



Thursday
February 21, 2008

**SUCCESS
IN THE CLASSROOM:
SHARING PRACTICES
THAT WORK**

**The Third Annual
UNM Community
Conference for Faculty
by Faculty**

**Abstracts listed alphabetically by first author's last name;
not all presenters provided an abstract**

Office of Support for Effective Teaching (OSET)

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Success in the Classroom: Sharing Practices that Work – February 21, 2008
Preliminary Schedule – Subject to Change

SUB Fiesta A&B

Learning through Writing Across the Discipline

8:30 OPENING REMARKS
 8:40-9:00 *Learning through Writing in the Disciplines: A Revolution in University Education*, Jim Burbank, English
 9:05-9:25 *Writing Their Way Around the World: Student Essays and Geographic Literacy*, Maria Lane, Geography
 9:30-9:50 *Strategies for Supporting Excellence in Your Graduate Students' Writing*, Betsy Noll, Lang., Lit. & Sociocult. Studies
 9:50-10:05 **COFFEE BREAK**
 10:05-10:25 *Writing Assignments in Calculus Classes: A Good Idea?* Adriana Aceves, Math & Stats
 10:30-10:50 *WAC & QUAC in a Large Lecture Principles of Microeconomics Course*, Kate Krause, Economics
 10:55-11:15 *Giving Richer Feedback on Written Assignments Through Social Technology*, Robert Hoffman, Arts & Letters, Gallup
 11:20-11:40 *Use of a Mock NSF Panel Meeting to Reinforce Critical Writing Skills*, Jane Selverstone, Earth & Planet. Sci.

SUB Lobo A

Creative Teaching & Learning Strategies I

OPENING REMARKS
Using Backwards Design to Plan for Instruction at the University Level, Julia Scherba de Valenzuela, and Kelley Peters Ed. Spec.
Shake it Up! Energizers and Keeping the Brain Engaged, Paula Steele and Dorothy Kerwin, Family Develop.
Working With Your Librarian: Designing Effective Library Assignments to Enhance Student Learning, Carroll Botts, Univ. Libr.
COFFEE BREAK
It's About Time: Teaching Core Science Classes Within the Freshman Learning Communities Program, Laura Crossey and Karl Karlstrom, Earth & Planet. Sci.
Course Projects as a Real-World Simulation: Preparing Students for Life After College in Advertising Campaigns, Olaf Werder, Commun. & Journ.
Using Card Sorts to Stimulate Group Discussions, Denise Zwahlen-Minton, IM-Geriatrics
Activate and Engage! Using Background Knowledge Probes to Maintain Student Interest Elizabeth Bush, Health Careers, Gallup

Luncheon Ballroom A

***Talent, Effort and Learning: Re-Awakening Student Capacities*, Dr. Tom Keyes, Teacher Education, College of Education**

SUB Lobo B

Teaching with Technology

OPENING REMARKS
On-Line Course Interactional Strategies Model, Chris Chaves, Org. Learn.
Putting an Astronomy Lab Online - Solutions and Challenges, Bill Miller, Physics & Astron.
Using Online Discussion Groups Effectively, Erin Lebacqz, English
COFFEE BREAK
Pseudonymity in Online Discussion Forums, Leslie Donovan, Univ. Honors Prog.
Taming the Wild Wiki: Using Wikis to Promote Collaboration and Construct Knowledge, Valerie Thomas, English
Bringing Life into your Course Using the Tablet and Camtasia, Ann Brooks, Accounting
Teaching Clinical Skills to Resident Physicians Using Mannequins, Byrch Williams, Family & Community Medicine

	<i>Culture, Age, and Gender in Teaching and Learning</i>	<i>Creative Teaching & Learning Strategies II</i>	<i>Assessing Students and Evaluating Courses</i>
1:20-1:40	<i>Looping Immigrant Latinas' Experience to Literacy</i> , Nieves Torres, Lang., Lit. & Sociocult. Studies	<i>Large Group Problem Based Learning: Is it an Oxymoron or an Effective Alternative?</i> Kendall Crookston, Pathology	<i>Turning Failure into Success: A Report on Physics 110's Impact on Physics 151</i> , John Caffo, Physics and Astronomy
1:45-2:05	<i>Cross Cultural Teaching & Learning in the College Classroom</i> , Alicia Chavez, Ed. Lead.	<i>Palliative Medicine Death Rounds: An Educational Model to Integrate Core Competencies in Medical School Clerkship Rotations</i> , Judith Kitzes, Internal Medicine	<i>Turning Failure into Success: A Report on Physics 110: A "Killer Course" Safety Net that Teaches Needed Skills in an Interactive, Hands-On Second 8-Week Course</i> , Kathy Dimiduk, Physics & Astron.
2:10-2:30	<i>Teaching as an International Faculty Member at UNM</i> , Danielson Kisanga, Geography	<i>Expert knowledge: Is it Necessary or Sufficient for Good Teaching?</i> Michael Nakamaye, Math & Stats	<i>Managing Outcomes Assessment: Trials and Triumphs</i> , Janet Shiver, Commun. & Journ.
2:35-2:55	<i>On Selling Your Car to Your Colleague: The Ethics and Aesthetics of Transgenerational Team Teaching</i> , Susan Dever and Eva Hayward, Cinematic Arts	<i>Active Learning in an Introductory Programming Course</i> , Nick Flor, Marketing and Information & Decision Science	<i>Teaching and Evaluating Problem-Solving Skills: Assessment of Performance in a Cooperative Learning Environment</i> , Marcy Osgood, Steven Mitchell, and William Anderson, School of Medicine
3:00-3:20	<i>On Buying Your Car from Your Colleague: The Practices and Pedagogies of Transgenerational Team Teaching</i> , Eva Hayward and Susan Dever, Cinematic Arts,	<i>The Analysis of Logic Applied to Problems Involving Mathematics</i> , Joseph G. Martinez, Teacher Ed. and Nancy C. Martinez, English	<i>Teaching and Evaluating Problem-Solving Skills: Assessment of Individual Performance</i> , Steven Mitchell, Marcy Osgood, and William Anderson, School of Medicine
3:25-3:45		<i>Inquiry, Analysis, and Working-with-Data Group Project: Encouraging Students to Ask and Answer Their Own Questions</i> , Nancy C. Martinez, English, and Joseph G. Martinez, Teacher Ed.	<i>Assessment of medical student clinical competencies in the neurology clinic</i> , Molly King, Neurology
3:50-4:10		<i>Electronically Graded Homework—Buyer's Remorse? What Worked, and What Didn't</i> , Robert Tepper, Accounting	<i>SGID Marks: Instructional Evaluation</i> , Sarah Morley, Health Sci. Libr., and Julie Sanchez, Ed. Psych.

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Keynote Address:

***Talent, Effort and Learning: Re-Awakening Student
Capacities***

**Dr. Tom Keyes, Teacher Education, UNM College of
Education**

Read the address in the Spring 2008 issue of the [getSET Gazette](#)

Working With Your Librarian: Designing Effective Library Assignments to Enhance Student Learning

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Good library assignments don't just teach students how to find information for a particular class project. A well constructed library assignment can open the doors to a whole new realm of learning and teach information skills.

What's the secret of designing a good library assignment?

1. Collaborate with your librarian. We're your partners in education. You know what information you want your students to find. We know how to find it—we're Information Scientists! We have a current and thorough knowledge of the availability of information that your students will need.¹
2. Don't assume that your students have already learned how to do research in other classes! Teach them about research techniques and sources available to them. The best way to do this is to schedule an instruction session with your librarian. (You can do this online at http://elibrary.unm.edu/inst_req.php .)
3. Tell your students the purpose of the assignment. How does it fit into the course? What should they learn from it?² (Also, don't forget to tell them that the research skills they learn can help them both in their other classes and beyond in the workplace.)
4. Describe the specifics of the assignment (e.g., length, acceptable types of sources, format for references/bibliography - APA, MLA, etc.).
5. Give students a list of sources if there are specific ones you want them to use – and perhaps caution them against sources that you want them to avoid. (If you don't want students to use a search engine for their research, tell them just that. If you say “no internet” students often think that means print resources only. Emphasize that using the internet to access information through the library's website is *good* research.)

