CATs: Moving Beyond Testing and Grades

Every instructor uses a variety of methods when evaluating what their students have learned. While most end-of-the-lesson, chapter, or concept discussions are common forms of testing, CATs (Classroom Assessment Techniques) offer a more systematic approach to formative evaluation and tools for collecting data on student learning and improvement.

CATs’ association with IPFW began in 2001, when Barbara Millis (Director of Faculty Development at the United States Air Force Academy) served as the keynote speaker at the fall CELT/FACET sponsored pre-semester workshop. Marcia Dixson (Communication), then CELT Director, and Yvonne Zubovic (Mathematics) a CELT Board member, realized Millis’ affiliation with classroom assessment could help our faculty focus their attention on a student-centered environment and student engagement, in addition to traditional forms of assessment.

Since 2002, Linda Lolkus (Consumer and Family Science) has been the facilitator for IPFW’s CAT activities. She oversees monthly meetings whose participants range from Limited Term Lecturers and full professors to department chairs, and from such disciplines as Communication, English and Linguistics, Chemistry, Psychology, OLS, CFS, and Dental Hygiene, among others. Linda utilizes several CAT strategies, including the Think, Pair, and Share activity in her classroom. She builds a community quickly and establishes rapport by engaging her students with one another. These productive learning experiences are enthusiastically voiced in her positive student evaluations. Linda’s original goal as facilitator of the campus CAT group was to use CATs to engage learners and obtain feedback from them. She said, “It’s a way to get students involved, engaging them in their own learning.” As the monthly groups met to discuss successful teaching strategies, however, Linda and other members of the group wondered why they couldn’t use CATs to collect data and “use it to document our teaching effectiveness.” She strongly endorses the use of CATS and sees it as a (Continued on pg. 2)

CELT Faculty Showcase

Three IPFW faculty members recently presented the results of their instructional development work obtained through CELT summer grants in two Faculty Showcases.

Jennifer Parker (English & Linguistics) was a graduate of IPFW, but as a faculty member, soon found herself overwhelmed by what she did not know about locating resources, designing a course, and classroom management. Her experience was the impetus for creating WIRED, (http://www.ipfw.edu/engl/wired/wired.htm), a password-protected site dedicated to the professional development and support of IPFW writing faculty. Jennifer researched the department’s goals, interviewed secretaries about commonly asked questions by new faculty, and solicited other English & Linguistics faculty to contribute their syllabi, exercises, rubrics and other course materials. The active participation of faculty in the creation of the web site is evidence of its success as a professional development tool. Students can also access relevant information to enhance their academic lives.

Worth Weller, also in English & Linguistics, created a syllabus, activities, assignments, and a calendar in which he embedded the English department’s philosophy toward teaching writing and best teaching practices, specifically as they relate to W131 (Elementary Composition). Numerous sections of W131 make it difficult to maintain consistency in content and quality. Moreover, teachers of W131 comprise a large group of teachers new to IPFW or new to teaching. Through Worth’s project, teachers can now copy these items, available in Vista, as templates to use in their own sections. Contact worthw@ipfw.edu for more information.

In November’s faculty showcase, Glen Gendzel described how he transformed his “H106: America since 1877” students from bored, passive listeners to engaged, active participants. H106 is a large lecture class dominated by freshman students who often expect the teacher to entertain them. Glen’s standard strategy to encourage listening and discussion has always been to require two questions or comments before the class is dismissed. Glen also feels that active note taking is essential to helping students remember and think critically, plus using well-chosen pictures and graphics further aid in the retain of information.

Over the summer (and into the fall), Glen learned to use PowerPoint, chose 700 visuals, and re-wrote 26 lectures. He carefully chose the text he put on his slides and found the combination of well-chosen text and an image directly related to the point of the slide helped guide students in their note taking and grabbed their attention, as evidenced in their evaluations.

Glen concludes that the (Continued on pg.4)
CATs Continued

Cats Continued

valuable professional development and research opportunity. Linda, like other CAT participants, has presented her research at a variety of conferences and has an upcoming article in the Journal of Nutrition Education and Behavior.

