

Teaching Matters

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Task Force on Learner Outcomes initiates comparative study of assessment methods

In Fall 2007, the Task Force on Learner Outcomes was established by University Governance with the charge to “examine the issues surrounding the assessment of learning by undergraduate students at the University of Kansas, with particular attention to the basic competencies that should be attained by all graduates of the University.” By initiating university-wide assessment of learner outcomes, KU will be participating in a national move toward greater accountability for all public universities and colleges. Both the American Association of Colleges and Universities and the National Association of State Universities and Land Grant Colleges have spearheaded these movements, advocating voluntary assessment projects from each university instead of any federally mandated assessment that would ignore the “vitality and independence” of individual institutions (McPherson and Shulenburg, 2006).

One of the key questions the Task Force explored was what kind of assessment provided the best fit for KU. The primary task was to find a method that would provide accurate and useful data for interested parties such as the Board of Regents, parents and prospective students, and faculty. Faculty should be able to use

assessment data to help improve student learning—the ultimate goal of any assessment project. A number of standardized tests were explored, as were several methods of assessment using student portfolios. At this point, a comparative study of both the Collegiate Learning Assessment (CLA) and a portfolio assessment using examples of student work is being conducted. The portfolio method and the CLA are discussed in detail by Dan Spencer and Dan Bernstein on pages 4–5.

As articulated above, the ultimate goal of any university-wide assessment is to improve student learning by providing faculty members with data to help guide curriculum reform and/or help shape department-level assessment. Several University departments have already initiated their own assessment projects as a way to improve student learning. These serve as models for the kind of student-based reform possible when broad assessment is conducted.

More information on the Task Force's findings can be found on Blackboard. Do not login as yourself; go to the link under “Other Users” and use the guest login, which is `_tlo` and the password, which is `guest1`.

—Meghan Kuckelman, CTE

Oranges and algae: Challenges of developing meaningful assessments

Dan Bernstein, CTE

Some years ago I heard an interview with a public school teacher from New York City. The school system was, as usual, under pressure to show how much and how well students were learning. I felt great empathy for this teacher as he described his community's search to identify bad schools and/or bad teachers so "something could be done about it."

Somewhere in that interview, however, he made an observation that stuck with me. He puzzled over how to represent what his students were learning that could possibly meet all the needs being expressed. He could bring forward evidence of retention of facts or use of formulas in solving routine problems; he could find writing samples of five paragraphs of declarative prose. This evidence, he said, would make it pretty straightforward to compare performance of units in the system, but no one who takes education seriously would care a whit about the results. On the other hand, if teachers brought forward examples of student work that they felt showed great depth, it was unlikely that the system could compare the effectiveness of different programs, classrooms or schools. When one school brings oranges and another brings samples of algae, it is difficult to compare outcomes.

My first thought was that his analysis replicates a problem explained to me by physicist friends. If you set up an experi-

ment to measure one property of a particle very well, then it becomes impossible to measure some other properties. Switch to measure the missed ones, and the first becomes invisible. That metaphor may also operate at the macro level; perhaps excellence in measurement can serve a limited number of goals at one time.

So it is with learning at a university, as well. When asked by our publics, our students, even

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our peers to describe why we teach, faculty members can articulate rich understandings of our fields. We teach so we can see our students demonstrate general intellectual skills in communication, analysis, problem solving and articulation of an evidence-based argument. But those are exactly the kind of skills that are most difficult to measure, and it is unlikely that another class, much less another program or school, will ask students to engage in similar demonstrations of understanding. At least, not similar enough that a reasonable comparison could be drawn.

On the other side, we are being asked to consider standardized tests, designed to capture skills we talk about all the time. The student work we see is not exciting, but it maps pretty well onto our goals of critical thinking, analysis, use of evidence, and skilled communication. These standards would allow us to know if our students graduate with skills comparable to populations we aspire to be part of.

The danger for us is the possibility of ending up in "no college student left behind." Once we set a target skill set, it can't be long before we alter our teaching so that students will do well on that performance. We have to be extraordinarily thoughtful about identifying an intellectual target for students, as it could drive the way we teach and the way we ask students to demonstrate what they have accomplished.

