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Teaching Legacy: Voices of Experience
Ralph Llewellyn

Ralph Llewellyn is a Professor in the Department of Physics. He received his B.S. degree from Rose-Hulman Institute of Technology and his Ph.D. from Purdue University. Before coming to UCF as the first dean of the College of Arts and Sciences, he chaired the Physics Department at Indiana State University and was Executive Secretary of the Board on Energy Studies of the National Academy of Sciences National Research Council. His current research area is radioactivity in meteorites and space artifacts.

1. What are some of your best strategies for encouraging students to stay engaged?
I use a lot of demonstrations in both lower- and upper division classes. Some are simple and others require complex, commercially available stuff. When teaching modern physics, I use a historical context; for example, in nuclear physics, we talk about the discovery of fission—first explained by a female physicist, Lise Meitner, while she was walking in the woods with her nephew. A vision came into her head of how fission occurred. At one point a group of theater students here at UCF created several short vignettes of historical events in physics, e.g., the trial of Galileo and the discovery of electron spin, and presented these as little "playlets" for my students in the modern physics class. In general education courses, a colleague, Costas Efthimiou, developed the "Physics in Film" concept, where we use film clips from popular movies in class to illustrate physical principles. The idea is to get students engaged because they're interested in the films, but also to make them think critically about things that happen out there in the world. They can be entertained without being misled.

2. What should instructors be doing more of (or less of) than we already are?
We need to get better at teaching students how to solve problems. Physics is a problem solving, experimental discipline. As a matter of fact, living out in the world is a problem solving, experimental discipline! It helps us live better to be able to solve problems. The concept many students have of solving a problem is shuffling through the book until they find the equation that looks right and then start putting the numbers in it. And that's not solving a problem. They need to know how to state and analyze problems and how to solve them. One thing all students need is an understanding of the scientific method. We don't have to call it by that name, but they need to understand what's involved in actually proving something is or is not correct.

3. How does your research inform your teaching?
I'm an experimental nuclear physicist. Our search for radioactivity in lunar materials, meteorites, and other extraterrestrial objects focuses on aluminum 26, which is present in the near earth atmosphere but shouldn't be there. Why is it there? The answer has to be in some cosmological event that occurred some time in the past. When I'm teaching modern physics, we make the connection of nuclear physics to what goes on outside the earth's narrow confines.

4. How can we make the biggest difference in the lives of our students?
I think we do it all the time, and it's not a deliberate thing. Teacher Christa McAuliffe, who was a crew member on the Space Shuttle Challenger, was asked how she fit into space exploration. Her reply was "I touch the future. I teach." That's what we do. We touch the Future. We teach.

5. Why did you become a university professor?
I started out as a chemical engineer. Once I had time to fill before my first appointment

with my graduate program advisor and wandered into the nearby Physics Building. It was a Saturday afternoon and the building was pretty quiet. There was a man sitting there working in an office at the far end of a dim corridor. We sat down and talked for a long time. He eventually offered to convert my assistantship from chemical engineering to physics. Later, as a graduate student, I had him as a professor for quantum mechanics and he was fantastic. I just thought, "I'd like to be like that!" So here I am.

Facilitating Information Fluency through Blogging Assignments—Part I: Faculty View
Donna Malvey

Donna Malvey is an Assistant Professor in the Department of Health Professions. She received her Ph.D. in health services administration from the University of Alabama at Birmingham and her master's degree from the George Washington University. Her research interests include health care strategy, human resources management and labor relations, and leadership. Her most recent published research is, "The Retail Revolution in Health Care: Who Will Win and Who Will Lose?" with Myron D. Fottler, *Health Care Management Review 2006*, vol. 31, no. 3, 168-178.

In collaboration with UCF librarians at the Cocoa campus, Barbara Alderman, Allison King and Andy Todd, I utilized a Course Innovation Project workshop to integrate corporate/business blogs into a 3-credit hour graduate online course, HSC 6636, Healthcare Issues and Trends. In doing so, I expected to facilitate information fluency. Increasingly, corporate blogs are being used by employers to gather, analyze, and communicate information externally with the public, especially customers, and internally with employees.

The purpose of this article is to share with you my insight and perspective concerning this course innovation. Integrating blogs into the course energized and engaged the students. Collaborating with the UCF librarians helped to produce a higher quality educational product and to assure that information fluency goals were achieved.

1. Why did I take the students out of WebCT and into the blogosphere?
- Discussion boards serve many useful purposes in WebCT, and I did not abandon them. I simply provided students another opportunity to engage in discussions that were not purely academic.
- I had observed that student discussions were becoming artificial and academic. Students "played it safe" and took few risks, posting just enough information to meet the requirements for the assignment.

- Students did not perceive the relevance of what they were learning in terms of their future employers.
- Student discussions were not evidenced-based. Student postings tended to be subjective, based on opinions and feelings, none of which were supported by facts or objective data.
- Discussion assignments were not meeting my objectives for achieving information fluency. Students were not gathering information beyond Google searches. As such, their analysis was limited, and students appeared unable to apply any new information.
- There was little two-way communication occurring in student discussion boards, and there was limited connection with the real world beyond the classroom.
- The students were becoming complacent and probably bored. They asked few questions. I found no evidence of excitement or intellectual inquiry even though healthcare is a dynamic field of study.

