CTE Today

A Newsletter for Teachers at USMA

Center for Teaching Excellence

October 2007

"A college degree and a teaching certificate define a person as a teacher, but it takes hard work and dedication to be one."
-- author unknown

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Teaching and Academic Excellence at USMA,

by Dr. Mark D. Evans, CTE Director

When you consider *Academic Excellence* at USMA, what comes to your mind? The Academic Excellence subcommittee (LTC Kobylski, chair) of the faculty senate asked that question, and other related questions, last year in their survey sent to all faculty (123 replied) when they asked (among other questions):

... Please indicate the approximate amount of time you allot among the 5 faculty domains.

Faculty responded that their time was spent, on average, as follows:

49% Teaching
28% Mentoring
12% Service
11% Scholarship

... What would you recommend as a method (metric) for measuring the achievement of Academic Excellence for cadets and for faculty?

Faculty responded that Academic Excellence should be measured by these activities:

25% Publishing
22% Presentations
12% Research
10% Cadet/Peer Surveys
10% Rater
7% The 5 Pillars
5% Course Development
5% Licensure
2% Mentoring Cadets
2% Master Teacher Program

While faculty reportedly spend about half of their time teaching — teaching, per se, did not show up on the survey results as a measure of "Academic Excellence". Other activities or evidences of teaching (5 pillars, cadet surveys, course development) appeared in rather small percentages.

> "I would suggest that teaching, or teaching-related accomplishments should in some way be a measure of Academic excellence at USMA. Don't you?"

I would suggest that teaching, or teaching-related accomplishments should in some way be a measure of Academic excellence at USMA. Don't you? Yet, while surveyed faculty responded that they spent almost half their time teaching, they did not respond that teaching accomplishments were a measure of academic excellence. I am somewhat surprised by this data.

While all faculty are engaged in some scholarly activities, USMA is primarily an undergraduate, teaching institution. Teaching should be our primary focus. Faculty at USMA should believe that good teaching is valued and that good teaching is a measure of academic excellence.

The USMA mission, after all, is: "To educate, train, and inspire the Corps of Cadets so that each graduate is a commissioned leader of character committed to the values of Duty, Honor, Country and prepared for a career of professional excellence and service to the Nation as an officer in the United States

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Upcoming Conferences

32nd Annual Conference, Professional and Organizational Development Network in Higher Education. October 25-28, 2007, Pittsburgh, Pennsylvania. www.podnetwork.org

14th National Conference on Students in Transition. November 4-6, 2007, Cincinnati, Ohio. http://www.sc.edu/fye/events/sit/index.html

7th Annual Conference on The First-Year Experience. February 15-19, 2008, San Francisco, California. http://www.sc.edu/fye/

Annual Conference for the Society for Research on Educational Effectiveness. March 2 – March 4, 2008, Crystal City, VA. http://www.educationaleffectiveness.org/conferences/2008/

2008 American Education Research Association Annual Meeting. March 24 - March 28, 2008, New York, NY. http://www.aera.net/

5th annual Teaching Professor Conference. May 16 – 18, 2008, Kissimmee, FL. http://www.teachingprofessor.com/conference/index.html

2008 Textbook and Academic Authors. Association Conference . June 20-21, 2008, Las Vegas, NV. http://www.taa-online.net/TAAConference/index.html

20th Annual World Conference on Educational Multimedia, Hypermedia, & Telecommunications. June 30 – July 4, 2008, Vienna, Austria. http://www.aace.org/conf/edmedia

Technology in the Classroom: How the Afghans Overcome IT (pun intended), *by MAJ Paul Stanton, EE&CS*

Have you ever walked into the classroom to teach and nothing worked? You try to turn on the computer and it won't respond. You move to the overhead to show a video clip and the bulb is burned out. You resort to the whiteboard, but the markers are all dried up. What do you do? Cancelling class is not an option; that would be admitting defeat. Instead you are forced to quickly analyze what is at the core of the lesson, focus on what the essence of the learning objectives are, set aside the technological problems, and teach.

> "The technological realities at NMAA force the teachers to think about the *lesson objectives* and to be capable of teaching them regardless of what resources are available."

Recently I spent a couple of months in Afghanistan helping the faculty to prepare for lessons and to teach in their newly created computer science program. The daily headaches that we faced due to the evolving information technology (IT) infrastructure were immeasurable; yet we found a way to communicate to the cadets during each and every lesson. My experiences reinforced my understanding that technological tools can provide great value and they can really enhance the learning experience, but they should not be the focus of the lesson. I watched the Afghan faculty spend a couple of minutes struggling with an IT tool during class, but then shift focus back to the lesson material when it wouldn't work. I sat in the back of the classroom and thought about my own lesson preparation. As a computer science instructor, I have many elaborate classroom examples that rely on a whole host of IT devices: servers, switches, routers, projectors, lab workstations, detailed configuration settings, etc. What happens if something fails?

