



# CIDLink:

Center for Instructional Development  
Notes from a CASTL Cluster Institution

Clayton State  
University

Volume 3, Issue 1  
January 2006

## Problem-Based Learning in Junior Level Nursing By Carrie Dodson

Much has been made of the image of today's professional nurses as autonomous individuals capable of critical, independent thought. Nursing programs should strive to



Carrie Dodson

produce nursing graduates who have the ability to explore options with an open mind, are articulate and have the capacity for developing appropriate decision-making skills. This study explores the use of problem-based learning strategies in nursing courses in achieving this goal.

The purpose of this study is to determine if adding problem-based learning strategies in a junior level nursing course increases student understanding of content material as opposed to the traditional lecture format of instruction alone. Nursing students have become increasingly diverse; therefore it is incomprehensible that the use of one teaching style will be beneficial for all types of learners. By introducing problem-based learning strategies in the classroom, it is hoped that students of various learning backgrounds will be engaged and the success of the class as a whole will be increased.

The project will take place in a junior level maternal-child nursing course.

There are about 30 students in the course. The students will be broken into groups of four or five. Case study sessions will be added to selected weekly classes. During these sessions which will be held during the last hour of selected three hour classes, groups will be presented with stimulus material that represent real-life clinical practice scenarios. The focus of the scenarios will coincide with the content material that will be covered in the upcoming week. For example, a case scenario on a person with pregnancy induced hypertension could be scheduled during the week before high-risk pregnancy disorders are presented. During this session students will be encouraged to use existing knowledge to formulate possible hypothesis or causal relationships. Further learning needs will be identified by the group and a plan will be devised on how to achieve this throughout the next week. The groups will reconvene the following week and present the results of their information seeking. Students will be graded on session participation and presentation.

The study will be evaluated by looking at unit exam scores of this class compared to scores from the previous semester in which only lecture format of instruction is used. The study will be further evaluated by examining student evaluations of the course and instruction.

## Michael Wood Hired as Instructional Designer

Would you like some fresh ideas on ways to teach your classes? What are the latest instructional delivery methods recommended for your field of study? Our new Instructional Designer, Michael Wood, can assist you with course evaluation and development. He holds a Masters Degree in Instructional Technology from Troy State and is a 2003 alumnus of Clayton State.

Michael comes to us from Chattahoochee Technical College where he has taught and assisted other faculty with instructional initiatives for almost two years.



Michael Wood

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### Spring Workshops

#### Beginning FrontPage

Jan. 25th 10:30 AM - 12:30 PM  
Jan. 26th 10:30 AM - 12:30 PM

#### Intermediate FrontPage

Feb. 22nd 10:30 AM - 12:30 PM  
Feb. 23rd 10:30 AM - 12:30 PM

#### Advanced FrontPage

Mar. 29th 10:30 AM - 12:30 PM  
Mar. 30th 10:30 AM - 12:30 PM

#### Creating Online Forms

April 5th 10:30 AM - 12:30 PM  
April 6th 10:30 AM - 12:30 PM

#### Beginning PhotoShop

Feb. 10th 10:30 AM - 12:30 PM  
Feb. 14th 10:30 AM - 12:30 PM

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**CIDLink**

Vol. 3, No. 1  
January 2006

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**Retention Tips for Faculty**

- Learn student names as early in the semester as possible.
- Instead of returning tests in class, have students stop by your office to pick up their papers and discuss any concerns they have about their test grades or college.
- Call and/or email students who are absent. Establish a "buddy" system in class where student pairs exchange phone numbers or email addresses to contact each other when they are absent.
- Schedule a personal interview with every student during the semester.
- Vary your instructional strategies during the semester; incorporate active and collaborative learning.
- Arrive to class early and be willing to stay a few minutes late to answer questions or chat with students.
- Encourage students to visit you during your office hours, and keep your office hours sacred.
- Ask students to recommend possible topics to discuss in class.
- Schedule appointments with students who are not doing well. Refer them to the appropriate support unit.
- Add a question on your midterm or final to determine whether students plan to drop out at the end of the semester. Send names to Dean of Retention.
- Participate in campus activities and encourage students to also get involved.