There IS life beyond Google and the Wikipedia! Help your students learn essential research skills and prepare them to be lifelong learners in an information economy.

Please join me and learn how to design effective library assignments for your classes!

¹ Ellison, A. (2004). Positive Faculty/Librarian Relationships for Productive Library Assignments. *Community & Junior College Libraries*, 12(2), 23-28. Retrieved January 31, 2008, from Education Research Complete database.

² Houdyshell, M. (2003, Spring). NAVIGATING THE LIBRARY. *College Teaching*, 51(2), 76. Retrieved January 31, 2008, from Academic Search Complete database.

Bringing Life into your Course Using the Tablet PC and Camtasia

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As a lecturer originally from New York, you can imagine how fast at times I can talk. Well, try being a student in my class taking notes after notes of what I am speaking or writing on the chalkboard. Well, beginning in January 2007, my students are more focused on the concepts rather than every word I say or write. Why? Because I am currently using a Tablet PC in my class to record my notes. Then I upload my class notes into my WebCT course for students to view for exam preparation at a later date.

Another great tool is the ability to capture graphics on the Tablet and annotate the graphics so that students have the problem and solution together.

The use of Tablets in the classroom increase:

- Classroom interactivity
- Enhance collaboration
- Improve note taking
- Increase comprehension
- Improve information recall

Another great use of Tablets is grading and retaining student work. Sometimes it takes grading 5 papers or exams before I really can apply my rubrics consistently. Those first five exams or papers of hardcopy usually have a lot of scribbles. Now with the Tablet, I just erase and update my notes and points given without the student being wised to my changes.

Tablets and Camtasia are a great partnership. In my online and face-to-face courses I use the Tablet to demonstrate a step-by-step illustration of an accounting problem while recording it with the use of Camtasia. Then I upload the recording into my WebCT course for students to play and re-play at their leisure. This approach gives the student a feeling of being in the classroom with me even when I am at home walking my dog!

Activate and Engage! Using Background Knowledge Probes to Maintain Student Interest

**Elizabeth Bush, Lecturer
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How can I get my students interested in today's topic? What do my students already know?
How can I refocus my students after a break? How can I check for understanding?

If you've asked yourself any or all of these questions and you find yourself searching for a strategy to address them...this session is for you! This presentation will demonstrate the use of background knowledge probes to activate prior student knowledge and keep students engaged in class. These quick and easy assessments can be used throughout class and provide instructors with valuable information on student learning.

I will discuss how to create probes for any content area, share sample probes from my classes, and demonstrate how and when to use them in the classroom. Attendees will leave with the tools to begin using probes in their classes right away.

Turning Failure into Success: A Report on Physics 110's Impact on Physics 151

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Failure: Our introductory physics courses (Physics 151 for life science students and Physics 160 for physics and astronomy and engineering students) have had low success rates. In some sections, less than half of the students present at the 3 week point have gone on to earn A or B or C in the course. Factors contributing to poor student performance include inadequate math ability and lack of effective study strategies that are needed to cope with the fast pace where one difficult topic follows another. Since the late 1990's I, and others, have assessed student outcomes and have tried several approaches to improve student success. These include online homework, a math diagnostic test, clickers, improved enforcement of prerequisites and supplemental instruction. By about 2005 my student success rates appeared to have bottomed out. But there were still too many students caught in the following lose-lose situation. In spite of my early warnings to students to drop, too many remained in a state of denial and soon it was too late. They were forced to choose between dropping and going below the minimum hours for their scholarship or remaining and getting a D or F. We hear much about the low graduation rates at UNM; I was experiencing the problem in real time in meetings with these perplexed students.

What Is Physics 110? Physics 110 is a new second half semester rescue course; it is an experiment that addresses the lose, lose problem. Physics 110 provides students a place to go when they drop Physics 151 or Physics 160 to prevent their 3 hours from being lost. In 110, the students are immersed (4 days a week 0730 to 0845 to minimize conflicts) in the basic concepts (including math topics). We thought that perhaps some of the students could be rescued to the point where they could enroll in 151 or 160 the next semester and continue their original plans. And we thought that others would decide to change majors but would save their 3 hours and their scholarship and not drop out of school. Physics 110 was approved in time to be taught by Kathy Dimiduk in Spring 07 and Fall 07. Following my talk, Kathy will report on initial student outcomes and on techniques she uses in teaching the course.

Success: Physics 110 has had a very successful impact on Physics 151. During Fall 07 semester I taught the large 151 MWF section for the 11th time since 1996. My final exam and 4th test have served as good assessment tools because they have remained mostly unchanged. Performance in Fall 07 was the best ever. The class environment was refreshing. Why? Because most of the poor students were not around to "drag down" the course as they had in prior years. (They had negatively impacted teaching and the tone of the classroom experience at the expense of the better students). The existence of Physics 110 enabled me to feel right about establishing strict rules to encourage the failing students to drop and enroll in 110. For example, any student who scored less than 55 on the first test was told that if they remained in the course and took the 2nd test then they would have to earn their WP if they eventually dropped. And I told them that the chances of turning things around were not good. My communications to these students were emphasized in the syllabus, announced several times in class, especially after the first test and just before the 2nd test, and in repeated emails to students with low grades who weren't dropping. Some of those who dropped enrolled in 110. Not everyone dropped who should have. But the environment in 151 was good compared to prior years.

Cross Cultural Teaching & Learning in the College Classroom

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You know, I would have thought that a university as diverse as this one, in a state known for its tri-cultural populations and bordering Mexico, would have provided me with an educational experience more in line with my Mexican American heritage. Finding a few professors who do create this kind of classroom experience for me is like finding islands of empowerment within a stormy and dangerous sea.

I'm not sure that I would still be here without these rare opportunities to breathe more easily and find myself reflected in the curriculum, the classroom activities, the conversation styles, and to feel like the professor kind of gets me. What amazes me is that it has not always been just Latino professors or even professors of color who have created this for me. I have some White professors who do this too and so I know that others could if they wanted to.

Don't they want to?

-- Ramona, Mexican American teacher education student --

Multiculturally congruent classroom learning environments have remained elusive in United States higher education as colleges strive to recruit, retain, and educate an increasingly diverse population. Frustrations run high amongst domestic and international students of color who find collegiate classrooms in the United States difficult to negotiate and often pedagogically incongruent with their own ways of learning and interacting (Ibarra, 2001; Johns & Kelley Sipp, 2004; Viernes Turner, 1994). Little empirical research is available on cross-cultural teaching of college students in or out of classroom environments. This session offers findings from a qualitative research study (Chávez, 2008) of four professors identified as multiculturally empowering by international and domestic students of color in their college. Results are derived from three qualitative methods of data collection including: faculty interviews, student interviews, and classroom observations. Findings suggest six elemental dynamics necessary for college professors to develop and facilitate empowering multicultural learning communities including: 1) climate of safety, 2) spirit of risk taking, 3) congruence, 4) proactivity, 5) multiplicity, and 6) reciprocity. Tips and suggestions will be offered as well from my own teaching experiences in relation to these six elements and I hope that participants will offer insights as well.

Chávez, A.F. (2007). *Islands of Empowerment: Facilitating Multicultural Learning Communities in College*. International Journal of Teaching and Learning in Higher Education, 19(3). <http://www.isetl.org/ijtlhe>

Ibarra, R. (2001). *Beyond affirmative action: Reframing the context of higher education*. Madison, Wisconsin: University of Wisconsin.

Johns, A.M., & Kelley Sipp, M. (2004). *Diversity in college classrooms: Practices for today's campuses*. Ann Arbor, MI: University of Michigan Press.

Viernes Turner, C. S. (1994). Guests in someone else's house: Students of color. *The Review of Higher Education*, 17(4), 355-370.