I concluded that the students had found their comfort zone in discussion boards. Because students use them so frequently in online classes, they had established patterns: "click this" and "do that." They had become too passive, almost as if they were on automatic pilot. They needed to be challenged. If I had confronted a similar situation in a face-to-face class, I would have livened things up with an exercise or activity. Was there a similar opportunity to do so in WebCT? I integrated the blogs in my online course. In doing so, I moved all of us out of our comfort zones.

2. Did the course innovation work?
- The students fairly quickly transformed from passive to active learners. To survive in the blogosphere, students had to engage. They had been catapulted into the real world. Students were able to observe firsthand that what they were learning in the course had relevance and utility beyond the classroom.
- They also were publishing on the web, which meant that they were more attentive to their writing.
- I transformed, too. My authority as an instructor became quieter, shifting from telling the students, "do this, then that," to actually guiding and mentoring them in the experience of learning.
- The students became expansive and were sharing with everyone. Whatever they discovered, they shared—from newly released government documents to web resources. I received "joyful" e-mails from students who began to exhibit their passion for the subject.
- There was excitement online, and it was distinct and palpable.
- Student blog postings were superior to anything that had been posted in a discussion board.

3. Why did I bring the UCF librarians to the table?
- First, they are critical in achieving information fluency. They instructed students in how to access (gather) information using a library module. They moved the students beyond Google research by providing them with information technology tools.

- Second, because they functioned as librarian consultants, we simulated a real world "work project" environment. As consultants, they offered students an alternate environment to test their ideas and plans, safe from critical feedback of either their instructor or classmates. Being able to do so and also to make mistakes privately was important. The outcome was that students learned to assume and evaluate risk differently. Instead of playing it safe, as they had done in discussion boards, students took more chances and were much more creative in their work product for this course.
- Students also learned to establish and maintain a professional relationship with their librarian consultants.
- I found an opportunity to collaborate with my faculty library colleagues. We have subsequently completed the IRB process to enable us to further study the impact of blogs in the online classroom and to publish our findings. We also have had a proposal accepted for the *12th Sloan-C International Conference on Asynchronous Learning Networks*.

4. Were there any downsides?

- Everyone was on the learning curve, including me. This was unsettling but unavoidable and necessary according to the rudiments of change.
- Blogging is time-consuming and addictive! I was required to monitor the blogs weekly and evaluate them, too. They were so fascinating that I found myself spending far more time reading and posting to them than I had planned.
- There were also technical difficulties. One of our student blogs was shut down briefly by blogger.com. Apparently, the name for their blog gave the impression that they were selling something. However, the students resolved the matter quickly, before I had time to get involved. They became experts in blogging and were quite pleased with themselves.
- Student anxiety reached high levels in the weeks preceding the beginning of the blogging assignments and also in the first week or two of the actual blogging. High levels of student anxiety unsettled me. I was unnerved by the level of self-doubt that some students exhibited. However, by week three, most students felt competent and successful and began to enjoy the assignment. A few students continued to complain in e-mails that we should return to student discussion boards—where "things" didn't go wrong and they were in control.
- At the conclusion of the blogging assignment, I received inquiries from students asking if I could revise the schedule and add a week or two to the blogging assignment. They did not want the blogging to end.

For more specific information on blogs and details on how we integrated the blogs into the course, including sample rubrics for evaluation, please go to the e-Faculty Newsletter at <http://www.cdl.ucf.edu/wordpress/efaculty>.

Facilitating Information Fluency through Blogging Assignments —Part II: Librarians' View
Andy Todd, Barbara Alderman, Allison King

Barbara, Allison, and Andy are UCF librarians who work in the Southern Region. They have been involved in providing library instruction and reference services for online classes since 2001.

The Southern Region librarians Barbara Alderman, Allison King and Andy Todd first participated in Dr. Donna Malvey's WebCT class in Fall 2005, when we posted information on the discussion board. One semester later, our role had expanded tremendously. When Dr. Malvey approached us about participating in the blogging assignment as part of a Course Innovation Project (CIP), we all jumped at the opportunity.

5. Why did the librarians want to participate in the CIP and blogging assignment?
There wasn't much question that, when asked to venture into uncharted waters of providing library service, the Southern Region librarians would be first in line.

- It would allow us to take our collaboration with teaching faculty to a different level and give us a unique chance to work with other Southern Region faculty and the Faculty Center for Teaching and Learning.
- It would give us an opportunity to see if students, who had completed our library module, could apply their knowledge in a workplace setting using reliable sources of information.
- As librarians, we love learning and none of us had much (if any) experience with blogging; by participating in the blogging assignment, we would be able to use a new tool with students in a collaborative way.
- It would take us out of the library and allow us to share the students' experience of applying what they were learning for their jobs.
- It would force us to redefine ourselves and identify new ways to guide students as they learn to master information fluency skills.

6. What did the librarians do to prepare?
Since the subjects for the corporate blogs and blogging itself were new areas for most of us, we needed to complete some preliminary preparations.

- Each librarian already had access to the WebCT course, including the discussion board and course mail, and we all reviewed the postings on the assignment provided by Dr. Malvey.

- We divided up the five blog groups; two librarians supported two groups each and one librarian supported the remaining group.
- We all researched our respective topics to be better prepared to provide assistance.
- We all investigated the process of how to create, respond to, and edit a blog.
- We shared articles amongst ourselves on blogging, especially on corporate blogs.
- And, of course, we participated in the CIP workshop.