- Excerpt from 63 *Practical Retention Strategies*, Jefferson Community College

**Michael Wood Hired as Instructional Designer**

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In addition to providing instructional design support, Michael teaches workshops and provides software support for faculty and staff. Schedule an appointment

with him today to add more research-based delivery techniques to your lectures. Join us as we welcome Michael to the Center of Instructional Development.

**Using Problem-Based Learning in Introductory Statistics**  
by Catherine Matos

With problem-based learning, the learning is driven by "ill-structured" problems or cases. Students gather and apply knowledge, often from several disciplines in the process of finding a solution. In addition to mastering the traditional course material, students are encouraged through the PBL process to develop critical thinking and problem-solving skills. Collaborative skills are also developed, as students work on the problems in groups. The purpose of this project is to investigate whether PBL can improve student learning and performance in introductory statistics classes, Math 1231.



Catherine Matos

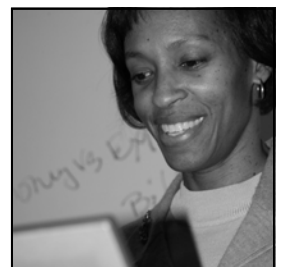
The project will include two sections of Math 1231. The students will be divided into groups of four. The groups will be given several PBL cases to complete over the course of the semester. Each PBL assignment will require the groups to determine what information they need to gather to

begin work on the case, and what skills they need to develop. The students will then use resources available in class (Internet, textbook, and instructor) to find the needed information and skills. The groups will be given some class time to work on the cases, while I float between groups to ask questions, check understanding and make sure that the discussions stay on track. Shorter-than-normal lectures will be interjected as needed during those class periods using PBL to fill in needed concepts as the students realize they need additional information. The groups will be expected to complete the PBL assignments outside of class (if needed) and then turn them in for evaluation. For each assignment, students will complete peer evaluations, to encourage significant participation from all members of the group. At the end of the semester, I will compare the scores of the students in these sections with a control group (Fall 2005 Math 1231 classes that I taught). The expected outcomes of the project are increased student performance and knowledge of course content as measured on tests, and increased teamwork skills and student engagement.

**Problem-Based Learning in Technology**  
by Christie Burton

The purpose of this research project is to investigate the extent to which students engaged in problem-based learning (PBL) demonstrate an increase in self-efficacy. Research has shown that familiarization with PBL, and the opportunity to practice it, improves students' confidence in their ability to handle challenges and find the resources they need in order to produce a product. Self-efficacy has also been shown

in the literature to be positively related to higher performance in school as well as persistence in career and learning environments.



Christie Burton

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## CID Resource Center Book Recommendations by Martha Wicker

*Creating Significant Learning Experiences* by L. Dee Fink discusses the significance of teaching and offers practical advice for transforming your courses to learner-centered experiences which span the taxonomy of significant learning. Fink provides a systematic integrated course design model which can be used in all disciplines.



*Discussion-Based Online Teaching to Enhance Student Learning* by Tisha Bender suggests a framework for rethinking learning theory from the online perspective. Bender offers innovative techniques for communicating in online courses, including suggestions for improving participation and overcoming common obstacles.



## Problem-Based Learning in Psychology When good brain goes bad: a modification of problem-based learning in a physiological psychology course by Antoinette Miller

One of the benefits of problem-based learning is that it facilitates the application of potentially abstract course material to concrete, "real-life" situations. Historically, I have required my Physiological Psychology students to work through case studies of various brain damage and other disorders, and this project will be an extension of this. Students will be divided up into working groups and assigned specific cases that are illustrative of a variety of perceptual, language, memory, motor, and



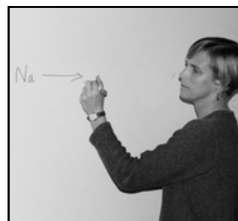
Antoinette Miller

other brain-based disorders. These cases will be modifications of actual cases reported in the literature, and deliberately written such that students will need to research and compile information on the relevant neurological systems in order to solve the problem posed by the case. Each student group will also be required to present its case to the class as a whole. Each group will complete a pre-test of content-specific knowledge prior to receiving its case, and then a comparable post-test will be given after completion of the case exercises. Comparisons can also be made across working groups on relevant test items, since each group will receive a case that is specific to a single system (i.e., vision).