Two main players are competing for our attention. The Association of American Universities has a project that provides common criteria for shared goals of a liberal education. These criteria would allow us to look at current student work and categorize its success. By using descriptions of learning shared by many universities, we would have some credibility in identifying our standing among aspirant institutions. The Council for Aid to Education offers complex essay assignments

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Spring program includes workshops on blended learning, peer review

In April, two guest speakers will present workshops on teaching. Donna Charlevoix from the University of Illinois at Urbana will discuss blended and online learning, as well as developing interdisciplinary programs to advance environmental education. CTE, IDS and the Center for Sustainability are co-sponsoring her visit on April 9 and 10.

The second, Amy Goodburn from the University of Nebraska at Lincoln, will present peer review workshops on April 24. Her visit is sponsored by CTE, the Department of Curriculum and Teaching and the Writing Center.

Check the CTE website (www.cte.ku.edu) for details about the visits, as they become available.

In addition, CTE will host the following sessions this spring:

February 9, 12–1 PM

Lunch & Conversation: Wiki-Project Mesoamerica in the Classroom: Encouraging Student Contributions to Wikipedia. A workshop on the use of WikiProject Mesoamerica in anthropology courses at KU, discussing how Wikipedia entry design and authorship encourages critical thinking, creativity, scholarship and publication. The ups and downs of Wikipedia-based exercises, with tips and caveats based on examples of student work.

February 12, 3–4 PM

What Clicks in the Classroom: iPods and Podcasting as Instructional Tools. Time-efficient ways to use these tools inside and outside the classroom. Co-sponsored by CTE and IDS.



Donna Charlevoix, U. of Illinois

February 16, 12–1 PM

Lunch & Conversation: How to Incorporate Service Learning in Your Course. For faculty new to service learning, this discussion will include: What is service learning? What are the benefits and risks? How can the Center for Service Learning help?

February 17, 12–1 PM

Lunch & Conversation: Taking Service Learning to the Next Level. For faculty with service learning experience, we'll discuss: What is the next level? What is community-based research? Are there publishing opportunities?

February 23, 3–4 PM

What Clicks in the Classroom: Digital Storytelling. See examples of digital assignments and how they can help students synthesize learning and develop powerful communication skills. Co-sponsored by CTE and IDS.

February 25, 12–1 PM

Lunch & Conversation: Options for Civility Issues. Learn how the Student Conduct Review Team



Amy Goodburn, U. of Nebraska-L.

can help with issues regarding students' behavior, including early detection and assessment, resource referrals and consultations on safety concerns.

March 5, 12–1 PM

Lunch & Conversation: Using Reflective Teaching for Tenure, Promotion, and More. See how to use two tools—teaching diaries and course portfolios—for documenting your growth as a teacher and students' learning.

March 24, 12–1 PM

Lunch & Conversation: Graphic Syllabi: A New Approach to a Standard Tool. Graphic syllabi allow instructors to communicate course information with visuals. In this session, you'll see examples and discuss the model, as well as syllabus content.

March 31, 12–1 PM

Lunch & Conversation: Hybrid Courses: Shifting Student Engagement. Discover how hybrid courses blend classroom time with online work and can result in deeper student engagement.

Institutional assessment of student learning via artifact portfolios

Dan Spencer, School of Business

As teachers we are all very familiar with the process of assessing student learning within the individual courses that we teach. However, we tend to be less familiar with and, frankly, less concerned about the process of systematically assessing student learning that is occurring across our disciplinary programs and, more broadly, our university as a whole. It is essential that we begin establishing a deeper appreciation of the importance of these broader assessment processes. One reason for this is that our constituents are placing increasing demands on us to be accountable for any claims we make about our students' collective achievements, particularly in an era of rising tuition. Another reason is more personal, that is, to help us discover ways to become more collectively accountable for our students' learning. Of key importance is generating feedback from assessments that will allow us to continually improve students' learning experience across the curriculum.