Irwin Mallin (Communication), has used CAT strategies in his classroom. He most often uses what he calls “Two Questions,” a version of the One Minute Paper. At the end of every second or third class period, Irwin has the class answer two questions: “What’s the most important thing you’ve learned?” and “What’s a question you still have?” According to Mallin, “That first question... gives insight into how well they understand concepts and shows you what topics they see as most relevant.” He finds greater value, however, in the second question, as that lets the instructor “directly see what needs reinforcing, what’s not clear to them, and also what their concerns are.”

Vincent Maloney (Chemistry), began using CATs for his organic chemistry lecture and lab courses with classrooms of more than 30 students. During the lecture, Maloney would pose a question, have his students respond to it on blank index cards, and then collect them. If time were available in class, he would immediately address those questions. He has found this strategy and other CATs beneficial in that improvements were seen in class involvement, comradery, rapport, and even attendance.

Maloney now uses other CAT strategies in a larger lecture course with 89 students enrolled. He has adapted a form of instruction called Classroom Performance Systems (aka “clickers” by some). According to Maloney, “Each student buys and registers a handheld remote...and during class, I pose a multiple choice version of the questions I previously used [with the index cards]. The students press the appropriate response and the results are collected by a receiver. The data is then compiled and presented in various formats.”

CAT strategies can accomplish the following for instructors and students:
- Provide short term feedback about the day-to-day learning and teaching process
- Provide useful information about student learning with a much lower investment of time, compared to other traditional means of learning assessment
- Foster good rapport with students
- Encourage...teaching...[as] a formative process that evolves over time with feedback
- Help students become better monitors of their own learning
- Help break down feelings of student anonymity, especially in large courses
- Point out the need to alter study skills
- Provide concrete evidence that the instructor cares about learning

The IPFW CAT’s group is open to any classroom teacher or university personnel who work with students in any capacity. The group meets once a month, in an informal yet supportive environment. Their aim is to share effective assessment techniques, ask questions, provide possible solutions, and adapt those suggestions to the individual needs of the teacher’s classroom. If interested in finding out more information about CATs, contact Linda Lolkus at lolkusl@ipfw.edu. Angelo and Cross’ Classroom Assessment Techniques: A Handbook for College Teachers (which lists 50 CAT strategies), and Novak’s Just-in-Time Teaching: Blending Active Learning with Web Technology are available for checkout in the CELT office in KT 234. Also check www.iub.edu/~teaching/feedback.html for further information. *

-Karol Dehr

Saturdays, February 12, 2005
The 4th Annual Associate Faculty Conference
“Engaging the First Year Student”
with keynote speaker Constance Staley.
Watch your campus email for more details or visit www.ipfw.edu/cele.

TOHE Conference

IPFW’s sixth annual Teaching Online in Higher Education (TOHE) international online conference attracted 140 participants from Australia, Barbados, Canada, China, India, Portugal, Puerto Rico, Thailand, United Kingdom, and the United States. They “heard” 32 presentations on the theme of “Politics, Ethics and Online Education,” between November 10 and 12. Centra, a leading provider of state-of-the-art online conferencing solutions since 1995 and based in Lexington, Massachusetts, provided the interactive conferencing environment, which had few technical glitches.

A high number had participated in previous TOHEs and organizers were encouraged by favorable participants’ comments such as the following: “I like the new process and software, and hope to contribute again next year!”

Iskandar Hack, Associate Professor of Electrical and Computer Engineering Technology, took on the uncharted territory of acting as TOHE Program Coordinator for the 2004 TOHE. He was a “hands-on coordinator” on both the technical and content ends of the conference. Program Committee members George Bullion, Jeanette Clausen, Rachelle Darabi, Marcia Dixson, Dina Mansour-Cole, Solomon Isiorho, and Nancy Virtue carefully reviewed all papers and provided its coordinator with moral support. Without this essential behind-the-scenes effort, TOHE could not take place. The committee will select papers to submit to Innovate magazine, a new online educational technology publication and a supporter of this year’s TOHE.