On-Line Course Curricula and Interactional Strategies: The Foundations and Extensions to Adult e-Learning Communities.

Christopher A. Chaves, Ed. D.

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The purpose of this presentation is to provide researchers, instructors, and, in particular, practitioner-scholars of e-learning curriculum designs, one conceptual model that supports more integration, involvement, and interaction between and among students and their instructors participating in on-line courses. The *On-line Curriculum Interaction Model* (OCIM) posited by the presenter is informed by foundational education philosophies, adult learning theories, research-based results, and the presenter's professional experience (i.e., Blackboard, WebCT, eCollege) developing and teaching on-line courses. The OCIM expands current understanding about on-line learning and interactional strategies designed to create community and better transfer of learning among adult learners, in addition to many traditional-aged students.

Specifically, four levels of interaction stages are explored to describe ascending levels of on-line integration and interaction including initial course content (academic) involvement, student-peer interaction, and instructor-student interaction within the context of various on-line course assignments (i.e., discussion boards, chat sessions, team-based and cased-study based assignments). Ultimately, the *On-line Curriculum Interaction Model* can, subsequently, be applied by student/employees as a tool for the crucial purposes of organizational learning across time and space within workplace (i.e., cross-functional) Internet environments.

Large Group Problem Based Learning: Is it an Oxymoron or an Effective Alternative?

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Traditional lectures are not the most effective way to facilitate teaching/learning based on principles of adult education. Small group problem-based learning (PBL) has been used successfully as a learner-driven alternative to traditional curricula. Students generally enjoy it more and faculty members that facilitate it correctly recognize its great potential. However, several limitations make PBL difficult to implement for some educators—both practically and emotionally. These limitations include:

- a) The need for increased resources in faculty time and classroom space to facilitate small groups,
- b) The inability to cover large volumes of information perceived as important by the faculty member, and
- c) Working with learners who have been conditioned all their lives to have the information delivered to them neatly organized and packaged, for subsequent memorization and repetition on the test.

The small group dynamics of having a facilitator and 5 to 9 participants have been considered sacred in many PBL-based curricula. To PBL purists, suggesting that 15 to 50 learners might participate in a one PBL group borders on heresy! Coming from this background, I was dubious when I was exposed to “large group PBL.”

I spent a year as a Fulbright visiting professor in Denmark at the Center for Educational Development with the University of Copenhagen Health Sciences Faculty. I participated in large group PBL and have experimented with implementing it with groups in the USA.

What is the main difference? Traditional small group PBL used effectively at the University of New Mexico School of Medicine is learner driven, with the faculty member (optimally) serving only as a facilitator. Large-group PBL moves faster and involves a much larger group of learners. Therefore, a trained content expert is needed to facilitate the discovery process, move it forward, and actively involving all learners.

Though still a novice, I have come to recognize that while large-group PBL is different in structure and expected outcomes than traditional PBL, it is an exciting and effective alternative to traditional lecture format.

On Selling Your Car to Your Colleague: The Ethics and Aesthetics of Transgenerational Team Teaching

Susan Dever, Associate Professor and Chair, Cinematic Arts, susandev@unm.edu

Eva Hayward, Assistant Professor, Cinematic Arts, eva.hayward@yahoo.com

Our generation of faculty, says UNM Regents' Professor Chris Shultis, "constitutes the last of the leisured class." Yet we don't always exploit that privilege in order to fully inhabit the life of our minds. Shultis has an idea: we should "work less so we could work more." These words come to us from someone whom most of us would regard as working altogether too much more—in every arena that the university requires. But this artist/scholar works smart. He not only theorizes labor while enjoying it—say, with a contemplative walk in the woods as he composes a musical piece—he's also figured out ways to share what he does. Over the course of his years at UNM, his colleagues have been treated to performances and cross-college team teaching and committee work that make us delight in what often demoralizes. Inspired by such collegiality, motivated to milk the possibilities of intellectual leisure, intrigued by what *working less and more* might mean, and determined to take pleasure in just going to school, members of the Department of Cinematic Arts have begun to team teach. Our presentation at this conference glosses the history, ethics, aesthetics, pedagogical practices, and SLOs™ of team teaching as experienced by one collaborative duo. We'll discuss how two members of a unit that produces 20% of its College's total SCH—on the strength of only 6% of its College's faculty—approaches working in tandem for profit and pleasure.

Issues, among others, we'll (more or less) engage:

Session I. 2:35 - 2:55 pm

1. What are the ethics of selling (cars, ideas, or junior colleagues into servitude)?
2. How do we balance departmental exigencies and college requirements that faculty teach inordinate numbers of students in inordinate numbers of courses with our desires for an artistic/intellectual inner life?
3. How might one come to team teaching?
4. If team-teaching defies definition, what's its effect?

Session II. 3:00 – 3:20 pm

1. What are the components of a lively relationship between humility and humiliation?
2. What's the practice of pedagogy? The pedagogy of practice?
 - a. (We're teaching a series of "Visual Epistemology" courses and "The Contemplative Cinematic" in a format we call the "studio seminar.")
3. Satisfying syllabi? Our experience: displayed for your comments and criticism (see # 4).
4. SLOs; Or, Animating Ledger Logic: What the Students Did

Suggested reading, viewing, and experiences to consider before it's too late:

- Attend a Shultis talk/performance.
- Make friends with a colleague; consider duo teaching, carpooling, writing, conferencing.
- Read Eve Kosofsky Sedgwick's *Touching Feeling: Affect, Pedagogy, Performativity*. Durham, Duke, 2003.

Turning Failure into Success: A Report On Physics 110— A “Killer Course” Safety Net Teaches Needed Skills in An Interactive, Hands-On, Second-8-Week Course

**Kathryn C. Dimiduk, Lecturer III,
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Challenge: How does one teach a college class made up entirely of students who were flunking? Compound the problem by teaching at 7:30 AM to accommodate multiple schedules and teach the entire course in 8 weeks.

Why: Too many students are not passing physics 151 and 160 resulting in lost scholarships and derailed career aspirations. They simply do not have the skills. This includes math skills, study skills, and time management skills. Physics 110 starts after students have failed test 1 in P151 or P160. It catches students dropping those courses and offers them a chance to earn 3 credits and a better grade while teaching them some of their missing skills. Hopefully they can then either retake and pass the course they dropped or change majors, having kept their scholarship.

How: Clearly the P110 students were not successful in a large lecture class. They needed to be taught differently, especially at 7:30 AM. I taught P110 primarily from worksheets. I wrote so the students didn't need to buy a new textbook and could focus on the problems without page flipping and chasing examples in a textbook. I carefully started with a new topic and alternated the hard material they had run into trouble on with other interesting easier material that had a strong hands-on component. I introduced most topics with hands-on group activities. Then I gave a mini-lecture after which students would work on progressively harder problems in groups in class. The problems were designed to bring up math and physics issues where students often ran into trouble. I and my TA(s) would wander around the class helping groups. We could spot where they were stuck or had made a mistake and help them on the spot if someone in their group couldn't. Attendance was taken and required; I wanted the students working problems in class where they could get immediate help and I wanted them to learn they had to come to class. Homework was online and involved problems similar to the ones they had just done in class; they got immediate feedback and a chance to redo problems. I gave in-class quizzes where students worked independently for half the period and then finished in groups to catch errors and help each other through the problems. Tests were done individually. Students gave presentations in groups on an application of physics of their choice, such as skateboards, racecars, surfing, nanotechnology, rockets, artificial diamonds, racing bikes

Success?: Physics 110 has been taught for two semesters and some data has been collected. 71 students signed up for and completed physics 110. At least 90% of those students passed physics 110. Nearly all of the students returned to UNM the following semester and many scholarships were saved. Students finished P110 with an improved ability to solve word problems, filled math holes, an ability to tackle physics problems they couldn't have touched before and hopefully with improved study skills. Perhaps as important for retention, they made friends, had a safe space to regroup and developed the confidence to work hard on something and succeed. This data alone shows Physics 110 is a success. Further analysis showed that of the spring 2007 P110 students, 10 students retook P151 or P160 and 8 of those students passed for an 80% pass rate. This is a significant improvement over the normal pass rates in P151 or P160 and especially good considering these students came from a pool of unsuccessful students. The other 19 students from that semester did not take a physics course though all but one continued at UNM. From fall 2007, 29 out of 42 students are taking physics in spring 2008. Physics 110 is an ongoing experiment whose early results look promising for improved student success.