Program- or university-wide assessments are typically conceived around some kind of standardized, machine-scored examination. An alternative that has gained traction in recent years is the "artifact portfolio." In particular, Institutional Artifact Portfolios (IAPs) are increasingly being used at institutions of higher education to assess the

achievement of a university's general education goals.

IAPs compile representations of student learning throughout a university's curriculum for the purposes of assessing the achievement of the university's general education goals. These portfolios sample a wide variety of learning artifacts such as student papers, artwork, video creations, etc., that stretch from students' basic coursework to discipline-specific products associated with particular majors. These artifacts are then assessed, typically by faculty teams, using rubrics specially created to examine the achievement of an institution's unique general education goals. Results are then used to not only document achievements, but more importantly, redesign the learning experiences of students to ensure goal achievement.

Illinois State University's IAP process was recently highlighted at the 2008 AAC&U Network for Academic Renewal Conference on Integrative Designs for General Education and Assessment. ISU's general education goals are represented by four shared learning outcomes: critical inquiry and problem solving, public opportunity, diverse and global perspectives, and life-long learning. ISU isolates and assesses one shared learning outcome each semester. In this institution's case, achievement of all four goals is assessed over a two-year cycle.

At ISU faculty are asked to voluntarily source the artifacts used in the process. At the beginning of a semester, a general call is made for faculty to submit assignments that are relevant to the assessment of the focal shared learning outcome. Ungraded student assignments are collected, copied and returned to faculty the next day. Only the artifacts of ISU's native students are used.

ISU's process involves taking a stratified random sample of 100 artifacts from the inner, middle, and outer core of their curriculum (300 artifacts total). Six teams of two faculty members review the artifacts sampled. Student work is anonymous, and reviewers are blind to the parameters of the assignment. Before the review process, they are trained in using a rubric for the assessment. Faculty reviewers practice the application of the rubric until inter-rater reliability is achieved. Consensus reviews are done, and when consensus is not achieved on a particular artifact, an alternate reviewer is brought in to provide a third perspective and achieve consensus. One hundred artifacts per team are reviewed over a four-day period; all review is done in one location, two days after grades are submitted. ISU's faculty reviewers are compensated for their participation in this process.

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Standardized testing as an option for assessing learning

Dan Bernstein, CTE/Psychology

In any conversation about public evaluation of students' learning, there are strongly differing assertions about how learning should be measured. Many complaints about No Child Left Behind arise because the tests used to measure progress often focus on concrete memory of isolated information or use relatively inflexible criteria in defining correct problem solving methods or outcomes. As explained by Dan Spencer, there is more intellectual substance to be found when faculty members read complex samples of student work completed in the context of integrated learning in a course. Still the academic landscape includes standardized systems for measuring learning at the college level.

There are two main advantages these systems have over systems for judgment of quality in portfolios of student work. First, students at different institutions are engaged in the same performances and are judged by the same criteria, yielding data that can place the learning from a set of students in the context of an appropriately selected comparison group. In a portfolio scoring system, it is more difficult to determine whether any particular level of success is truly comparable to that shown by students in general. Second, in these assessment schemes faculty members and staff spend zero time analyzing or scoring student work. The institution receives feedback in

the form of data on its students, along with comparisons to other samples beyond the home university, without effort by local faculty members in designing, evaluating or interpreting results.

Several testing companies have stepped up with standardized tests for college students. Educational Testing Service has produced the Measure of Academic Proficiency and Progress (www.ets.org/portal/site/ets/); it assesses critical thinking, reading, writing and mathematics with multiple choice questions. ACT has produced a similar test called the Collegiate Assessment of Academic Proficiency (www.act.org/caap/index.html), and it offers an institution a choice among six different modules covering reading, writing skills, writing essay, mathematics, science and critical thinking. The module involving writing an essay is hand scored, but the other five modules are multiple choice tests based on reading problems and cases for analysis.

