The Center for the Advancement of Teaching

TEACHING & LEARNING SYMPOSIUM
Bone Student Center
Illinois State University

Thursday, October 24, 2002
9:30 A.M. – 3:15 P.M.

PROGRAM

9:30 a.m.–11:00 a.m. and 12:15-3:15 p.m.
First Floor West Lounge - Posters on Display, Unit Displays, Food and Beverages and Door Prize Registration.

Posters on Review
A. *Illinois State Agriculture Student Contest: Crop Production and Marketing*
Robert Rhykerd, Agriculture
Douglas Kingman, Agriculture
Kerry Tudor, Agriculture
Bryon Wiegand, Agriculture

B. *Mapping Research Learning Among Students in Professional Academic Programs*
Ann Beck, Speech Pathology and Audiology
Yvonne Unrau, Social Work

Instructional Support Unit Displays
C. Center for the Advancement of Teaching/Opscan Evaluation

D. Faculty Technology Support Services

E. Milner Library

F. University Center for Learning Assistance

9:30 -10:45 a.m.

(1) Old Main Room—**On-Line Teaching**

Student Behavior in the Virtual Environment: Using Web-Based Quizzes to Promote Student Learning
Kathleen Bergquist, Social Work

Strategies for On-Line Assessment of Learning Outcomes
Temba C. Bassoppo-Moyo, Curriculum & Instruction

Implications of On-Line Teaching and Learning
Adel Al-Bataineh, Curriculum & Instruction

(2) Circus Room—**Research Reports**

An Interdisciplinary Collaborative Project
Klaus Schmidt, Technology
Maria Canabal, Family & Consumer Sciences

Beyond the Classroom: Out of Class Learning in Sociology
Kathleen McKinney, Cross Endowed Chair in SoTL

Identifying the Ideal Qualities of New Graduate Nurses for Curriculum Improvement
Caroline Mallory, Mennonite College of Nursing
Donna Redding, Springfield Memorial Hospital

(3) Founder's Suite—**Creative Approaches to Thinking about Teaching**

The Mid-Term Chat: Find Out What Your Students Think While It Can Still Do You All Some Good
Robert Broad, English
Gerald Savage, English

Under Construction: Using Metaphors to Foster Teacher Development, Expertise, and Reflective Practice
Theresa Steger, Curriculum & Instruction

I'm Not Afraid to Admit It: Theorizing Play in the College Writing Classroom
Robert Mawyer, English

11:00 a.m. -12:15 p.m.

(4) Old Main Room—**Keynote Speaker Dr. James Eison**
Active Learning: Research and Classroom Applications

Dr. Eison co-authored *Active Learning: Creating Excitement in the*

Classroom. Professor in the Department of Adult, Career, and Higher Education at the University of South Florida (USF), he served as the founding director of USF's Center for Teaching Enhancement from 1990-2002. Eison will lead an exchange of teaching insights and experiences on such questions as: What are practical ways to help students better understand why they learn more from active involvement than passive learning? What are cogent ways faculty can address commonly encountered problems in using active learning instructional strategies? What are time-efficient ways faculty can transform traditional lecture courses into ones that promote more active student involvement?

12:45 -1:45 p.m.

(5) Founder's Suite—**Talkback Session with Jim Eison**

(6) Circus Room—**Analyzing Media Sources**
 Enhancing the Quality of Student Research: Libraries and Critical Thinking in the Classroom
 Dane Ward, Milner Library

 What Are the Politics of the Nation? A Guide to Ideology in Political Opinion Magazines
 Erik Estep, Milner Library

 Selecting Articles for Analysis: An Instructional Innovation for COM 260
 Brent Simonds, Communication

(7) Old Main Room—**What Our Students Tell Us: A Discussion of Current Survey Data**

 Wendy Troxel, University Assessment Office
 Jyl Josephson, Politics & Government
 Linda Leinecke, Accounting
 Janice Neulib, English
 Jamie Young, University Assessment Office

2:00 -3:15 p.m.

(8) Old Main Room—**Learning Towards Mastery: Using Mallard**

 Anne Finn Bettendorf, Biology
 Jack Chizmar, Economics
 Valeri Farmer-Dougan, Psychology
 Sarah Walczynski, Laboratory for Integrated Learning & Teaching

Paul Yu, Mathematics

(9) Circus Room—**Active Learning Strategies**

*Active Learning in the Lecture Hall: The Use of In-Class,
Group-Based Activities*
Douglas Hardwick, Psychology

Active Teaching Strategies for Technical Courses
Richard Polanin, Illinois Central College

*The Benefits of Implementing Manipulatives into the Microbiology
and Immunology Classroom*
Beverly Barham, Health Sciences

(10) Founder's Suite— **The Use of Reading Objectives and Participation
Sheets to Assess Student's Preparation for and Participation in the
Basic Communication Course Panel**

Allison Rattenborg, Communication
Becky Erxleben, Communication
Tim Schlosser, Communication
Cheri Simonds, Communication

ABSTRACTS
(In alphabetical order by the last name of the first presenter/author)

Al-Bataineh, Adel *Implications of On-Line Teaching and Learning.* Paper presentation, session 1, page ?.