Pseudonymity in Online Discussion Forums

Leslie A. Donovan, Associate Professor

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Many teachers are now using electronic forums, bulletin boards, blogs, and chat rooms to develop dialogue about course subjects and to improve writings skills. However, while much has been written about how electronic spaces may function as pedagogical agents for democratizing interactions between students, little discussion exists about the advantages of requiring students to be identified on such spaces by pseudonyms, rather than by their usual login ID or email address. In my teaching experience, using pseudonyms enhances the interactive nature of electronic discussions by encouraging students to grapple with ideas in ways that diffuse classroom performance that may be affected by race, class, gender, physical ability, age, or educational background.

For my pedagogical purposes, the use of pseudonyms helps me level the playing field a bit for students. Whether my students work on an actual threaded discussion forum or a we-enhanced blog, I have found that pseudonymity is a useful pedagogical tool for supporting issues of student privacy, encouraging role-playing, and reducing such speech-inhibiting barriers such as shyness, lack of self-confidence, and fear of peer pressure. In addition, the communal nature of such pseudonymous discussions permits students to voice confusions and frustrations with difficult classroom material in ways they are frequently embarrassed or hesitant to admit as themselves in a class of their peers. Because they risk little exposure or damage to their reputations, students in my classes who are required to use pseudonyms for their online work frequently allows them to feel more comfortable and willing to voice dissenting views or minority perspectives. Some recent responses from 100-level students to the use of pseudonyms are:

“I really liked having the pseudonyms because you could say what you wanted without any judgment”;

“I like the fact we can share things outside of the class setting, and the pseudonym allows us to do so without worrying what our classmates will think”;

“I really liked the pseudonyms because anonymity gives me the courage to say something I would usually be too self-conscious to bring up”;

“I liked having a pseudonym because it made me feel more secure about sharing my thoughts about the readings and ideas we discussed in class”;

“The pseudonyms idea was a good idea, so that if arguments arose online it did not hurt friendships in real life. Also, if you were embarrassed about something you said on the blog, you would not have to worry about anyone knowing who you were.”

In this presentation, I will describe the practical nuts and bolts issues for how I use pseudonyms for such electronic discussions, discuss the pedagogical benefits and implications for using pseudonyms in this way, and mention a few exercises using pseudonyms that have been particularly successful in my classes.

Active Learning in an Introductory Programming Course

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Learning how to program a computer is difficult for most students. The textbook approach to teaching programming is to have an instructor start off by teaching students how to build simple programs and then progressively teach them how to build more complex programs.

The problem with this textbook approach is that students do not see the immediate value in simple programs, which rarely resemble the programs they are used to interacting with on a computer. Thus, students get bored and when they get bored they do not put in the time and effort necessary to learn how to develop more complex programs.

In my talk, I discuss how I used active learning principles to keep programming interesting for the students in my introductory programming course: MGMT 330—Business Programming Fundamentals. The active learning consisted of in-class instructor demonstration, followed by student imitation, then instructor conceptualization, and finally student generalization and improvisation via the drilling of code patterns that successively increased in complexity.

At the end of the course, the students were given the *IDEA Student Diagnostic Form* survey, where they assessed their progress on four objectives: (1) gaining factual knowledge; (2) learning fundamental principles, generalizations, or theories; (3) learning to apply course material; and (4) developing creative capacities. On a five-point scale, the averaged results were 4.8, 4.8, 4.7, and 4.2, respectively. When these scores were compared across the IDEA discipline database, all but the last score ranked in the Highest 10% of classes.

SGID Marks: Instructional Assessment

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**Sarah Knox Morley, Lecturer III, Health Sciences Library and Informatics Center,
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Julie Sanchez, Part time Educational Psychology Instructor, jreed@unm.edu

The purpose of this presentation is to describe an instructional assessment technique conducted in two UNM settings.

What is SGID? Small Group Instructional Diagnosis (SGID) is an interactive assessment technique used to provide feedback to instructors about their course.

What is the process? Typically used at the semester mid point, a facilitator not connected to the course asks the class four questions:

- 1) What do students like **MOST** about the class?
- 2) What do students like **LEAST** about the class?
- 3) What suggestions do students have for the **INSTRUCTOR** to improve the learning experience?
- 4) What suggestions do **STUDENTS** themselves have for improving their own learning experiences and those of other students in the class?

Initially students are asked to reflect individually on the set of questions. Next, breaking into small groups of 4 or 5, the students discuss their individual responses for each question. In order to bring an idea or suggestion before the entire class, the group must first come to consensus. Each group reports their responses for each question while the facilitator records the responses. Each member of the class votes on whether they agree, disagree, or are neutral for each of the responses listed. The facilitator is responsible for using this data to write a report to be presented to and discussed with the course instructor.

Where did SGID take place and who took part? Two faculty members from the Health Sciences Library and Informatics Center were asked to perform SGID for two College of Nursing courses and one College of Pharmacy course in 2005-2006. Three graduate assistants performed 90 SGIDs for Freshman Learning Community courses during the 2006 and 2007 fall semesters.

What are the benefits and pitfalls of using this type of assessment?

Information gathered mid semester gives the instructor relevant feedback that can be incorporated before the course is over. Class voting ensures topics with broadest appeal will be included in the assessment. Because the process takes place during class there is more complete participation in assessing the course but it does take a one hour class period

Final Thoughts Faculty recipients who took part in the process found the process useful. To make the process faster, more anonymous, and more accurate we recommend using i-clicker technology when feasible.

Giving Richer Feedback on Written Assignments Through Social Technology

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Social technology, ranging from the simplest forms of e-mail through audio-tape, CDs, DVDs, wikis, blogs, Blackboard™, WebCT™, and web pages offers all teachers an opportunity to give rich feedback on written assignments – far richer feedback than can be achieved in marginal notations. The up-front overhead often seems high, but this cost is quickly balanced by the increase in student involvement in course material and the learning that follows. I have been using various forms of social technology to give feedback on writing since 1987. My research on e-mail and audio-taped feedback conducted at the City University of Hong Kong (where I was Associate Professor of English, 1986 – 1996) in the late 80s and early 90s revealed that students perceived such feedback as more effective, personal and warm, and a clear indicator of the teacher’s concern for students. While I have not conducted further research on this topic recently, I have continued to increase my use of social technology because of the gratifying results my students report informally – and the clear increase in learning that I observe in their performance.

Why Do We Give Writing Assignments?

Presumably, every time we assign written work it is for a variety of purposes:

- To develop students’ structured memory of information
- To enable students to develop ownership of concepts through personal expression
- To allow students to demonstrate the depth of their learning: recall of facts and understanding of information – synthesis with a broader matrix of information
- Oh, and to develop their skill as writers of effective, accurate and eloquent prose

Effective written assignments ought to relate clearly to the learning objectives of the course or the unit of instruction, if they are to satisfy the purposes above. If this relationship is clear, the scope for giving feedback is also clear. Teachers will want to comment on issues of recall, understanding, synthesis, and clarity of expression. The latter issue is not the purview of composition faculty alone, but is the responsibility of all teachers who read student writing. The problem lies in how effectively any of us can offer useful feedback in brief and often obscure marginal notations and tie well-developed commentary to specific aspects of student prose. As we increasingly encounter 21st Century students who experience challenge transitioning from high school or adult life to the demands of higher education, it becomes more important to give such students careful and rich feedback.