7. How were the librarians involved and what did they observe?

- Each librarian used course email for introductions and followed up through course email or personal email, depending on group preferences.
- We posted general announcements on the discussion board, such as the deadline for blogging assignments and other information that would be useful to all groups.
- Each librarian read the discussion board and blog postings to gain insight on blog group activities. We issued suggestions regarding blog format and how to improve content by including credible sources. Search strategies were provided to help the students locate relevant information sources.
- For students who tended to use just one source for a posting; e.g., newspaper articles, we contacted them and commented on the source, and emphasized the need to use a variety of sources; e.g., associations, organizations, or scholarly journals.
- We provided assistance to ensure complete and accurate citations. We reminded the students that the blogs were a public forum and that they wanted anyone reading their posting to be able to locate sources from the citation. Students were encouraged to supply as much information as possible about a source, including an in-text citation, author, article title or website heading, date the site was last updated, website title, and a specific website link or URL. APA format websites were provided for reference.
- We also provided guidance on the difference between biased and non-biased sources and on evaluating web resources, reviewed copyright compliance, and supplied information on the difference between plagiarism, paraphrasing, and using quotations.
- We noted the impact of moving the students out of the classroom and into the public arena where they were health services administration professionals writing about topics of current interest in their field. Most of the students quickly grasped the need for reliable information, accurately quoted. They responded to our suggestions, appeared to appreciate our input, and became more cautious and more resourceful in their information choices.
- On the whole, as blogging continued over the weeks of the assignment, quality improved.

8. What lessons did the librarians learn?

Given that participating in a "corporate blog" was a new experience for us as well as for the students, we learned a lot during the exercise.

- For everything except the blogging assignment, only one librarian, Andy Todd, was involved with the class. The other two librarians joined the class when the assignment started. Consequently, these librarians and their student groups were slower to reach a desired working relationship.
- Most students appeared to communicate more freely offline using personal emails rather than within WebCT.
- Many students required more help than expected in providing complete and accurate citations for their postings.

9. What do the librarians recommend?

Following only a single semester of involvement, we still have some ideas.

- Librarians should introduce themselves to their blog groups weeks before the assignment actually starts.
- Librarians should concentrate on serving as consultants and advisors, avoiding the tendency to judge.
- Librarians should post additional APA citation format information before the assignment begins; we have already started expanding the APA section in the online library research module used by several WebCT classes.
- Librarians should be prepared to provide some tips on establishing a corporate blog and setting parameters.
- Librarians should visit other group blogs and make postings to stimulate discussion.

Participating in the CIP workshop and the resulting corporate blog assignment with Dr. Malvey has been a valuable and enjoyable experience, and one for which we are extremely grateful.

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myUCF Grades is a program to post grades electronically and is fully optional.

- myUCF Grades is FERPA-compliant; students can only see their own records.
- myUCF Grades is a pagelet that can be added to the myUCF Portal.
- Scantron results from Test Scoring will be automatically uploaded to your courses in myUCF Grades.
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- It is possible to upload and download grades using comma-delimited (.csv) files.

For more information, please visit <www.fctl.ucf.edu/tresources/myUCFgrades>.

How to Say No
Tison Pugh

Tison Pugh is an Associate Professor and Director of Undergraduate Studies in UCF's Department of English. In 2004 he won an Excellence in Undergraduate Teaching Award from the College of Arts and Sciences; in 2006 he won a Teaching Incentive Program Award and a Scholarship of Teaching and Learning Award. With Angela Jane Weisl of Seton Hall University, he is currently co-editing a pedagogical volume, *Approaches to Teaching Chaucer's Troilus and Criseyde and the Shorter Poems.*

We've heard it all before, and until the day we retire from teaching, we'll hear it all again. Too frequently students approach us with the countless modern variations of "my dog ate my homework" —from an alarm clock failing to a love affair disintegrating, from a computer crashing to a grandparent dying. The range of these excuses, from the pedestrian to the truly pitiable, demands that teachers be prepared first to show sympathy and empathy, but then for a decision to be made: will we allow students to make up the missed exams, to turn in the late essays, to be excused for their lapses in terms of their classroom responsibilities (which, we are assured, will never, ever happen again)? With their fawn-like eyes pleading for mercy, it can be very difficult to say no.

In most instances, however, I believe that it is unfair to the other students in the class to say yes to one student's pleas while expecting the rest of them to meet the course requirements. For example, consider the issue of giving a grade of Incomplete to a student lamenting about life's hard knocks. While this option is necessary in extreme cases, it is fundamentally unfair to the other students the vast majority of times. Why should one student be given the luxury of another week, month, or year to finish a course, when others were compelled to finish it on time? Circumstances may necessitate such an option when students experience their own version of the trials of Job, but surely these situations are rather rare.

As students and teachers, we are responsible for creating a learning community in which all students can succeed, but also one in which students must ensure that they do not fail. A university is not like the old game show *Queen for a Day*, in which the contestant who narrated the most heartbreaking and maudlin of tales won a washing machine to compensate for her misery. We should not assess students' proficiencies in our disciplines in any relationship to the lamentable vagaries of their personal lives, but rather in sole relation to their academic work. For these reasons, I am more likely to say no to a student request for special treatment than to say yes.