## Problem-Based Learning in Environ. Chemistry by Susan Hornbuckle

Environmental Chemistry, CHEM 4110, is a course that lends itself well to problem-based learning due to the applied nature of the content. In Fall 2006, I will develop and use problem-based learning activities in this course to introduce the following eight topics: Global Warming, Ozone Layer Depletion, Oil Tanker Spills, Environmental Estrogens, Water Treatment, The Water Cycle, The Carbon Cycle, and The Function of Clay in Our Soil. The students will be randomly placed in groups of four and each group will be responsible for meeting outside of class to collect informa-

tion. The information collected will be reported by a variety of methods including PowerPoint presentations, poster presentation, concept maps, and essay papers. I hope to observe greater student interest in the topics and enhanced student learning as they become more active in their learning process.



Susan Hornbuckle

## Spring Workshops

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### Intermediate PhotoShop

April 7th 10:30 AM - 12:30 PM  
April 11th 10:30 AM - 12:30 PM

### Sedona

Jan. 19th 10:30 AM - 12:30 PM  
Jan. 23rd 1:30 PM - 3:30 PM  
Jan. 24th 1:30 PM - 3:30 PM  
Feb. 7th 11:00 AM - 1:00 PM  
Feb. 8th 11:00 AM - 1:00 PM  
Feb. 24th 9:00 AM - 11:00 AM

### Vista I

Jan. 19th 1:30 PM - 3:30 PM

### Vista II

Feb. 2nd 1:30 PM - 3:30 PM

### Vista III

Feb. 16th 1:30 PM - 3:30 PM

### Vista IV

Mar. 2nd 1:30 PM - 3:30 PM

### Vista V

Mar. 16th 1:30 PM - 3:30 PM

### Vista VI

Mar. 30th 1:30 PM - 3:30 PM

### Vista I - II

Jan. 20th 9:00 AM - 12:00 PM

### Vista III - IV

Feb. 3rd 9:00 AM - 12:00 PM

### Vista V - VI

Feb. 17th 9:00 AM - 12:00 PM

### Vista I - III

May 9th 9:00 AM - 3:00 PM

### Vista IV - VI

May 10th 9:00 AM - 3:00 PM

### Turnitin.com - Plagiarism

Mar. 27th 10:30 AM - 12:00 PM  
Mar. 28th 10:30 AM - 12:00 PM

### Retention Strategies

Jan. 30th 1:30 PM - 3:00 PM  
Jan. 31st 1:30 PM - 3:00 PM

### Microsoft Project

Mar. 15th 10:30 AM - 12:30 PM  
Mar. 16th 10:30 AM - 12:30 PM

### Beginning Excel

Feb. 6th 10:30 AM - 12:30 PM  
Feb. 9th 10:30 AM - 12:30 PM

### Intermediate Excel

Mar. 20th 10:30 AM - 12:30 PM  
Mar. 23rd 10:30 AM - 12:30 PM

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## Upcoming Conferences

13th Annual Georgia Conference on College & University Teaching at Kennesaw State University; 03/24/06 - 03/25/06.

17th International Conference on College Teaching and Learning in Ponte Vedra Beach, FL; 04/10/06 - 04/14/06; <http://www.teachlearn.org>.

Educause 2006 in Dallas, TX; 10/09/06 - 10/12/06; <http://www.edcause.edu>.