The Advantages of Social Technology

Social technology enables teachers to direct developed comments to specific parts of student writing. Assignments submitted via e-mail, either as direct messages or attachments, can receive quick response in which the teacher can intersperse comments within text or between paragraphs using color or font variation to make comments clear. Most of us type faster than we write by hand – and our typed legibility does not decline as we progress through assignments. We can say more about why a student’s writing works or doesn’t work and how it might be perceived or misperceived by readers. Although audio-taped feedback is slower, likewise, it enables a teacher to speak directly and at length to a student. Audio files captured in wikis and blogs speed up the process of returning feedback. In all cases, students report to me that they appreciate the fuller and more analytical feedback, the provision of examples, and the challenge for revision that I give them through fuller and more deliberate commentary. As well, social technology offers opportunities to broadcast specific kinds of commentary, to elicit peer commentary more effectively, and to give students a more direct sense of audience when they write their assignments. These factors increase the relevance of written assignments and underscore the need for rhetorical sophistication and linguistic accuracy – important for chemistry and mathematics as much as for history, philosophy, and literature studies.

My brief presentation expands on the techniques for giving rich feedback and shows examples of the kinds of explanation that become possible through the use of social technology.

Shake it Up! Energizers and Keeping the Brain Engaged

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Family Development Program

Consider the nature of the brain when organizing a classroom presentation. The brain needs movement, oxygen, novelty, change. Think about incorporating some active interludes to your lectures. The ideas we'll be sharing don't take much time and they will wake up your students. They'll get those synapses firing.

Our activities are based on brain research from authors and researchers such as David Kolb, Eric Jensen, and Tim Burns.

Teaching as an International Faculty at UNM

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Academic teaching and research learning has a long standing tradition of international scholarship. In this era of globalization it is more than desirable to maintain and expand this tradition. My presentation starts by introducing and discussing the concept and contributions offered by international faculty into US higher learning institutions exemplified by the UNM. International scholars bring unique experience and perspectives into the American classroom and research environment. Their contribution fits in the UNM's vision and mission, in which vital academic climate and diversity are prominent components.

To ensure that the learning environment caters to student expectations, any university should provide incoming young members of staff, teaching assistants and research fellows with a mentoring program tailored towards specific needs of the University, particular department or institution. Naturally, such a mentoring program should accommodate international scholars. Similarly, research support office should be prepared to provide in depth information and help to a diverse and international community of scholars. The mother Earth has shrunk into a global village, and this should be demonstrated by experience exchange and cultural talks in classroom as student learning enhancement techniques are implemented.

I have suggested to the UNM administration some steps which can enhance student learning outcome, in addition to the effort the OSET puts on this highly needed exercise. For instance, a university that strives toward an international appeal should work toward motivating her human resources in general, including foreign scholars. Example, foreign scholars have to be provided with an attractive working environment to minimize any hindrance towards their performance. This can be dealt with through well organized international office which gives advices and delivers support in every day practical life issues, ranging from visa application to opening bank account and locating childcare facilities.

Center for Teaching at Vanderbilt University

http://www.vanderbilt.edu/cft/resources/teaching_resources/specific_audiences/international.htm
).

Institute for International Education. (2005). *Open doors data tables*. New York: The Institute for International Education. Retrieved 1/28/2008 from <http://opendoors.iienetwork.org/page/69688/>

Ohio State University <http://ftad.osu.edu/> ,

Sarkisian, Ellen (2006). *Teaching American Students: A Guide for International Faculty and Teaching Assistants in Colleges and Universities*. Cambridge, MA: Harvard University Press Pages: 130

Smith, J., Meyers, C., and Burkhalter, A. (1992). *Communicate: Strategies for international teaching assistants*. Englewood Cliffs, NJ: Regents/Prentice Hall.

Palliative Care Death Rounds: An Educational Model to Integrate Core Competencies in the School of Medicine Third-Year Clerkships

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Background

Palliative Medicine is a recognized medical subspecialty and mandated curricula for medical schools by many national accrediting organizations. The medical student's experience with patients' dying and death has profound impact on personal and professional development. A memorable death offers the opportunity for significant learning in required core competencies. The University Of New Mexico School Of Medicine has implemented an evolving four year integrated palliative medicine curriculum which includes third year clerkship learning environments that focus on "memorable deaths".

Research Objectives

To describe the implementation and evaluation activities of a third year clerkship palliative care death rounds as an educational model that promotes self reflection, professional development, self care, and integration of other essential core competencies: clinical palliative medicine, bioethics, medico-legal issues, spirituality, cultural diversity, and communication skills.

Methods

Within an integrated four year palliative care curriculum, third year medical students attend two-three small group palliative care death rounds sessions during selected third year clerkships. These structured sessions are facilitated by the attending clerkship director, chief residents and a palliative care physician.

Results

Pre and post assessment tools regarding palliative care knowledge/skills/attitudes demonstrated significant improvement and integration of mandated competencies in ethics, medico-legal, palliative medicine, pain management, geriatrics, spirituality, cultural diversity, and communication skills.

Conclusions

The implementation of palliative care focused "death rounds" based on authentic clinical experiences in the clerkship phase is an effective model that integrates the following cross cutting core competencies: palliative care, ethics, diversity, pain management, medico-legal issues, spirituality, and communication skills. The implementation of death rounds required only limited time away from traditional clerkship activities and limited faculty time, and thus is a model we believe can be implemented readily at other schools.

Writing Their Way around the World: Student Essays and Geographic Literacy

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The Problem

The furiously-paced, content-heavy “World Regional Geography” course has been around as long as the discipline of Geography. Although this course is a favorite way of introducing American students to the little-known world beyond U.S. borders (and is often a required course for Education majors), it can also be extremely frustrating for both professors and students. In a typical World Regional Geography course, students are expected to master basic geographic principles AND learn the physical and cultural geography of all the world’s regions in a single semester. Factoring in time for introductory material and exams, this often works out to one world region per week! True mastery of regional dynamics or geographic concepts is thus fairly rare.

An Attempted Solution

In this talk, I describe and assess an experimental re-design of the course that eliminated exams and used frequent short-essay assignments (1-2 pgs, double-spaced) as a means of both spurring and assessing student learning. In the new format, students wrote two essays per region: one essay describing their perceptions of the region before we covered it in class, and a second essay reflecting on key regional issues and geographic concepts after the class sessions for that region.

The Hypothesis

Essay-writing would give students a better opportunity to absorb and reflect on difficult concepts and dynamics than could be achieved through studying (cramming) for exams.

The Big Question Mark

Over the semester, we covered 13 regions. Including introductory and concluding essay assignments, this resulted in a grand total of 28 essays per student. Would the students be willing or able to do it? And, of more agonizing concern (~40 students x 28 essays = ~1,120 essays!), would the professor be able to handle the grading load??

Results

The two-essay-per-region format proved to be more or less manageable for both students and professor, and students displayed a level of concept mastery that seems comparable to traditional versions of the course. Attitudinal data collected in anonymous surveys at a mid-point and at semester’s end indicates that students felt confident about their mastery of the material and thought they learned more than they would have learned through studying for exams. Although the re-designed format raised a number of issues that should be addressed in future semesters, the general concept of using frequent short essays to spur deeper learning in content-heavy courses should be considered a feasible strategy.

The Analysis of Logic Applied to Problems Involving Mathematics

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Problems involving mathematics exist at every educational level—from kindergarten to graduate-college level and beyond. And they exist in a wide variety of types sometimes requiring very specialized knowledge to solve. Additionally, they require logic—whether it be inductive, deductive, symbolic, or more specialized logical frameworks. Problems vary in their requirements for solution, often being solved in a variety of ways. Problem-solvers vary in their experience and expertise in problem-solving. How do problem solvers tackle unfamiliar problems? The following represents a preliminary attempt to begin answering this question with COE undergraduate and graduate students.