Students may not appreciate this decision, but I have found an effective manner of explaining my reasons for rejecting their pleas. When I couch my refusal within a context of rigorous fairness, in which all students must be held to the same exacting standards, they typically understand my decision, even though they may not appreciate it. For the students who miss an exam or fail to turn in an essay, I simply point out that I would have to offer all students in the course this option in order to be fair to everyone, and I cannot allow everyone to retake an exam or to hand in their papers when they please. The great irony of fairness in this instance is that it is a concept in which most students firmly believe, and they often continue to appreciate its application, even when it works against their particular interests. The concept of rigorous fairness puts the focus on the remainder of the class who has met their responsibilities rather than on the one or two students who have not; as a teacher, I confess that my loyalties lie primarily with students who do not need excuses to achieve their goals. Also, I applaud UCF for its grade forgiveness policy, and I always encourage students who fail my class due to personal reasons to take advantage of this policy when their personal lives prohibit them from successfully meeting course requirements.

Rigorous fairness provides an effective method of saying no to students, but please note that I do not address the perhaps more challenging question of when to say no or indeed, when to say yes. Each pair of pleading eyes comes with its own unique set of circumstances, and one of the challenges of teaching is separating the students with trivial excuses from those with truly life-wrenching experiences—chronic and debilitating illnesses, abusive relationships, and the hardballs that life throws at us when we least expect them. I have indeed said yes to numerous students over the years, but I believe that saying no, when applicable and fair, teaches vital life lessons about the importance of deadlines and commitments. Unfortunately, life's adversities will whack us all at one time or another, but maintaining our commitments while overcoming personal hardships provides us the opportunity to prove our mettle as scholars, students, and teachers.

GTA Certificate Course

Registration due date:
January 5, 2007

Please encourage your graduate teaching assistants to enroll in UCF's non-credit certificate course, particularly if they are instructors of record. This certificate also meets the requirements set out by Graduate Studies for GTA Training. The class will meet on Fridays (January 12th to April 6th) from 1:30-4:30. The Spring 2007 Certificate course will offer a stipend of $500 to qualified individuals who complete the class requirements. Admission to the course will be granted on a first-come, first-served basis. Online registration can be found at: <http://www.fctl.ucf.edu/events/GTAprograms>.

Incorporating Journals and Portfolios in Third-Year Composition
Martha Garcia

Martha Garcia is an Assistant Professor in the Department of Modern Languages & Literatures. She is a UCF alumnus and returned as a faculty member in 2005 from Vanderbilt University where she completed her Ph.D. Her teaching and research interests include the female voices within the literature, the dialogue within the text, and the theological aspects of the narrative.

Spanish composition classes require interactive classroom dynamics, reading strategies, and the presence of conversation, which is a valuable piece for engaging the students in the writing process. However, the techniques and methods, as I will explain later, can be transferred to any composition course. Let me share my experiences with you.

One of the components that I included in my syllabus for SPN 3420 (Spring 2006), Spanish Composition, was the development of a portfolio. The textbook selected, *Composición práctica: Conversación y repaso* by Trinidad González and Joseph Farrell, includes at the end of each chapter an exercise to do on the Internet and in a journal. At the beginning of the semester, I provided the students with the guidelines for the portfolio and how to use the Internet and journal sections in the textbook.

Students' Portfolio and Journal
As part of the assignments, the students complete the Internet exercises specified in each section. Then, they write in the journal their reflections about their discoveries, obstacles, fears, and achievements in learning a second language. I strongly believe that the journal can be used in any course because it promotes active participation by the student and a self-exploration journey. It is a personal and different experience for each of them.

I met individually with each of my students at the end of the semester to provide them with feedback before submitting the final product, the portfolio. We went over the materials and journals together. I provided them some pertinent suggestions, observations or comments to guide them during the preparation of the materials, the writing of the journals or the Internet assignments. I created a rubric so I could measure the outcomes and at the same time be able to grade them according to the initial criteria. The results were beyond my expectations. A few of my pleasant surprises included a genealogical tree elaborated in Spanish, short stories, invitation cards, professional and personal letters, and advertising designs written in Spanish, using the structure and guidelines that we learned in class while practicing the target language.

Developing Writing, Reading & Analytical Skills
Regarding activities, I created a variety of writing assignments using the textbook themes to put into practice the concepts learned and to motivate the students to reach their maximum potential. I used videos, mini-research assignments, newspapers, magazines, and Internet web sites in order to develop analytical skills in conjunction with language acquisition. The students were required to include all of these materials in their portfolios and to organize them according to personal style and creativity.

Assessment
I designed a rubric to grade the presentations and I used a rubric by Professor Julie Pomerleau for the compositions. In this way, I was able to keep a log of the improvement of each student's writing skills from the beginning of the semester to the end. The results proved that each student was able to improve his/her ability to investigate, analyze, read, organize ideas, and finally to write in the target language.

Instructors' Portfolio
Professor Anne Prucha and I organized a portfolio, which contains syllabi, activities and rubrics (that we have been designing and/or using) as a database to which any instructor teaching this course in our department can have access to the materials. This is a work-in-progress because our ultimate goal is that, every semester, new innovations will take place and new materials will be added. These class activities can be implemented in any course that has a writing component, including English and ESOL.