A new player in this growth industry is the Council for Aid to Education. For ten years CAE worked with the RAND Corporation to produce the Collegiate Learning Assessment (www.cae.org/content/pro_collegiate.htm), an all-essay measuring system with two major components. In one section students read various materials about a case and then write a recommendation of how to proceed; in the other

section students write a persuasive essay taking a position on a stated issue, followed by offering a critique of an existing essay on the same topic. When faculty members read the specific tasks given in this test, they look like a performance we would want students to be able to do. Currently the analysis and writing tasks are scored partly by human graders and partly by an automated scoring program operating on linguistic models.

Much of the literature available in support of all three of these professional instruments focuses on the reliability of the tests (how consistently they yield a numerical estimate of quality) and their validity (how well scores on the tests are matched with other indicators of performance quality for the same sample of people). All producers of these tests identify strategies for appropriate use of their test for institutional evaluation of learning and for development of teaching and learning that would yield higher performance. There is mixed language about whether or not these tests are intended to be used to make institutional comparisons, and they offer strategies for interpretation of gains made by students over time. For political and practical reasons they are among the options that KU will consider as it searches for a way to represent what our students know and can do upon graduation.

Good reasons to use online measurements of learning

Susan Zvacek, Instructional Development & Support

When I work with groups of faculty or speak at a conference, I typically ask those in attendance to raise their hands if they use online tools for assessing learner progress. Every year the percentage of hand-raisers in each group goes up, but I'm also interested in what the non-hand-raisers have to say. I ask them why they don't use online assessments, and the responses almost always fall into one of three categories: time, security and need.

The "time group" tells me that developing online assessments—especially quizzes or tests—is just too labor-intensive and takes time away from more important work. While it is true that coming up with good quiz or test questions can be a real challenge, it doesn't take much longer to type them into an online question pool than it does to use a word processor, and the long-term benefits make the effort worth it. (Just think: An ever-increasing pool of quiz questions that could be presented online in random order and graded automatically... Who couldn't use that?) An apt analogy for the "I don't have time" argument is my first experience with word processing. I can remember thinking that I just didn't have time to learn how to use a word processor (Apple Write, as I recall), because I was too busy writing my master's thesis... by hand. In hindsight, it's hard to believe that the benefits weren't obvious

enough to outweigh the relatively short learning curve posed by such a basic resource.

Are you holding back on using online tests or quizzes because it seems too time-consuming? Start small, maybe with one online quiz for students to check their comprehension of assigned readings, and then decide whether to continue. Don't look back in a few years and wonder why you waited so long.

Another common refrain goes something like, "I think the students will cheat if I use online assessments." When I ask for clarification about what constitutes cheating, I hear either, "They'll look up the answers in their book" or "They'll work together." Personally, both of these scenarios sound to me like good ways to learn, but they might not fit into your curricular goals.

In this case, consider developing online assessments that result in unique responses or require working with real-world materials. For example, a foreign language instructor might post an audio recording of a question or prompt in the discussion board and students would then provide their own (spoken) audio response. Or, ask each student to identify web sites related to course content and evaluate them for accuracy, bias, completeness, etc., then post the evaluation to his or her blog for other students to review.

Finally, the last group of

instructors explains, "I'm not interested in using online assessments because I'm satisfied with what I'm already doing."

At the risk (or, more precisely, with the hope) of fomenting dissatisfaction with the status quo, I'll simply point out that online quizzes can present questions that integrate text, graphics, audio and video. They can also be scored immediately (including partial credit for specific questions) with feedback given on a question-by-question basis, and the student's score automatically recorded in the gradebook. Online quizzes can be part of a sequence in which students are presented with new material only after they've taken the quiz or achieved a minimum score set by the instructor. Questions can be drawn randomly from a pool based on topic, difficulty level, category, or keyword each time the quiz is accessed. Still satisfied with the same old paper-and-pencil test?

If you're thinking about developing some online assessments, get in touch with us at Instructional Development and Support, and we'll help you get started. E-mail us at ids@ku.edu or call 864-2600.

Greenhoot joins CTE as Faculty Fellow

Andrea Greenhoot, associate professor of psychology, is a new CTE Faculty Fellow for spring 2009. Greenhoot joins Brian Donovan, sociology; Dena Register, music and dance; and Susan Williams, chemical and petroleum engineering, as Fellows.