After my return, I lived through the exact experience described above – the instructor workstation didn't work and the overhead projector wouldn't turn off, thus rendering the whiteboards useless. I issued a CS audible and moved my students to another classroom where none of my materials were loaded onto the computer (for the course that I teach, the configuration of the individual machine is critical for the software to function properly). We had one of the best lessons of the semester by simply talking about concepts with a marker on the board.

Technological challenges like the rare occurrence I suffered through describe daily life at the National Military Academy of Afghanistan (NMAA). If there is an Afghan equivalent to Murphy, he lives at NMAA . . . if something can go wrong, Inshallah, it will. Technological resources at NMAA are scarce to begin with, but then those that are *supposed* to be available lack a predictable reliability. This forces the new, inexperienced faculty to prepare for class with the real heart of the lesson material in mind. They prepare a lesson to optimize the potentially available resources (computers, networked storage, the Internet, etc), but they also have a backup plan for contingencies. What happens if the city power shuts off during class, what if the satellite uplink to the Internet gets blown askew by a sudden wind storm, what if a rat finally chews through the last threads of the network cable that is holding everything together? (All of these happened at least once during my two months at NMAA. Fortunately, the rat incident was isolated).

The technological realities at NMAA force the teachers to think about the *lesson objectives* and to be capable of teaching them regardless of what resources are available. We don't suffer from the same IT related problems at USMA - when things don't work, we have skilled technicians who can quickly resolve the problems – but arguably the NMAA preparation model is a good way to prepare our lessons anyway. Can we walk into the classroom with no extra IT tools and teach the lesson objectives? Have we really spent enough time thinking about what the lesson objectives are, or have we spent most of our lesson preparation time figuring out how to work a particular example that requires extensive IT resources?

> "Have we really spent enough time thinking about what the lesson objectives are … ?"

I'm not suggesting that we should plan on having technological failures in the classroom; our teaching environment is very well resourced and supported. I am, however, suggesting that we take a hard look at what the lesson objectives are for each lesson. Are we really focused on what is important? Can we teach what is important in a resource-constrained environment? Are we employing technology for added value to the learning experience, or just because it is available? It is worth thinking about every once in a while. The Afghans don't have the luxury of deciding whether or not to use technology, but their model of preparation provides some good cause for reflection. We should take a look and make sure that we are preparing lessons around the objectives and applying technological resources judiciously where they provide added value.

MAJ Paul Stanton served at NMAA last summer from 19 May to 1 August. His position there was to mentor the CS program in curriculum and course development. In addition to his mission, he worked closely with the NMAA IT director to further develop the network infrastructure. He is in his third year of a 3-year USMA tour.

Resources for Faculty Development, *By Dr. Kimberlee Bonura, Assistant Director, CTE*

As college faculty, we are challenged in the classroom with the realization that knowing our material well is not the same thing as teaching it well. Teaching requires more of us than simply being subject matter experts. It requires that we develop relationships with our students and foster a classroom environment that sparks an interest in both learning and the subject matter among all participants in the classroom. It requires us to learn about human development and motivation, about strategies for classroom interaction and classroom discipline, and about approaches to the assessment and measurement of learning.

You undoubtedly engage in professional development in your subject area – reading current journals and textbooks, staying informed about improved research methods, and attending conferences and presentations by leaders in your field. At least some portion of your professional development should also focus on the art and science of teaching. The following organizations and databases are provided as key resources for professional development in education.

Professional Organizations in Education

Membership in a professional teaching organization can offer many benefits, including access to resources such as journals and online databases, conference attendance and participation, and networking with fellow professionals. For certain fields, there are teaching societies relevant to your particular domain. For instance, the American Society for Engineering Education (http://www.asee.org/), the National Council of Teachers of Mathematics (http://www.nctm.org/), and Division Two of the American Psychology Association, which is the Society for the Teaching of Psychology (http://www.teachpsych.org/). Professional organizations which focus on teaching in general, and which can be useful to faculty from all academic domains, include:

(1) American Educational Research Association: http://www.aera.net/

(2) Professional and Organizational Development Network in Higher Education (POD Network): http://www.podnetwork.org/

(3) Association for the Study of Higher Education: http://www.ashe.ws/

(4) Society for Research on Educational Effectiveness: http://www.educationaleffectiveness.org/index.shtml

Useful Databases for Educational Research

Most academics are used to finding relevant information from within your field and tracking down articles and texts through databases. However, databases which focus on your domain of expertise may not include articles relevant to teaching and faculty development. Most professional organizations for teachers and faculty publish journals on teaching (so start with the websites of the organizations listed above). As well, the USMA library system offers two databases which you will find useful:

(1) ERIC (Education Resources Information Center) – this is the main database for educational research, and will include articles, texts, and government publications on teaching.

