



# INNOVATION ABSTRACTS

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## WEB-ASSISTED INSTRUCTION: STUDENT ENGAGEMENT IN LEARNING

Students in our Physical Therapist Assistant A.S. degree program are required to prove competency by demonstrating the ability to *apply* their knowledge of physical therapy. Therefore, cognitive learning objectives for my students are usually based on their attainment of skills at the *application* level of performance. Bloom's taxonomy (cognitive domain) describes application as the ability to relate and apply general ideas, procedures, principles, or theories to unique situations. This requires that I instruct using activities that match the level of teaching to the learning that I want my students to obtain, achieved by feedback lectures.

Feedback lectures require that students complete readings or other learning activities *prior* to participating in classroom-based activities. The classroom format de-emphasizes the traditional lecture and engages students in problem-solving activities that require more active learning behaviors. Typically, these classroom activities are designed to foster learning by integrating participants' prior experiences with their newly acquired knowledge about the subject.

To engage students in the classroom activities, they must have some fundamental knowledge of the topic to be learned. If your experience is similar to mine, the assignment of readings results in few students (if any) completing the reading until an examination is pending. Their lack of familiarity with the subject and passivity in the classroom then forces lectures about textbook content rather than discussion or activities that foster analysis of the material.

I turned to web-assisted instruction, replacing half of my traditional (i.e., classroom) instruction with learning activities that were Internet-based. I designed this through the WebCT platform in which most lessons were presented as text or PowerPoint that the students were required to review (in addition to traditional reading assignments) prior to attending lectures. WebCT

also provided an advantage of allowing testing to be completed on-line. The program's testing structure allowed scheduling so that tests were released for specific dates and times. I developed weekly quizzes that were 10% of the final grade. I required that quizzes be complete by the beginning of each class and that students complete assignments in a timely manner. Therefore, students were prepared to participate actively in classroom discussions.

The primary benefit was that students arrived prepared with *knowledge* from the lesson. This permitted me to devote most of the classroom time to guiding students in solving case studies. Case studies appealed to students as "real life" learning and allowed me to start my presentations at the application level and progress within Bloom's taxonomy. Other benefits derived from this teaching strategy include:

- Students received immediate feedback of the results of the quizzes (and I did not have to grade them).
- Hyperlinks in the lessons provided students with portals to other outstanding educational resources.
- Communication among students via bulletin board and individual mail offered the opportunity to receive clarification prior to class on the points they did not immediately understand. Students entered successive classes with more sophisticated knowledge and the ability to explore course content in greater breadth.
- Students attained a level of comfort and proficiency in the WWW—a medium that they will need to use in their physical therapy careers.
- Learning improved; aggregate final grades for the course improved by almost 10%.

**Jim Smith**, *Director, Physical Therapist Assistant Program*

For further information, contact the author at Naugatuck Valley Community College, 750 Chase Parkway, Waterbury, CT 06708.  
e-mail: [jsmith@nvcc.commnet.edu](mailto:jsmith@nvcc.commnet.edu)



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## PROMOTING THE HUMANITIES IN TECHNICAL CURRICULA

I recently asked one of my former students, who had just begun a new computer programming job, which of her college courses had been the most useful. She replied it was a world religions course and further explained that she had to work closely with a Hindu student on all her programming projects. The world religions course had helped her to understand and appreciate cultural differences and develop good working relationships. Unfortunately, few technical and business programs include arts and humanities courses. We overlook the importance of educating the whole student!

Most of my students are in college for technical skills that are rewarded with attractive salaries. It is logical to expect students to pursue career fields which pay well. However, many students often know little more than the average salary about their future career choices. They arrive at college with only sketchy information about the major ideas and events of human history, while their high-tech, media-driven culture changes rapidly and offers little information about smart living. What these students often lose by not studying the arts and humanities is the ability to reason, think critically, write clearly, and cultivate a taste for the mainstays of western culture. In short, they do not develop cultural literacy.

By creatively tailoring assignments, instructors can promote and teach cultural literacy in traditionally technical courses, combining the goals of business/technical and liberal arts education. For example, they can have students:

- discuss *The Death of A Salesman* in a sales management course;
- discuss cultural taboos for business travelers in foreign countries in a business course;
- write a paper about the three most influential biologists in history for a biology course;
- research Buddhism to better understand a case study on Hong Kong in an accounting course;
- attend a murder mystery play for a criminal justice course;
- study the origin of the zero in a computer studies course;
- analyze magazine ads for evidence of myths used as common selling points in different cultures for a marketing course;

- listen to Mozart while working on their computer programming assignments;
- assign a biography of Isaac Newton in an engineering or electronics course; or
- discuss cultural communication differences among international patients in a nursing course.

I have used this approach in my writing courses for several years with much success. I often assign subjects in the humanities to improve students' knowledge in areas such as world religions, geography, foreign customs, and history. My students typically find these assignments both refreshing and interesting.

Two-year students routinely wait until their last semester to take the required humanities courses and then approach these courses as something they *have* to take. However, many find that they enjoy these courses and learn valuable lessons about life that they are not exposed to in other courses. Students cannot become culturally literate taking only two or three liberal arts courses. These learning experiences should not be confined to humanities and liberal arts courses. Faculty across the curriculum should make the most of every opportunity to introduce and teach the basic lessons of cultural literacy to provide students with a stronger foundation for understanding the world in which they live.

**Phillip Bailey**, *Instructor, Communication and Humanities*

For further information, contact the author at Edgecombe Community College, 2009 West Wilson, Tarboro, NC 27886-9399.  
e-mail: baileyp@edgecombe.cc.nc.us