A Final Thought
After reflecting and meditating on these implementations, I have concluded that when I find a common ground—where I learn what might be of interest to my students and how I can connect that interest with my course objectives—my expectations and theirs, too, are met. As a logical consequence, the students' motivation and performance increase, and I can measure, evaluate, and be the first witness of their progress. In addition, the portfolio and journal constitute tangible objects that they can take with them after the course is finished.

I do not know if my students realize how profound this process is and what it means, but I am sure, one day when they have to prepare a portfolio, write a document, a letter or a report as part of their jobs, they will be glad they did it, and I will have done my job successfully.

"Mathematics... is indispensable as an intellectual technique. In many subjects, to think at all is to think like a mathematician."

—Robert M. Hutchins

An Alternative Method to Address the Overwhelming Variance of Information Literacy Levels of Students: Cyber-TA
Tadayuki (Tad) Hara

Tadayuki (Tad) Hara is an Associate Professor in the Rosen College. After completing his Ph.D. at Cornell, he taught at the School of Hotel Administration there. His previous career includes Senior Manager at Industrial Bank of Japan where he spent 17 years (currently Mizuho Corporate Bank), and Assistant Director of Middle Eastern Peace Process at Japanese Foreign Ministry. His research interests include quantitative economic impact modeling in the field of regional science, peace science and tourism studies with emphasis on financial aspects.

Background: Challenges
Upon arrival to UCF last summer, I had to prepare and teach three courses without any teaching assistants. I did not want to dilute my course content, which includes advanced level modeling in MS-Excel including a series of matrix computations. It was my mission to teach undergraduate students here the fun of economic impact modeling. Another set of classes were basic level corporate finance classes, in which combinations of basic financial knowledge and practical programming skills in Excel would increase the likelihood of students' success in their managerial careers.

One thing that I did NOT know was the students' skill levels had an unexpectedly huge variance, from intermediate level to absolute zero. My syllabus did not specify prerequisites, which meant that I had to teach many students how to use MS-Excel before teaching the content of either economic impact modeling or financial modeling.

How can you teach students who have few PC skills to program some formulas in MS-Excel so that they can calculate economic impact analysis without wasting your precious class time? How can you cater to imminent needs of many students who have little knowledge of financial programming, without boring smaller numbers of those who already have basic skills? You have to teach students how to create 10-year projections of a proposed hotel investment and let them learn the effect of change in market interest rates on ROI simulations, while telling one group of students things such as, "NO, your Excel sheet is not broken, you just have to type '=' before inputting formulas." How can I meet those needs without demanding internal resources, and keep enough hours for myself to sleep for sanity?

Identification of Problems
Compared with students at my previous school, Cornell, I felt the biggest problem that I had to address immediately appeared to be the huge variance of quantitative computer skill levels, or information literacy, which is not simply a web-surfing ability. Just as in the services industry, I believe it is the variance, not necessarily the absolute level, of skill sets which spoil the reputation of the brand. From a recruiter's point of view, variance of skill levels would be more troublesome than seeing a small number of super-performers. A reputation tends to be set around the lower variation, and not higher ones, as told by several corporate recruiters who visited my previous school. Companies are surely expecting minimum levels of computer-spreadsheet skills from students who are marketed as "management candidates." For example, an employer expects students to identify trends, problems and specific solutions, given the last 12 monthly operating results of hotels/restaurants in the region, no matter which micro-major they are in, such as accounting, marketing, sales, food & beverage, human resources, event planning, etc. In other words, minimum levels of quantitative computer skills are required no matter which hospitality business area students wish to pursue, and enhancing our product (students) consistency would serve to strengthen this school's reputation and brand recognition.

Creative Solution: Experiment with Technology
I decided to implement a new method that I had experimented with at my previous school, which I call "Cyber-TA." Cyber-TA is available online 24/7 at any place as long as students have a high-speed Internet connection, which is offered anywhere here on campus. Cyber-TA displays and explains the MS-Excel screens from a primer's level, such as how to calculate basic math functions, then moves students up to basic matrix operations, such as addition, subtraction, multiplication, and then to inverse operations. In a finance course, students learn how to build cash flow projections, amortization tables, income-based appraisals and investment analysis methods, such as IRR and NPV, outside of my class hours, so that I can take them to analytical discussions in the class. Cyber-TA speaks to students as it shows precisely how to program, and Cyber-TA never stops working, with enough patience to explain the same concept as many times as each student wants.

Thanks to Cyber-TA, I can spend my class time on important conceptual content, such as relevant articles in the *Wall Street Journal*. I express my indebtedness to the flexibility of the IT team at Rosen College who supported my experiments.

Great Return on Investment
There was no marginal cost to copy myself as a Cyber-TA, as I already had the required software ("Snag-it", about $30, and "Real-Producer Basic 10", free download) and hardware (a headset with microphone, about $10). While monetary costs are small, you have to invest time to create Cyber-TA. First, you capture your PC screen and your verbal explanations; then you have to digitize the captured file to make it smaller (also known as "streaming"). You will have to spend some time to learn to create those, but then you can surely save more time because many questions, particularly, "how to program this or that in Excel?" are pre-empted by your sleepless clone, Cyber-TA.