Greenhoot has developed an exemplary online course portfolio (see www.cte.ku.edu/teachingInnovations/gallery/

[visibleknowledge/greenhoot/index.shtml](http://www.cte.ku.edu/visibleknowledge/greenhoot/index.shtml)), and she is a faculty leader on a grant for enhancing research and writing skills through instructional design teams. This semester, Greenhoot will lead the CTE Faculty Seminar, work with departments on the learner outcomes project, and along with the other Faculty Fellows serve as a resource person for peer review.



Andrea Greenhoot

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that draw upon reading, analysis, problem solving and communication skills, but the scoring is done with a common framework. Since they have data from students at hundreds of institutions, including students' growth over four years, they provide a rich context for judging that performance.

So we face the same dilemma as the teacher from New York. Somehow, as a community, we need to identify a shared target, performances that we believe manifest the best qualities of a KU graduate. Once we select those criteria, we would be committed to work on our teach-

ing so that our students would perform well on those measures and meet our collective goals. It will be interesting to see how we balance our internal tastes about learning, external preferences for comparative evidence, and the demands of each option on our limited available time.

Institutional assessment of student learning via artifact portfolios

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Finally, the results of ISU's assessments are compiled and provided to a general education assessment committee that analyzes the data, puts the information into a form for general dissemination, and recommends action for improvement, if warranted. The committee is careful to not assess an individual faculty member, course or student.

In contrast to standardized tests, IAP assessment is grounded in actual student performances that can be richly analyzed for evidence of student learning. Also, artifacts can be targeted to demonstrate learning associated with learning objectives unique to a particular program or university. In addition, results of the assessment can be directly linked

back to student experiences in actual coursework, thus enhancing the potential for continuous improvement of curriculum and pedagogical practice. These and other benefits of IAPs should be carefully considered as KU explores alternative approaches to assessing university-wide student achievement of its general education goals.

Five approaches to assessment used at other institutions

What are other schools doing to ask how well their students are learning?

1. At Illinois State University (see page 4), faculty members volunteer to provide ungraded samples of student work from their classes to the University Assessment Office. These “artifacts” are copied and returned to the faculty member within 24 hours. Each artifact is then evaluated by a team of two to three faculty members or administrators with teaching responsibilities, to see if the work demonstrates mastery of a set of learner outcomes established by the university.
2. Oklahoma State University assesses using an institutional portfolio method similar to the program at ISU mentioned above. At OSU, samples of student work are collected and evaluated by a committee of faculty members using a standardized rubric to determine if students are meeting university goals in written communication. Faculty reviewers go through a training session to ensure the consistency of scoring among the committee members.
3. The University of Nebraska focuses on department-by-department assessment, and has published a guidebook to aid departments in developing assessment plans in accordance with their own needs. This guidebook provides departments with six questions they should ask as they perform assessment:
 - Outcome—Based on how and what students have learned in your program, what should they be able to demonstrate, represent or produce?
 - Opportunity to Learn—How are students in your program provided the opportunity to learn this outcome?
 - Question of Interest—What does your program hope to learn from its assessment of this outcome?
 - Assessment Method—What procedures and/or products will your program use to gather evidence about the learning outcome and your question of interest?
 - Sharing and Interpreting the Results—What were assessment results and what conclusions did they lead you to?
 - Using Results and Interpretations—What decisions and/or actions has your program made or taken based on the results?
4. The University of Texas system evaluated all of its schools using the CLA test during the 2004-2005 school year, and found that most of its students performed at or above the levels that were expected.
5. Alverno College, a small women’s liberal arts college in Wisconsin, conducts assessment via an online portfolio that is maintained by each student throughout her four years at the school. The students, working with an advisor, collect evidence of their own learning and keep it in the Digital Diagnostic Portfolio, which is then reviewed by both internal and external reviewers to make sure each student has met the school’s eight learner outcomes.

Teaching Matters is published by the Center for Teaching Excellence. The staff welcomes your comments and suggestions. We will upon occasion invite the submission of articles of special interest to the academic community.

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