(2) PsycINFO – includes more than 2 million citations within psychology (including educational psychology, learning theory, etc). PsycARTICLES is the fulltext subset of PsycINFO and will only include article citations which are available in fulltext online.

The website in Thomson Scientific, (http://www.thomsonscientific.com), also hosts a master list of more than 14,000 academic journals – you can search for journal titles by subject area and key word – 95 journals related to education are listed in the database. Once you've identified journals that are relevant to teaching in your subject area, you can refine your literature search to those journals. Through the Thomson Scientific website, you can also access ISI Web of Knowledge (http://isiwebofknowledge.com/), to search for journals according to a specific key word and to compare journals based on specific factors, such as frequency of citation.

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Teaching, *continued*

Army." A focus on teaching excellence would seem more consistent with the Academy mission to "educate, train, and inspire…" than a focus on Publishing (25%) and Presentations (22%).

One of the findings of the Academic Excellence subcommittee stemming from this survey was that faculty feel that:

Academic excellence is difficult to achieve [at USMA] due to the other requirements that faculty and cadets have.

Since "teaching excellence" was not listed previously as a measure of academic excellence, then one might surmise from this finding that teaching is one of the "other requirements" that are getting in the way of academic excellence for faculty. If our goal is cadet academic excellence, then a faculty focus on teaching excellence would seem appropriate.

"… take time to reflect on how to pursue academics better …"

The Academic Excellence subcommittee proposed a new definition of academic excellence for faculty at USMA.

Faculty who strive for academic excellence do so in four major areas:

*… They create **exciting active classroom learning environments** tailored to cadets.*

*… They keep themselves **active/current in their field** by not only doing research but exchanging these ideas within and outside the walls of USMA.*

*… They provide opportunities for academic growth by **mentorship** and resourcing.*

*… They take time to **reflect** on how to pursue academics better and take steps to advance their discipline through education.*

This new definition clearly articulates the connection between academic excellence and teaching activities and appropriately promotes cadet academic development. Let me, or LTC Kobylski, know what you think of this definition of faculty academic excellence.

Blooms's Taxonomy

The original structure of Bloom's Taxonomy of the thinking or cognitive domain (Bloom, Engelhart, Frost, Hill, & Krathwolh, 1956) is as follows:

Lower-Level Objectives:

1. **Knowledge**: Remembering, recognizing, repeating information, without necessarily understanding, using, or changing it.

2. **Comprehension**: Being able to describe information; does not require relation to other information.

3. **Application**: Using a general concept to solve a particular problem.

Higher-Level Objectives:

4. **Analysis**: Critical look at the parts of a whole; being able to break information down into its parts.

5. **Synthesis**: The use of information in a new way; the ability to create something new by combining different ideas.

6. **Evaluation**: Judgment of the value of information, or judgment of the use/ application of different methods in a specific situation.

When writing or evaluating lesson objectives and questions on wpr's, one should have an appropriate blend of lower and higher-level objectives from Bloom's Taxonomy so that cadets are both studying lower and upper level objectives and being tested at both levels as well.

TEACHING-RELATED REFERENCES FOR ALL FACULTY TO CONSIDER

Lowman, J. (2000). *Mastering the techniques of teaching*, Jossey-Bass, 2nd ed. San Francisco.

Davis, B.G. (1993). *Tools for Teaching*. Jossey-Bass, San Francisco.

McKeachie, W. J. and Svinicki, M. (2006). *McKeachie's Teaching tips, 12th* Ed., Houghton Mifflin, Boston.

Bain, K. (2004). *What the Best College Teachers Do*. Harvard University Press, Cambridge MA.

Angelo, T. A., and Cross, K. P. (1993). *Classroom assessment techniques: A handbook for college teachers*, Jossey-Bass, San Francisco.

Newsletter Submissions

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Submissions to *CTE Today* are welcome and encouraged. When submitting, please keep these guidelines in mind:

…We are interested in a wide range of teaching and learning topics.

…We are interested in innovative strategies, techniques, and approaches that facilitate learning

…We are interested in reflective analyses of educational issues of concern.

…Write with the understanding that your audience includes faculty in a wide variety of disciplines and in a number of different departments.

…What you describe must be relevant to a significant proportion of USMA faculty.

…Write directly to the audience, remembering that this is a newsletter, not a journal publication.

…Keep the article short; generally between 1 and 3 double- spaced pages.

…If you'd like some initial feedback on a topic you're considering, you're welcome to share it electronically with the editor.