ASSESSING YOUR TEACHING EFFECTIVENESS AND STUDENT LEARNING
Michele Montgomery

Michele Montgomery is a Lecturer in the Department of Physics. She received a B.S. in Nuclear Engineering from Pennsylvania State University, a M.S. in Physics from University of Alabama and a Ph.D. in Physics from Florida Institute of Technology. She started with UCF in the Physics Department in 2004. She lectures to large classes on general education Astronomy. She also lectures to smaller student bodies on astrophysics, galaxies, cosmology, and offers a new lab at the Robinson Observatory in Spring 2007 called Astronomy Techniques. She is on the Robinson Observatory Committee and is assisting on the removal of the old telescope and helping with the installation of the new telescope. She works with a RAMP student on constraining the age of a brown dwarf binary system and another undergraduate researcher on galaxies as seen in multiwavelengths.

Does this sound familiar? You ask your students to come prepared to the next class meeting to discuss a topic, take a quiz, complete an assignment/task in class. The day comes and you are ready, but, alas, your students show up unprepared. Now you have to decide whether you should reassign the task to the next class period, give them the grade they deserve, or just drop the activity altogether and wing the class. If you reassign the task, you could be accommodating the students' laziness and thus the students do not learn to accept the consequences of their actions. If you give them a poor grade, then the poor grade may not reflect their knowledge of the subject. Further, this poor grade may fuel negative feelings that may be eventually reflected in your student evaluations. If you drop the task altogether, then you cheat yourself out of time well spent on creating the activity and you cheat the students out of another learning activity. Whatever your decision, your choice is a temporary fix as it does not solve the problem.

To help combat a student's lack of preparation for class, ensure the syllabus lists
1. work required,
2. weighted percentage of the total grade,
3. due dates,
4. rubric,
5. references, sources, and/or excellent examples of previous work.

But what if you do provide this information on your syllabus and your students are still coming to class unprepared? For example, your exams are listed on the syllabus but grades are poor. Or perhaps you require class participation for a grade as listed on your syllabus but students come to class not having read the assigned work. Well then, maybe you need to re-evaluate your learning outcomes, course competencies, course competency indicators, and/or teaching methods/learning activities for your class!

Learning Outcomes: What should your students be able to do as a result of successfully completing your class? Focus your thoughts on the student's future performance in society after graduation from UCF. What act must your students do? Can the act be observed? Can the act be measured? Examples include having students communicate effectively, having students apply theories to solve problems, etc.

Course Competency: What knowledge and skills do the students need to learn or hone and then deliver in this class? "Knowledge" examples include think, judge, communicate, act. "Skill" examples include identify, prepare, journalize, detect, maintain, practice, use, process, operate, record, calculate, prove, reconcile, verify, post, allocate, acquire, select, sort, perform, complete, review, apply, plan, etc. Other more subjective examples of course competencies are creativity, teamwork, partnering, visioning, ethics, values, stamina, stress resistance, behavior, confidence, and personality.

Course Competence Indicators: What is the indicator level of learning outcome and course competency? Examples include having students achieve at least 70% on assessments, produce a refereed-quality paper debating at least three arguments, balance a checkbook, create a temporal portfolio, journal, or log, and build a working model.
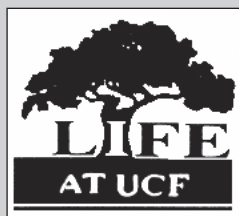
Now you say that you do have your outcomes, competencies, and indicators listed on the syllabus but student exam grades, papers, portfolios, models, etc. are still poor. Well, think back to how many teaching methods are given by you and how many learning activities are practiced, rehearsed, and performed by the students prior to these exams, papers, portfolios, models, etc. that count for grade. Maybe the practice activities need to be created or revised.

Teaching Methods/Learning Activities: To help achieve learning outcomes and core competencies, establish teaching methods or learning activities that incorporate verbs such as act, apply, define, find, gather, evaluate, restate, show, use, etc. (from "Bloom's Taxonomy," found at <http://faculty.washington.edu/krumme/guides/bloom1.html>). Give the students a more exciting way to learn and they may come to class more prepared! Examples include
- At the beginning of class, list a topic on the board that comes from the assigned reading for students to discuss amongst themselves while you prepare the lecture. Have students rotate whom they engage with each class. To engage the students in a conversation with you, ask, "What questions do you have?" and not "Do you have any questions?" Also, you might solicit future topics from your students.
- Give a clicker quiz as a review to an exam but pick up the pace, that is, make a game of the review and give 20 questions in 10 minutes.

- Give an open quiz, especially if you give many quizzes. Give the students one-half the time normally given to work on their own and then open the floor for students to engage and debate those questions not well understood.
- Give students a choice to put more of their personality, ideas, and thoughts into the assignment. One method is to have students gather, comprehend, analyze, and evaluate a dozen newspaper articles on a particular subject and then have the students synthesize one parent article that proposes their solution to a particular problem (e.g., global warming), using the other articles as reference.
- Engage the students in bonus points by attending an event or place of work applicable to your course that reinforces learning outcomes.
- Select the best students as future SARC tutors and send your students for exam reviews to SARC.
- Form teaching teams within the class by using the best students to volunteer and mentor other students.
- Assign student(s) a number and upon that number being called, allow the student(s) to pick a topic for the entire class to perform, act, review, etc.
- Have the students perform small and quick demonstrations at their seats like solving problems, measuring with their hands, making facial expressions, act out laws such as Newton's Laws, complete mini-labs, etc.