Instructional Technology Conference at Middle Tennessee State University; 04/02/06 - 04/04/06; <http://www.mtsu.edu/~itconf>.

New Learning Technologies 2006 Conference in Orlando, FL; 02/08/06 - 02/10/06; <http://www.salt.org>.

Lilly-East Conference on College and University Teaching at the University of Delaware; 04/07/06 - 04/08/06; <http://www.udel.edu/lillyeast>.

Scholarship of Teaching & Learning (SoTL) at Western Carolina University; 2/23/2006; <http://www.wcu.edu/facctr/sotlfaire>.

The National Educational Computing Conference (NECC) in San Diego, CA; 07/05/06 - 07/07/06; <http://www.iste.org/necc>.

The Scholarship of Teaching and Learning: The Cognitive-Affective Connection at Emory University at Oxford; 3/24/2006; <http://www.cal.emory.edu/>.

The Teaching Professor Conference in Nashville, TN; 05/19/06 - 05/21/06; <http://www.teachingprofessor.com>.

12th Annual Cooperative Learning Seminar in Jacksonville, FL; 05/15/06 - 05/18/06; <http://www.fccj.edu/sccl>.

## Problem-Based Learning in Finances by C.R. Narayanaswamy



C.R. Narayanaswamy

Problem Based Learning (PBL) can be viewed as a series of mini research projects that provide experiential learning for students. It is a systematic way to capitalize on the natural curiosity that students have by exposing them to real-life problems in which theoretical concepts are embedded. I found the PBL approach very innovative because it provides an avenue for professors to share their experiences and skills as researchers with students.

These are very interesting times to be teaching finance. A vast amount of finance and economic data are freely available

on the Internet. Recently, several academic computer software packages have been developed that use finance data for pedagogical purposes. Further, at CSU all students are required to have access to computers in classrooms, making it feasible to incorporate software programs in teaching.

The PBL approach can be merged with these resources to create a novel and appealing teaching methodology. However, currently, there are no clearing houses or sample problems for finance and business courses using the PBL approach. My objective is to first identify finance concepts for which it would be most appropriate to utilize the PBL approach and then to then develop problems that address these concepts. In preparation for my project, I plan to attend a five-day case writing workshop sponsored by the Richard Ivey School of Business at the University of Western Ontario.

## PBL in Technology by Christie Burton

*(continued from page 2)*

The study design is a mixed methodology, using the Generalized Self-efficacy Scale and individual journaling to capture perceptions regarding self-efficacy. Data will be collected at several time periods throughout the semester to measure change. The study will also investigate whether there is a difference in performance and self-efficacy perceptions between students that have completed Critical Thinking 1101 and those that have not, given that the possession of critical thinking skills is necessary for problem solving.



James Fries, Technology Support Specialist, assisting faculty during WebCT Vista workshop

### Spring Workshops

*(continued from page 3)*

#### Beg/Intermed PowerPoint

Feb. 27th 10:30 AM - 12:30 PM  
Feb. 28th 10:30 AM - 12:30 PM

#### Course Enhancement V & VI

Feb. 13th 1:30 PM - 3:30 PM  
Feb. 14th 9:00 AM - 11:00 AM

#### Course Enhancement VII

Mar. 27th 1:30 PM - 3:30 PM  
Mar. 28th 9:00 AM - 11:00 AM

#### Course Enhancement VIII

Apr. 10th 1:30 PM - 3:30 PM  
Apr. 11th 9:00 AM - 11:00 AM

#### Webpage Design I

Feb. 21st 1:30 PM - 3:30 PM

#### Webpage Design II

Mar. 21st 1:30 PM - 3:30 PM

#### Webpage Design III

Apr. 18th 1:30 PM - 3:30 PM

#### Learning Styles

Feb. 15th 10:30 AM - 12:00 PM  
Feb. 15th 10:30 AM - 12:00 PM

#### Using Games for Instruction

Apr. 12th 1:30 PM - 3:30 PM  
Apr. 13th 1:30 PM - 3:30 PM