One of our favorite activities in mathematics-methods courses is to present our students with problems for which they do not have instant, ready-made algorithms. While learning algorithms is practical and is a confidence-builder, being presented with a problem whose algorithm is unknown to the learner or for which an algorithm has yet to be invented or discovered, can be most challenging. The Achilles and the Tortoise problem (Martinez, in press) does have known algorithms, but most learners have a difficult time discovering them. The Water Jar problem discussed in a recent article (Martinez & Martinez, 2006) is also a problem for which most students have not discovered algorithms. And alphanumeric problems, such as the classic problems developed by George Summers, call for students to employ the kind of logic used by code-breakers to decipher secret messages (1968).

To discover how students tackle these problems, we ask them to write comments on their problem-solving processes for the alphanumeric problem (handout at presentation) we give them and determine whether any patterns or stages emerge.

A preliminary analysis of 51 student comments and performance outcomes reveals different stages of puzzle-solving responses and strategies. The first stage involved confusion for many students ($n = 25$). Comments like the following were common: “I am clueless on what this puzzle is asking me to do,” and, “What kind of a math problem is this?” The second stage showed the first attempts of puzzle-solving with a preponderance of trial-and-error strategies ($n = 48$ with a mean time of 5.5 hours). Most student strategies remained at this stage and only several could solve the puzzle using trial-and-error ($n = 8$ with a mean time of 2.5 hours). A few ($n = 3$ with a mean time of 45 minutes) seemed to have skipped the second stage and entered a third stage—applying more systematic puzzle-solving strategies that actually resulted in all three solving the puzzle relatively quickly. These three puzzle solvers consisted of two undergraduates and one graduate student, all of whom developed an if-then, process-by-elimination strategy which Summers would contend involves deductive logic.

Our students learned that developing more systematic strategies maximized the chances of solving puzzles and minimized the time required to accomplish the task.

Martinez, J. G. R. (In Press). Thinking and writing mathematically: “Achilles and the Tortoise” as an algebraic word problem. *Getting into the mathematics conversation: Valuing communication in mathematics classrooms: Readings from NCTM’s school-based journals*. Reston, VA: National Council of Teachers of Mathematics.

Martinez, J. G. R., & Martinez, N. C. (2006). The hidden solution in the water jar problem. *Mathematics Teaching in the Middle School*, 11, 407, 416.

Summers, G. J. (1968). *New puzzles in logical deduction*. New York: Dover Publications.

Inquiry, Analysis, and the Working-with-Data Group Project: Encouraging Students to Ask and Answer Their Own Questions

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Students often come to the classroom expecting to be given answers—to focus on the procedures and products, the *how*'s and *what*'s of the learning process. In my Technical Writing course, the Working-with-Data Project involves students in composing and asking their own questions. As they work together to collect and analyze data, they discover that the process of inquiry can be more important and interesting than the answers or products of that process. The project helps students develop the inquiry and analytical skills essential for information literacy as well as the teamwork skills important for collaborating successfully.

Background

Traditionally inquiry-based learning has been emphasized primarily in science and mathematics courses; however, increasingly other disciplines including English have adopted inquiry strategies. According to one group of writing instructors, teaching writing as a “mode of inquiry” helps students to see their writing, not as “an end in itself,” but as a process for exploring and understanding their worlds (Van Oostrum, Steadman-Janes, & Carson, 2007, p. 556). Kajder writes that inquiry encourages students “to see writing as a tool for thinking” and to view their work as a way “to seek, engage, probe, construct, and store understanding that is continually in flux” (2005, p. 64).

Procedures

The Working-with-Data Project begins with a question: What issue, event, or situation concerns you and the people that you know? Students work in small groups to choose a topic and to develop a survey of open- and closed-ended questions. Most use Microsoft Excel to compile the data; analyze for means, medians, and modes; and represent their findings in pie charts and bar graphs. The groups create PowerPoint presentations that are also inquiry based, responding to questions such as what issue did you explore and why, who did you survey, what did you find, what do the results mean and not mean.

Outcomes

One project goal is laying a foundation for a habit of inquiry—to encourage students to go beyond the ready-made information to find their own answers. A second goal responds to the criteria for information literacy by helping students to understand the difference between primary and secondary research and to develop analytical skills for assessing the value and limitations of their sources. A third goal involves teamwork, including working together to construct Gantt charts to organize their work, assign responsibilities, and set deadlines.

Many of the students apply skills developed in this activity to their semester research projects. They collect data with surveys or observations and represent the results with various graphs. Many will also add inquiry skills to the outcomes discussed in their final, course-assessment memos.

References

- Kajder, S. (2005). Whole-class inquiry: Language arts. *Learning & Leading with Technology*, 32(8), 53- 55.
- Van Oostrum, D., Steadman-Jones, R., & Carson, Z. (2007). Taking the imaginative leap: Creative writing and inquiry-based learning. *Pedagogy*, 7, 556-566.

Putting an Astronomy Lab Online - Solutions and Challenges

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Placing solutions before challenges is a bit like putting the cart before the horse. However in this case I'll be looking back at solutions to old problems and forward to new challenges facing a web based course.

Online Astronomy 101L is a one-hour laboratory course that was launched in 2005 by transferring an existing html document over to WebCT.

As each semester passes we learn from experience what works and what doesn't. Some problems are simple to solve and even easier to avoid in the first place. Other problems are unique to each situation and require some help to figure out.

As the course matures we have the luxury of being able to fine tune some of the content. There are traps to be avoided as well as techniques to be incorporated that enhance the quality of pedagogy.

I will share some of the solutions to common problems and thoughts on how we are preparing for the future development of our Online Astronomy 101L course.

Teaching and Evaluating Problem-Solving Skills: Assessment of Individual Performance

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The evaluation of higher-level cognitive skills can augment traditional discipline-based knowledge testing by providing timely assessment of student problem-solving abilities that are critical for success in any professional development program. However, the wide-spread acceptance and implementation of higher level cognitive skills analysis has been delayed by the lack of rapid, valid, and reliable quantified-scoring techniques. At the University of New Mexico School of Medicine, we have developed an examination format that can be routinely and sequentially implemented for both formative and summative assessments of individual students in large classes. Rather than providing results in terms of an individual student's knowledge base in a single academic discipline or group of disciplines, this type of examination provides information on performance in the application of specific problem-solving skills, which we term "domains," to a contextual clinical or scientific problem. These domains, derived from the scientific-method, are tested across various academic disciplines, and are reported in terms of the following: Initial and sequential hypothesis generation, investigation of these hypotheses, evaluation of newly-acquired data, integration of basic-science mechanisms with new information to explain the basis of the problem, and reflection on ones own professional development in the context of the examination. The process for criterion-referenced quantified grading of the examination is outlined in this discussion. This process involves relatively rapid scoring, and permits the timely use of the resulting information for individual student assessment as well as curricular improvement. Data regarding grading consistency and comparison with other measures of student performance is also presented in this discussion. A decade-long analysis of the performance characteristics of this examination indicates that it is valid, reliable, and utilizable. As such, the methodology is now routinely used in several undergraduate and graduate level biochemistry classes to monitor the development of individual student problem-solving abilities.

Teaching and Evaluating Problem-Solving Skills: Assessment of Performance in a Cooperative Learning Environment

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For the past three years, faculty at the University of New Mexico Department of Biochemistry and Molecular Biology have been using interactive on-line Problem-Based Learning (PBL) case discussions in our large-enrollment classes. We have developed an illustrative tracking method to monitor student use of problem-solving strategies in order to provide targeted help to groups and to individual students. This method of assessing performance has a high inter-rater reliability, and senior students, with training, can serve as reliable graders. We have been able to measure improvements in many students' problem-solving strategies, but, not unexpectedly, there is population of students who consistently apply the same failing strategy when there is no faculty intervention. This new methodology provides an effective tool to direct faculty to constructively intercede in this area of student development.