On-line teaching is steadily becoming a reality on most college campuses. Its growing use as a means for delivering instruction has made it possible for educational institutions to reach a large number of students. More important, education has become more accessible to a wide sector of people. While online instruction enjoys wide acceptance in certain quarters, its effectiveness is still in question. This presentation outlines some implications for using on-line teaching. Those implications are associated with certain teaching and learning skills such as ones ability to communicate effectively with others, the extent to which one uses active and collaborative learning strategies in the classroom, and ones application of reflective thinking.

Barham, Beverly *The Benefits of Implementing Manipulatives into the Microbiology and Immunology Classroom.* Paper presentation, session 9, page ?.

The "hands on" experience for students in the microbiology and immunology classroom is an essential part of the learning process. The cost of that experience can be a barrier for many

institutions. Implementation of manipulatives can help students understand the basics of both traditional and molecular based testing methodologies used in the laboratory without having to use scarce resource dollars for expensive reagents and instrumentation. By designing and constructing very simple manipulatives, students can apply theoretical concepts in a visual and "hands on" experience. Students are able to demonstrate and explain testing methodologies. Enhanced student engagement can be achieved through the use of manipulatives as a small group experience in the classroom. The use of manipulatives also allows for the theory of the "cutting edge" technologies to be taught without tapping already limited resource dollars. Students can be challenged to design next testing strategies for solving a particular problem in groups or individually. Recognizing that students have diverse learning styles and implementing different strategies to complement that diversity also assures that the next generation of students will have a strong foundation in the theory and application of laboratory testing methodologies without depleting precious resource dollars.

Bassoppo-Moyo, Temba *Strategies for On-Line Assessment of Learning Outcomes.* Paper presentation, session 1, page?.

The proliferation of on-line courses has become a major concern for some educators when it comes to whether they apply valid and reliable instruments to assess learning outcomes. Looking at an instructional strategy that has generally been viewed as less than reliable in eliciting valid performance measures, educators are beginning to look at e-learning in a more critical perspective. The issue of online testing and assessment has always presented problems, especially when one considers the absence of face-to-face interactions that are the cornerstones of traditional education. Generally, in addition to proctored tests and other measurement instruments, face-to-face interactions enable teachers to use informal observation techniques to gauge student response, obtain feedback, and progress toward prescribed goals. This lack of nonverbal cueing, a technique rampant in traditional delivery systems, poses a great challenge to online assessment. This presentation explores several reliable and valid approaches to online measurement and testing methods that are designed to eliminate such problems as plagiarism, technical problems associated with access, matching learners' and instructors' technical skill levels, learner isolation, and the impersonality of computerized assessment. The study looks at maximizing instructor control over assessment conditions and increasing online instruments validity and reliability.

Beck, Ann *Mapping Research Learning Among Students in Professional Academic Programs.* With Yvonne Unrau. Poster presentation, page ?.

Levels of self-confidence in research knowledge and skills among undergraduate and graduate students in speech pathology/audiology (SPA) and in social work (SW) who were taking research classes were compared to each other and to those of control students in both fields who were not taking research methods but were enrolled in practice courses. A significant three-way interaction of major by curriculum group by time of testing indicated that while SPA students in practice only courses had higher levels of research self-efficacy than did SW students, the gains made across the semester by the two groups were similar. For the students who were in research plus practice courses, however, the SPA students' level of research confidence was originally lower than that of the SW students, but by the end of the semester had

risen higher than that of the SW students. Potential explanations regarding curricular differences between SW and SPA and activities that appear to promote research learning are discussed in this poster.

Berquist, Kathleen Student Behavior in the Virtual Environment: *Using Web-Based Quizzes to Promote Student Learning.* Paper presentation, session 1, page ?.

Novice academics often approach classroom instruction with a naiveté borne out of a combination of inexperience and pedagogical idealism. Armed with the certitude that students will embrace curricular expectations with enthusiasm and a lust for learning, junior faculty can be disheartened with the realization that student engagement in and out-of-class is often marginal at best. During the first semester as a newly appointed professor, I was dismayed to realize that not only were students not completing assigned readings prior to class, but they seemed to be interacting with their text only during pre-test cram sessions.

This comparative study examined the efficacy of Web-based formative assessments in promoting student performance on in-class summative assessments. On-line quizzes were incorporated into one section of a foundational undergraduate Social Work class (N=25). Pre- and post-tests were administered to the experimental group (N=25) and a comparison group (N=25) which did not have access to the formative assessments. A comparison of pre- and post-test mean differences neared significance (p=.051), with students who took the Web-based quizzes only slightly outperforming those who did not. Instructor evaluations and final course grades were analyzed for triangulation purposes. Implications for the use of instructional technology to broaden pedagogical approaches are discussed.

Bettendorf, Anne Finn *Learning Towards Master: Using Mallard.* With Jack Chizmar, Valerie Farmer-Dougan, Sarah Walczynski, and Paul Yu. Panel presentation, session 8, page ?.