After identifying and solving for any weaknesses in your syllabus and in your teaching methods or learning activities, student attendance and performance should increase. Further, your daily results and your overall course results should also improve. I teach Astronomy, a general education lecture class that involves as many as 800 students per semester. The negatives on my course evaluations center on the lecture format and the positives are the teaching methods and learning activities listed above that may help your daily classes and courses in the future.

Improving the Quality of Research Papers: A Dynamic Evaluation Model
Dr. Naim Kapucu

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There are always complaints among faculty for the low quality of research papers. There must be something to be done to improve the quality of student research papers. In this short essay, I briefly review the importance of research papers for my Analytic Techniques for Public Administration courses and describe a seven-step paper development and evaluation model designed to improve the quality of graduate student research papers. I describe a dynamic, systematic approach which is grounded in the effective teaching literature.

Completing research papers is a critical part of the Analytic Techniques for Public Administration courses. Hands-on experiential learning is the core of applied disciplines. Term-long research projects are a natural fit with the Analytic Techniques for Public Administration courses. Well designed project activities can comprise a substantial piece of the activities Master of Public Administration (MPA) graduates will be expected to perform in their career. Yet, research projects have a basis in learning and effective teaching theory. Term paper projects involve elements from each of Bloom's taxonomy of learning objectives (Knowledge, Understanding, Application, Analysis, Synthesis, and Evaluation) in a research design and analysis project, which I describe in the following two Analytic Techniques courses:

PAD 6700: Analytic Techniques for Public Administration I: This course provides a foundation in the theory and practice of applied research methodology in public administration. These methods are used in program evaluation, monitoring social programs, performance evaluation, and assessing the effectiveness and efficiency of their impacts. Topics covered include quantitative and qualitative methods, research designs, measurement, data collection, report writing, and ethical issues in applied research. This introduction allows the students to conduct basic program evaluation and policy analysis as well as to read and critically evaluate reported program evaluation or policy analysis. Beyond introducing the logic and methods of applied research, students also learn to think critically about some of the problems associated with applied research. Course activities include reading texts and academic articles, discussions, critique of academic journal

articles, and practical hands-on-projects, going through the complete process of defining a research question, designing a study, developing a survey instrument, and presenting the final proposal.

PAD 6701: Analytic Techniques for Public Administration II: This course is designed to provide an overview of analytical techniques and their applications to problems of public policy and administration. This course focuses on the use of quantitative analysis of data to support managerial decision making. These decisions include the analysis of public policy alternatives, the evaluation of public programs, the decision of administrative systems, and the optimization of the efficiency of public service delivery system. The course includes review of applied research design, introductory statistics, statistical inference, linear models, and extensive hands-on experience on the use of the statistical software for data analysis, SPSS. This course builds on prerequisite PAD 6700, Analytic Techniques for Public Administration I.

Besides other course activities, research projects are used in these two courses for a variety of reasons. Life-long learning is an important part of a university education system. Research papers are a widely used method in MPA programs. MPA students need to be trained to use the analytic techniques in their problem solving efforts. A Service-Learning project is designed to facilitate students learning about how applied research actually works in the real world. Yet, there is no better way to learn about applied research than to be exposed to it. Below are the steps in developing and evaluation research projects for my two courses.

Clear guidance for the research project or request for proposals (RFP): Without the dynamic evaluation model, waiting to the end of the term for the final project, we have a very good chance to be disappointed with the quality of the papers handed in by the students. The dynamic model clarifies the requirements of the end product over the term. Students will not complain about the vague course requirements with the implementation of the dynamic course evaluation model. Without clear guidance, the very first problem students will face is the identification of the good do-able project for the course. Students usually choose very broad topics. Students also have significant problems in terms of substantive issues. They have difficulty in identifying implications to policy and public management. A detailed guide for the research paper is made available in the course webpage. The guide is also discussed in detail in the class with the students.

Before the semester begins, I send out a Request for Proposal (RFP) inviting public service agencies of Central Florida to submit data analysis and evaluation projects for consideration for graduate students' research projects. Proposals are due two weeks before the term start and decisions are made in the first week of classes. Students will complete the service-learning data collection and evaluation projects for the two graduate level Analytic Techniques for Public Administration courses. In the first section of the course (Fall 2006), the students will develop a research proposal and a survey instrument for data

collection. In the second section of the course (Spring 2007), the students will actually conduct analysis of the data they collected using the data collection tool developed in the fall semester under my supervision and regular contact with participating public agencies.

Students form their research teams and pick a name for the team for the research project in the very first class. Then they pick a project among the projects submitted by the public service agencies based on the RFP. I received 27 research project proposals from the community agencies. The student groups need to pick the project based on their interest and career plans. We also have a discussion topic on the research projects where students can raise issues and share their experiences.

In addition to the purpose of establishing high quality standards, the detailed guide and the RFP serve a second very important purpose. The incidence of plagiarism has been increasing significantly. Many variables can cause cheating. There are several ways that instructors can reduce the likelihood of cheating. One of the most effective ways is to give assignments which require specific features. Very detailed specifications and the specific service learning project will reduce the cheating incidences for students, especially for undergraduate students. Besides the detailed narrative explaining the criteria for evaluation, students are also given the grading rubric for the first and the final draft.