Using Backward Design to Plan for Instruction at the University Level

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Backward design (Wiggins & McTighe, 1998) is a curricular development process. In planning curriculum, educators ask the following questions:

1. What do I want students to understand, know, and be able to do? (curriculum)
2. How will I know they have accomplished this? (assessment)
3. What content, activities, teaching strategies will I use to help them achieve these learning objectives. (instruction)

These three stages should be followed in order.

Step 1 requires educators to identify the larger learning objectives, rather than specific content to be covered. Therefore, this curriculum design process is “backward” in the sense that instructors do not start figuring out what they will “cover” or how they will deliver instruction (e.g. instructional strategies), until the very last step. In contrast to courses that incorporate backward design, typical university courses determine that the course will be a lecture, seminar, or lab class that includes 15-16 specific topics. Sometimes the instructor will decide to use some innovative teaching strategy as a means of increasing student engagement. We suggest that these kinds of decisions should be made after the instructor has determined his/her major student learning objectives and the means for assessing student progress toward those objectives.

When making curricular decisions (step 1), educators should think about desired student understanding, ranging from knowledge worth being familiar with, to important knowledge and skills, and “enduring” understandings. This will help determine relative weight of different aspects of the curriculum. In addition, instructors should determine what is important beyond the classroom, important to the discipline, frequently misunderstood, and interesting to students, to make choices about learning objectives.

Step 2 should include both formal and informal assessments, with a clear correspondence between specified learning objectives and at least one formal method of assessment. We recommend using a variety of assessments, including performance based/authentic assessments, to address a variety of student learning needs.

Step 3 involves selecting course content/topics that align with the identified learning objectives (step 1) and assessments (step 2). Remember that higher levels of interactive student engagement with course content/materials lead to greater student learning. Therefore, use a variety of learning activities and teaching strategies rather than relying on traditional instructional methods such as lecture.

Wiggins, G., & McTighe, J. (1998). *Understanding by design*. Upper Saddle River, NJ: Prentice-Hall.

Use of a Mock National Science Foundation Panel Meeting to Reinforce Critical Writing Skills

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Strong scientific writing skills are critical to success in most scientific endeavors. However, many entering graduate students in the sciences have little experience writing outside of humanities classes. While in graduate school, they are expected to make the leap to being able to write first-authored publications and/or competitive grant proposals, in addition to a thesis or dissertation. Many students are naturally more focused on their scientific education than on developing their writing skills. How can we make writing practice pay off in meaningful ways?

I use a mock National Science Foundation panel meeting as the capstone experience in EPS 523 - Alpine-Himalayan Tectonics. The course includes lectures, student presentations, directed readings, a WebCT blog, in-class discussions, and preparation of an original research proposal. After initial overview lectures, we focus on areas of current controversy and unanswered questions – thus priming the students to think about topics for their proposals. At the start of the semester, I present students with NSF proposal guidelines and a budget template that includes the cost of their own research assistantship, line items for the costs of fieldwork and laboratory analyses, and UNM’s formulae for calculating benefits and overhead costs. As in the real world, students may submit individual or collaborative proposals. By the middle of the semester, I meet with each student to discuss his/her proposal topic, to advise collaborators how to justify their individual roles within a larger research project, and to help students determine what should be in the budget.

Proposals are submitted via WebCT and sent to the panel (i.e., all students in the class) for review. I distribute NSF reviewer guidelines and discuss how a real panel meeting works, based on my own 3-year term as a panel member. Each student must read, review, and rank all proposals. We then hold a 3-hour panel meeting to discuss the proposals and decide which ones will be ‘funded’ (I divide the total amount of money requested by 3 to arrive at an optimistic but semi-realistic funding rate). I serve as the program manager and run the panel meeting. The rules for the meeting are that (1) everyone must comment orally on every proposal, (2) the “principal investigator” must remain present but silent during the discussion of his/her proposal (no interrupting to say “that’s not what I meant!”), and (3) discussions must focus on what was actually written, not what reviewers thought the investigator meant to say. I also ask for comments regarding resubmission: what could the proposal author(s) do to make a revised proposal stronger than the original version? All written reviews and my written summary of the panel comments are subsequently provided to each student.

I find that discussions about proposals are professional and rigorous. Scientific content, significance of the work, and “bang for the buck” factors receive the most direct comments, but writing style and clarity also come up for discussion (e.g., “I wish the investigator had stated what she was going to do and why on p. 1, rather than making me read to the end to figure this out”). Because each investigator hears the discussion of his/her proposal, there is direct feedback on weak spots in both reasoning and writing. Furthermore, because the process closely mimics the real process of proposal writing and evaluation, students see the monetary benefit of strong writing skills. Student comments on the panel meeting have been uniformly positive; most students note that the experience is humbling, but gives them a clear sense of what lies ahead for them in the ‘real’ world of science funding and science writing. Many comment that the assignment represents the best class experience they have had in graduate school, and that it forces them to think about writing as part of the scientific endeavor.

Electronically Graded Homework: Buyer's Remorse? What Worked and What Didn't.

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Very few students who skip accounting homework pass the class. Electronically graded homework completely integrated with WebCT seemed like a dream come true, particularly if it was similar to WebCT quizzing (very popular). Students could do it anytime when convenient and receive instant feedback (and try again if necessary). No more excuses. More homework could be evaluated with greater consistency across sections. And the advertising said that astoundingly high percentages of students surveyed reported that a similar system helped them improve their understanding of the material, made them better prepared for tests and helped them get a better grade. Wow!

The implementation of this pilot project proved more difficult than expected because homework grades did not always migrate to the WebCT gradebook as promoted and a few other problems, hence the early buyer's remorse. But even with the problems (ultimately resolved or worked around), a student survey confirmed that most (72.5%) students preferred the electronically-graded online homework to alternatives including periodic collection of paper homework. Other data was consistent with the advertising claims.

This presentation will discuss the reasoning behind moving to electronically-graded homework, and how it met objectives to (1) emphasize the importance of completing homework, (2) improve the quality of the submissions, and (3) improve student satisfaction. The presentation concludes with suggestions for those thinking about adopting similar systems including the need for coordination among instructors, publisher and WebCT (NMEL).

Taming the Wild Wiki:

Using Wikis to Promote Collaboration and Construct Knowledge

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If the question, “Why Wiki?” doesn’t mean anything to you, don’t worry. If you are looking for a new way to promote student collaboration and help your students construct knowledge, then this presentation is for you. *Wiki*, which is derived from the Hawaiian word for “quick,” allows a group of users to create and modify documents in a quick and efficient manner. Instead of sending emails back and forth with attached documents that must be downloaded, worked on, and then uploaded again, wikis allow for asynchronous editing of a document that is easily accessed on a webpage by anyone with a computer and Internet access. But because access to a wiki can be restricted to a small group, such as a group of students, wikis are perfect for use in the classroom.

The power of wikis is their ability to move the instructor away from being the transmitter of information to a facilitator of information (Mindel, Verma). By creating a shared space for students to use, wikis encourage students to take control of their own learning. Wikis allow for collaborative learning where students can share what they are learning and researching, work together to solve a problem, discuss ideas, and reflect on what they are learning (Parker, Chao).

In this presentation, I will provide information on different ways to incorporate wikis in courses across the disciplines, providing examples of how you might create your own wiki in order to create a cooperative and collaborative learning environment. We’ll look at a number of different free wikis and I’ll demonstrate how to setup a wiki. Finally, to help you get started on creating your own wiki, I’ll provide a handout with useful tips and guidelines so you will be ready to tame the wild wiki and put it to use in your next class.

Mindel, Joshua, and Sameer Verma. *Wikis for Teaching and Learning*. Communications of Association of Informaiton Systems. Volume 18, Article 1. 2006

Parker, Kevin, and Joseph Chao. *Wiki as a Teaching Tool*. Interdisciplinary Journal of Knowledge and Learning Objects. Volume 3, 2007.