This year, Marvin Hauug, Terry Dougherty, Mike Kanning, Tom Kruse, CS intern Lindsay Patten and the applications development staff of Information Technology Services created a registration area to streamline the creation of the participant database and provide a smooth transition to the Centra conference environment. Their work, combined with Centra’s state of the art environment greatly enhanced the look, feel, and functioning of the 2004 TOHE.

The Division of Continuing Studies was again part of the TOHE team and from beginning to end, patiently and efficiently handled the payment process and assisted greatly in publicizing the event.

CELT provided the administrative “home” for TOHE. Stephanie Haneline, CELT Secretary, handled publicity and communications. CELT’s Samantha Birk managed the TOHE website and the technology behind the conference.

You can see the conference proceedings, including the chat logs and papers, at http://www.ipfw.edu/tohe. Next year’s call for papers is slated for April. ✈
Thumbs Up for Techno-CATs

Classroom Assessment Techniques (CATs) have been implemented by IPFW faculty in a number of ways. For example, one successful approach is through the use of classroom response systems such as eInstruction and PRS. The classroom response system is a technology faculty can use to solicit student feedback, engage students in active learning, and provide in-classroom quizzes in large, lecture-style classes. In recent years, adoption of these systems has been promoted by a number of textbook publishers and made available to faculty based on textbook adoption, requiring students to purchase the response input devices and register them for an additional fee.

CELT contacted IPFW faculty who are currently using these systems. They recommended that the personal response system be made available to all faculty members independently of textbook adoption. Those currently using a system feel in larger classes (25+) these response systems are valuable tools that can be used throughout the lecture to keep students engaged. Using the system to continuously check student understanding enhances the professor’s ability to customize the lecture on the spot, adding a layer of personalization to the learning process. The system can save response data, allowing the teacher to later analyze teaching effectiveness. The system can also help take attendance; for example, for financial aid tracking.

Purdue is the first university in the country to implement a system-wide license for using audience response pads in the classroom. (Purdue is featured on the Purdue system to standardize the hardware and software of these classroom response systems through eInstruction. IPFW will be sharing the cost of the site license for the use of eInstruction in selected classrooms. Students will buy a hand-held device for about $10. CELT is coordinating the project at IPFW with ITS, LRC, Physical Plant, the Registrar, and a group of faculty advisors. The systems will be checked out from the LRC, starting in the Spring of 2005. If you would like to know more about the classroom response system, call CELT at 481-6354 and ask for Sam or Gail.

Seasons Greetings

Move into the “Teachnology” Teaching and Learning Community

The purpose of the “teachnology” listserv is to build a sense of community among all faculty and staff who use technology to deliver information. Many of us sometimes feel we are operating in a vacuum and that no one else experiences our successes or feelings of frustration. Hopefully this listserv can draw us together to share our own best practices and solutions, with each other and with IPFW resource and service providers. It can also act as a forum to raise and discuss concerns among a variety of stakeholders, provide a way to get timely, accurate information on technological issues, as well as sharing best practices to enhance technology-supported teaching and information delivery.

I am honored to have been asked to facilitate this listserv through August 2005. Every two weeks I will suggest discussion topics for the listserv. I will post monthly digests to summarize the discussion for those who want to join the listserv but don't want to read each individual message. An individual can subscribe to the list by sending a message to listserv@listserv.ipfw.edu in which the body of the message contains one line:

SUBSCRIBE TEACHNOLOGY-L John Smith

Including your full name at the end of the line is optional. You must subscribe to participate in Teachnology. Postings are sent only to those who subscribe.

"See" you on the new Teachnology listserv! ✹

-Worth Weller, Continuing Lecturer, English & Linguistics

From the Director...