Research Project Proposal: The students' research paper proposals are usually due the third week of class. After discussing the detailed specifications of the research project expectations, the second important milestone of the project, research project proposal, is discussed with the students. Selecting the project (topic) early gives students enough time to produce a high quality product by the end of the term. Collecting community-based research projects early in the term is valid and efficient from the student perspective in that it can save them considerable time in tracking down and developing a do-able policy and management-oriented research project. The proposal is a modest assignment and graded accordingly. The proposals are submitted using the course webpage. The feedback is provided online before the following class to all individual students. I remind students at each class meeting before the proposal, draft project, and the final project due dates of their imminent arrival. We also have several discussion sessions during the term on the challenges students face in their research projects. Most of the time, projects developed by the community organizations lack theoretical explanations. I ask students to identify theories for their projects and list several scholarly references for their research project proposals.

Journal Article Evaluation: Evaluation of a journal article is based on the problem definition, research questions, conceptual models, connecting problems to theoretical and empirical contexts, key variables, the type of research method and design, and data collection method, analysis, and interpretation, and linking findings to larger contexts (policy and managerial implications). The journal article is made available on-

line. Students submit their journal article critiques online as well. These exercises provide students an opportunity to see a well-written and organized professional publication before they submit their first draft paper.

Sample Proposals and Papers: Over the years, students have asked that I provide them sample papers, proposals, and topics from previous semesters. I do provide five sample papers online on the course webpage without the names of the students who wrote the papers. The sample papers are available to students starting the second week of the term. During class sessions we also discuss the organization, content, references, and citations on the papers. I use these sample papers along with the journal article to demonstrate how to use citations correctly. The papers are also selected based on the critical thinking presented in them. Students can move from the second level in Bloom's taxonomy to the top level of evaluation and synthesis with their research papers.

First Draft Submission: The first draft papers are usually due three weeks before the final draft. They are evaluated by the instructor quickly and provided back to the students online to use the evaluations and suggestions in their final draft. The first draft papers are graded based on the rubric developed and used for the final paper as well. Students are provided specific suggestions for improving the paper in each criterion. I also use the first class period after the first draft evaluations read by the students to discuss comment issues on the papers with them. Students are also encouraged to consult with me individually or in teams if they have questions about their first draft. All first draft evaluations are available on the course webpage for use in the final paper evaluation by the instructor.

Final Reports: One advantage that this seven-step paper development procedure has is that it reduces the incidence and extent of late submissions. The evaluation also increases the quality of the final papers. The seven-step procedure consumes a great deal of an instructor's time. However, by using the first draft evaluation and by comparing the final papers with students' performance in the first draft, grading time is significantly reduced. There is less verbiage with the final paper evaluation sheets because there are fewer suggestions for improvements. The final draft is due a week before the presentations.

Presentations: The presentation step is an important part of the dynamic evaluation processes. It gives an opportunity to showcase oral communication skills in addition to the writing skills students have already demonstrated with their final research paper. The presentation guide is provided to the students two weeks before the presentation. The presentation usually takes place in the final week of the term. Community organizations are also invited to the presentations. Refreshments are provided. It is a good opportunity for students to share their final product with their friends and the community organizations. It is also an integral part of the improving the quality of the end product.

I believe that the seven-step research paper development and evaluation methodology can significantly improve the quality of research papers. It is a dynamic method of evaluation that can evolve each semester based on the feedback from students. It can work for individual and team projects as well.

References:
Bloom B. S. 1956. *Taxonomy of Educational Objectives, Handbook I: The Cognitive Domain*. New York: David McKay Co. Inc.
Walker, M. 1995. *Writing Research Papers*, 2nd ed. New York: Norton.

UCF's Classroom Response System

Classroom response systems are innovations in communication technology that can improve student engagement and learning in large classes and facilitate classroom management tasks. They are also known as audience response systems, classroom performance systems, student response systems, or just "clickers." UCF supports the eInstruction Classroom Performance System (CPS), a versatile tool that can be integrated with online courseware to manage student performance in class activities.

The system uses radio frequency (RF) transmission to provide real-time interaction between a student's keypad and an instructor's computer. The RF system is reliable and easy to use. It interfaces with PowerPoint or other presentation software and can display histograms of student responses. Some textbook publishers bundle keypads with their books and offer the keypads at attractive prices.

Classroom response systems can improve students' learning by engaging them actively in the learning process. Instructors can employ the systems to gather individual responses from students or to gather anonymous feedback. It is possible to use the technology to give quizzes and tests, to take attendance, and to quantify class participation. The system provides game formats that encourage debate and team competition. Reports are exported to Excel for upload to the instructor's grade book.

Detailed information on classroom response systems and eInstuction's CPS, including step-by-step ordering and setup instructions, can be found at the Faculty Center's website at <www.fctl.ucf.edu/crs>.

Submissions

The *Faculty Focus* is a publication for all instructors at the University of Central Florida. This includes full- and part-time faculty and teaching assistants at all UCF campuses. Its purpose is to provide an exchange of ideas on teaching and learning for the university's community of teachers and scholars. It is envisioned that this publication will inspire more dialogue among faculty, whether in hallway discussions, departmental meetings, or in written articles. This represents an opportunity for faculty to reach their peers throughout the growing UCF community. The *Faculty Focus* invites you to contribute your ideas on teaching and learning in a short essay.

See the guidelines for submission online at <www.fctl.ucf.edu/focus/guidelines.htm>. Please send your submissions to *Faculty Focus*, fctl@mail.ucf.edu.

Faculty Center

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