Looping Immigrant Latinas to Literacy

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The COE Family Literacy Program is differentiated by its quality of programming, its emphasis on family learning, and its focus on cultural relevance. The project purpose is to measurably increase the literacy skills of family members. Its design is to provide increased literacy skills and cultural understanding to traditionally underrepresented children and adults, whose primary language is Spanish, and who have struggled with English reading and writing skills. The program innovatively addresses literacy and learning by first creating a “learning community” among participants. The program centers on a positive model, embracing participants’ lived experiences. Therefore, story telling plays a dominant role in participants’ interactions. Diversity of thought is embraced and celebrated. Participants learn to reframe negative experiences into positive thinking and outcomes. Families participate in learning together through culturally relevant and language specific activities that connect family core values to educational practices that values everyone’s voice.

This program is facilitated weekly throughout the school year, as well as, through summer school and includes each of the following components:

1. Adult literacy, with socio-cultural emphasis
2. Literacy, and socio-cultural classes for school-aged students, ages 4-11
pre-literacy skills for toddlers ages 0-3
3. Educational opportunities for high school/UNM students (undergraduate, graduate and doctoral)
4. Weekly give-a-ways: a) High quality authentic bilingual book b) Bag(s) of groceries

Course projects as a Real-World Simulation: Preparing Students for Life after College in Advertising Campaigns

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The premise of this report is that by designing a capstone course in a way that combines the knowledge and skills acquired in prior classes of the concentration in a way that mimics the professional discipline behind it we can help students develop the skills they need for their respective fields (e.g., team building, problem solving, successful team interactions, time, budgeting and resource management, effective writing and presentation skills).

I will use a course from my own discipline, advertising, as an example to demonstrate how close a course can get to simulate the real-world activities in an industry. Students in the advertising campaigns class work for a real-world client chosen among the businesses in the Albuquerque metro area. This way students experience how all the functional areas of advertising (research, media, creative, account management) work together. It also means that they will be prepared to work with the stresses, time and budget parameters, client interactions, and strategic goals of real-world advertising. In the end the course demonstrates to the students how all the parts taught in previous courses flow into a seamless, strategy-driven campaign.

This course is structured differently from what students are used to in other courses. There are no exams, quizzes or papers. Borrowed from how the advertising industry executes new business pitches, students work instead from the beginning in an agency team of 5-7 people. Agencies – usually four to six teams per year – compete against one another for the client’s business. One team will be selected by the client as the “winner.” Each agency will have a leader, who may be re-appointed or changed for each stage of the campaign. Since students develop their campaign in stages throughout the semester, they are evaluated (graded) for their performance in the various aspects of campaigns creation in a mixture of group evaluation and individual evaluation. These include: call reports, peer evaluations, critique of a plans book from a previous semester, research, rough draft, final plans book, and presentation/ Q&A performance.

The client is real. In the past six years, we had diverse retail and media businesses such as The Mattress Firm and 103.3 Ed-FM as clients. The client “pays” for the work of the winning agency during an awards banquet. So far, rewards have been non-monetary (plaques, gift certificates, etc.) but it is conceivable to actually charge a client for expenses. Student teams explain their campaign to the client in printed form (via a professionally composed and bound plans book) and in a 20-minute presentation (including a formal presentation and an additional Q+A time) at the end of the semester.

In conclusion, both personal communication with course participants during and after the course and years later as well as ICES commentaries have shown repeatedly that after the initial “shock” of the dissimilarity of this course and work load connected with it, students do not only find this course relevant and timely (given how close it occurs before graduation) but also have used the materials they have created in this course for job application and career advancement. Ultimately, courses such as this are also suited to accomplish the universities mission (*UNM will provide students the values, habits of mind, knowledge, and skills that they need to be enlightened citizens, to contribute to the state and national economies, and to lead satisfying lives – FHB, A20-Vision*).

Using Medical Mannequins in the Training of Family Medicine Residents

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Practicing medical procedures is important to master technique. “Practicing” on “live” patients has limitations. Patient safety is paramount so learners should have practiced skills prior to working with patients whenever possible. Some procedures may not be frequent enough in clinical practice to obtain adequate practice but the procedures may be critical for patient health when needed. The UNM Health Sciences Center B.A.T.C.A.V.E. (Basic Advanced Trauma Computerized Assisted Virtual Experience) has a variety of mannequins for training health care providers. Over the last three years the Family and Community Medicine Department has used a variety of mannequins for training of its resident physicians and medical students. This abstract will discuss use of mannequins to practice joint and tendon sheath injections, central venous catheter placement and advanced cardiovascular life support.

Students in their third year of Medical School at UNM are required to do a six week rotation with Family Medicine. They are introduced to a variety of primary care procedures, including injection of the shoulder joint. Resident physicians have opportunities to practice injection techniques on a variety of models including shoulder, elbow, hand and wrist and knee during clinic and inpatient didactic sessions.

Central venous catheter placement is an important procedure for physicians who practice in a hospital or emergency room setting. Yet the procedure has a significant risk of potentially life threatening complications. The B.A.T.C.A.V.E. has several “Central Line Man” mannequins that allow learners to practice the techniques of central venous catheter placement. Family Medicine residents practice these techniques throughout their training on mannequins, particularly in their first six months of internship.

ACLS, advanced cardiac life support, complete with defibrillation, endotracheal intubation, medication administration and other invasive procedures can be practiced in the B.A.T.C.A.V.E. high fidelity simulation lab. There the “patient’s” heart rate and rhythm, blood pressure, oxygen consumption, breath sounds, pupil size and responsiveness and other physiologic parameters can be controlled from a central monitor. Programmed to respond to different medications, this mannequin is very helpful in practicing cardiac resuscitation skills. Family medicine residents go the high fidelity lab monthly while on the Family Medicine inpatient service.

(excerpt from, Seven Principles for Good Practice in Undergraduate Education, by Arthur W. Chickering and Zelda F. Gamson *AAHE Bulletin*, Mar 1987)

Good practice in undergraduate education:

1. Encourages Contact Between Students and Faculty

Frequent student-faculty contact in and out of classes is the most important factor in student motivation and involvement. Faculty concern helps students get through rough times and keep on working. Knowing a few faculty members well enhances students' intellectual commitment and encourages them to think about their own values and future plans.

2. Develops Reciprocity and Cooperation Among Students

Learning is enhanced when it is more like a team effort than a solo race. Good learning, like good work, is collaborative and social, not competitive and isolated. Working with others often increases involvement in learning. Sharing one's own ideas and responding to others' reactions sharpens thinking and deepens understanding.

3. Encourages Active Learning

Learning is not a spectator sport. Students do not learn much just by sitting in classes listening to teachers, memorizing pre-packaged assignments, and spitting out answers. They must talk about what they are learning, write about it, relate it to past experiences and apply it to their daily lives. They must make what they learn part of themselves.

4. Gives Prompt Feedback

Knowing what you know and don't know focuses learning. Students need appropriate feedback on performance to benefit from courses. When getting started, students need help in assessing existing knowledge and competence. In classes, students need frequent opportunities to perform and receive suggestions for improvement. At various points during college, and at the end, students need chances to reflect on what they have learned, what they still need to know, and how to assess themselves.

5. Emphasizes Time on Task

Time plus energy equals learning. There is no substitute for time on task. Learning to use one's time well is critical for students and professionals alike. Students need help in learning effective time management. Allocating realistic amounts of time means effective learning for students and effective teaching for faculty. How an institution defines time expectations for students, faculty, administrators, and other professional staff can establish the basis of high performance for all.

6. Communicates High Expectations

Expect more and you will get more. High expectations are important for everyone -- for the poorly prepared, for those unwilling to exert themselves, and for the bright and well motivated. Expecting students to perform well becomes a self-fulfilling prophecy when teachers and institutions hold high expectations for themselves and make extra efforts.

7. Respects Diverse Talents and Ways of Learning

There are many roads to learning. People bring different talents and styles of learning to college. Brilliant students in the seminar room may be all thumbs in the lab or art studio. Students rich in hands-on experience may not do so well with theory. Students need the opportunity to show their talents and learn in ways that work for them. Then they can be pushed to learn in new ways that do not come so easily.