Many thanks to all who attended the CELT Open House on October 19th. We had a very good turnout and hope to see many of you again, working with us in the new lab, even if we aren’t serving treats from Stephanie Haneline’s kitchen! Sam and Darlene had a chance to show off our new multimedia workstations and our guests had a chance to look behind two varieties of virtual reality-3D imaging and animation and the virtual walkthrough. Door prizes contributed by the IPFW bookstore, Pizza Hut, and Higher Grounds added to the fun.

Pat Ashton and I returned from the first annual conference of the International Society for the Scholarship of Teaching and Learning at IUB with lots of ideas and the realization that IPFW is already primed for SoTL—it’s just a matter of positioning! The underlying idea of SoTL-public, focused reflective teaching practice—is already part of the IPFW culture. IPFW faculty, engaged in reciprocal formative peer review, using and sharing classroom assessment techniques, presenting in faculty showcases or leading CELT or departmental discussion events about teaching, are already engaged in SoTL activity. The CELT advisory board will be working actively with FACET and other interested faculty to implement SoTL over the remainder of the academic year.

This year’s Associate Faculty Conference will take place on Saturday, February 12. Constance Staley, Professor of Communication at the University of Colorado, Colorado Springs, and author of 50 Ways to Leave Your Lectern, will give the keynote and lead one of the concurrent sessions. Although the conference targets Associate Faculty (Limited Term Lecturers), any IPFW faculty is welcome to attend. If you have ideas for the conference or would like to help in any way, please contact me at 481-6504.

Best wishes for a healthy and peaceful holiday season. ✹

-Gail Rathbun
Brown Bags Reveal Assessment Tools

This fall, several university departments co-sponsored with CELT the Brown Bag discussions entitled “Exploring Alternative Assessments of Learning.” CELT appreciates the departmental support and willingness of the faculty facilitators to lead these cross-disciplinary exchanges.

The October Brown Bag was co-sponsored by Arts & Sciences and facilitated by Jim Haddock, Associate Professor of Biology.

Two years ago Jim decided to convert his biology course for non-majors into an online course, out of both professional curiosity and because he thought the format would make the course less teacher-centered. He had always incorporated activities in his course that accommodated different learning styles and required his students to apply biology to familiar situations. But it wasn’t until WebCT arrived, and later, Vista, that Jim was able to take advantage of alternative methods of assessment. By integrating general education course objectives such as critical thinking, oral and written communication skills, and research skills into his non-majors course using Vista, Jim is now more effectively using discussion to achieve these goals.

An added benefit is that he can more fairly and accurately award students grades for their participation than in a face-to-face classroom. Jim now teaches 75 students in this online course. He has a teaching assistant working 20 hours a week who grades the discussion and he readily admits she is the key to being able to sustain the class size.

The November 2 Brown Bag was co-sponsored by the School of Visual and Performing Arts and facilitated by Barbara Resch, Associate Professor, Music.

Teachers representing Math, Music, Academic Skills, and English attended this lively brown bag. The focused question for the group project was “What should be graded and how?” The finished product is often all that is graded, but for many teachers the group project provides an opportunity for student reflections. Team meeting logs, journals, and peer evaluation are several methods that provide a window on process. Another emphasis in the discussion was encouraging independent learning and self-monitoring behavior. The student-centered classroom calls for assessment techniques requiring students to self-assess reliably and consistently.

Achieving good results requires coaching and clear assessment support materials.

Faculty Showcase Continued

A 2005 version of the application form will be available at http://www.ipfw.edu/celt/grants.htm in January.

Events Calendar

“Design your own” Technology Workshop December 1-17. Do you have a specific project you want help with or a specific skill that you would like to learn? Call or email for an appointment with a CELT consultant who will create a learning environment just for you, or for you and a colleague. Call x16504 or email celt@ipfw.edu. Please allow 2-3 working days’ notice.

CELT “Walk-in Weeks” December 1-17, Monday-Friday, 10:00 am to 1:00 pm, KT 234. Come visit the CELT Multimedia Lab, browse the CELT library, talk with CELT consultants. No registration required.

Visit our webpage www.ipfw.edu/celt

Happy Holidays
From the CELT staff