/or common assignments to have a faculty team evaluate to assess content mastery.

CELTUA and the Top 25 Coordinating Team conduct four Top 25 assessments for each course:

1. **Critical Thinking** – Each Top 25 team provides samples of student work that evaluated by the Assessment Fellows for critical thinking. Many assignments are evaluated using the Washing State University Critical Thinking Rubric, but others are evaluated by discipline specific critical thinking rubrics provided by the faculty on each course's Top 25 team. Some teams have conducted their own critical thinking assessment of student work.

2. **Student Perceptions and Satisfaction** – Students in Top 25 Project classes are invited to complete a Top 25 survey which collects data about student perceptions of the class activities, the level of student engagement, amount of engagement with other learners, critical thinking development, amount of time spent on low-level memory or descriptive material in class vs. out of class, the amount of time spent out of class on work for the class, and levels of satisfaction with the class. Data is generally collected from both traditional sections and redesigned sections of each Top 25 class.

3. **Focus Groups** – CELTUA staff conducts focus groups with students who are enrolled in redesigned Top 25 classes to get more open ended feedback about the above issues for the class.

4. **Classroom Observations**—CELTUA staff observes class sessions of redesigned Top 25 classes and offers formative feedback to the Top 25 teams.

### Preliminary Results

Each course team has its own data as well as individual course data from the CELTUA and Top 25 Coordinating Team assessments. Some of the assessment data provided to teams was formative (e.g., focus groups, class observations). Top 25 teams use the individual course assessment data for course improvement purposes and it helps focus and revise initial course re-design plans.

The assessment results discussed here represent data collected by the CELTUA and Top 25 Coordinating Team. This data is from Top 25 courses as a whole, and the data collected provides a comparison between Top 25 redesigned classes vs. traditional classes for the first four characteristics of the new learning model and student satisfaction. The results here are drawn primarily from the 2009 report prepared by Andrea Bakker. The complete report is available at

[http://www.units.muohio.edu/celt/engaged\\_learning/top25/documents/Summary\\_Report-June\\_2009.pdf](http://www.units.muohio.edu/celt/engaged_learning/top25/documents/Summary_Report-June_2009.pdf).

1) Results support Top 25 courses as student-centered and using active learning and inquiry-driven approaches to learning. For example, students in the redesigned Top 25 classes reported:

- engaging in more inquiry-driven activities than students in traditional courses,
- working on assignments that require building understanding on their own,
- working on a project that required them to integrate ideas from multiple sources, and
- engaging in course activities that helped them “learn to think in new ways.”

2) Results supported Top 25 courses using methods to engage students in their learning and with other learners. For example, students in the redesigned Top 25 classes reported:

- higher levels of engagement with other learners than students in traditional courses,
- being more likely to contribute to class discussions than students in traditional courses,
- being more likely to work with other students during class than students in the traditional courses,
- often asking questions in class, and
- more positive relationships with other students than students in traditional courses.

3) Results supported Top 25 courses using approaches that resulted in improved student critical thinking or problem solving skills. For example, students in the redesigned Top 25 classes reported:

- significantly more emphasis on critical thinking than did students in the traditional courses,
- more synthesizing information,
- more making judgments about the value of information, and
- engaging in activities designed to elicit critical thinking.

(However, effect sizes were small on most of the critical thinking measures).

4) Results supported Top 25 classes reducing the amount of class time spent on low-level memory or descriptive material by incorporating innovative approaches to facilitate students learning this material outside of class. For examples, students in the redesigned Top 25 classes reported:

- less emphasis on memorizing facts, ideas, or methods than students in traditional courses,
- working harder than they thought they would to meet the instructor’s expectations, and
- spending more time preparing for the course than did students in the traditional courses.

5) Results did not support Top 25 course revisions leading to increases in student satisfaction with their learning and the courses. There was no significant difference between redesigned and traditional courses for:

- student satisfaction,
- positive relationships with faculty, or
- likelihood of students reenrolling for the course (if they could start over).

These results were based on the student surveys conducted the first two years of the program, and thus are preliminary. There is some indication it may take time for change to manifest, particularly for student satisfaction. Some teams indicated it took at least 4 times through the class for the instructors to reach a comfort level with the new approach and the revisions from preliminary trials, and student culture and expectations changed. As students who experienced the traditional classes graduated, incoming expectations for the courses were altered. Some teams have reported that students are now starting to come into the classes prepared for the new approaches and ready to work.

For more information contact Marjorie Keeshan Nadler ([nadlermk@muohio.edu](mailto:nadlermk@muohio.edu)) or visit [http://www.units.muohio.edu/celt/engaged\\_learning/](http://www.units.muohio.edu/celt/engaged_learning/)