This panel will be discussing student learning towards mastery utilizing a technology tool called Mallard. Mallard improves student learning by allowing students to get similar yet different questions in order for them to spend more time on task, get more exposure to material, and gain instant feedback. Different grading strategies can be employed that encourage students to learn towards mastery of material. Students are rewarded for reaching higher levels of performance. They are given multiple opportunities to access materials. These materials are web-based and accessible from any internet-capable computer. Instructors also have the ability to improve student engagement by allowing instructors to present online quizzes thereby opening up class time for presentation of new material and discussion. Instructors have the ability to view detailed grade logs that not only show information on assignment outcome, but also on the assignment process. Faculty members, Staff, and the administrator of the Mallard program will present some of the different strategies used for the different departments on campus.

Estep, Erik *What Are the Politics of the Nation? A Guide to Ideology in Political Opinion Magazines.* Paper presentation, session 6, page ?.

Often, students in academic libraries have questions about the ideological origins of their sources. This paper is an example of a worksheet that students can use to determine the ideological content of political opinion magazines. The evaluation of the ideology of the opinion

magazines is based upon the authors' own content analysis and journals like Magazines For Libraries. The paper will give students a learning tool to better understand the political opinions that form around the issues of the day. For instance, if a student wants political opinions supporting a more aggressive, interventionist foreign policy he/she would know from looking at the guide. A paper handout will be passed out and also an on-line presentation will be given.

Hardwick, Douglas *Active Learning in the Lecture Hall: The Use of In-Class, Group-Based Activities.* Paper presentation, session 9, page ?.

This presentation describes a method of incorporating formal group-based activities into a large, lecture section course on Lifespan Development. Conceptually, the individual activities described are consistent with Chickering and Gamson's (1987) best practices in undergraduate education. Each is intended to promote active, engaged learning. At the same time, the fundamental structuring of each is intended to encourage the higher levels of thinking described in Bloom's (1956) taxonomy for the cognitive domain. In this approach, students are assigned randomly to teams of 8 or fewer students following the first week of classes. The teams then become the center for 8 original in-class group activities conducted over the course of semester. Importantly, each activity requires preparatory reading along with the completion of a written preparation sheet. These requirements insure that students have addressed the content on which the in-class activity builds. For example, in one activity students are required to read and review material on the earliest sensory capacities of infants. As part of their preparation students must also complete a worksheet that inventories these capacities. In the follow-up group activity, students work together in their teams to brainstorm and sketch out the basic design elements for a toy that would be appropriate given the sensory/perceptual capacities typical of an infant. At a prearranged time, discussion is stopped, and groups are randomly asked to send their spokesperson to the front of the room to describe their toys and give reasons underlying particular design elements. Instructor comments are used to reinforce student insights and clarify the course concepts addressed. This approach to in-class group activities has been implemented both in small breakout rooms and directly within the lecture hall setting. On-line student assessments have shown great satisfaction with and appreciation for the activities as a vehicle for learning.

Mallory, Caroline *Identifying the Ideal Qualities of New Graduate Nurses for Curriculum Improvement.* With Donna Redding. Paper presentation, session 2, page ?.

Curricula for baccalaureate nursing programs must reflect the expectations of employers and co-workers in the clinical setting as well as meet academic and professional standards. This study was designed to determine the ideal qualities of new graduate nurses with the long-range goal of improving nursing curricula to better prepare graduates for the workplace. A descriptive design was used to collect focus group and individual interview data from 44 registered nurses practicing in acute care settings in three urban Midwest cities. New graduates were perceived as lacking self-confidence, having difficulty prioritizing, having problems connecting with people, unable to cope, and unprepared to implement some clinical skills. However, nurses reported that graduates bring strong academic preparation and success-oriented attitudes to the work environment. Participants suggested increasing the quantity and quality of clinical time to better prepare graduates. Participants' perceptions of the ideal graduate include ability to prioritize,

adaptation, commitment to continuous learning, accountability, positive attitudes, and application of theoretical frameworks. Faculty from nursing and other disciplines may find the ideal graduate model provides a basis for assessing and revising curricula.

Mawyer, Robert *I'm Not Afraid to Admit It: Theorizing Paly in the College Writing Classroom.* Paper presentation, session 3, page?.

In spite of the ready admission that children learn when they are playing, as educators and parents we impede play when it comes time to "get down to business." This is especially so in college, which is where so much "serious" learning takes place. (This, despite the fact that college involves having more "fun" than many 17-21 year olds are equipped to handle!!!) College instructors are supposed to be diligent, assiduous, and studious, more at home in dusty, book-strewn offices and dim libraries than in the sunshine, out among the living, right? We are the arbiters of "higher education." We hold the keys to the kingdom, for a college degree, we all know, carries the promise of greater and better paying job opportunities, of graduate school or advanced education, and, more generally, of a "successful future." This is serious stuff. So once the time for real, important learning begins, playtime ends.

Or does it? For I believe that, at least in college writing programs, we have been struggling for years to incorporate play in our classrooms under the guise of the "de-centered" class environment. Proposed as a justification to get students more involved in their writing projects, the "de-centered" classroom is in fact a euphemism for "playtime." So why don't we just admit that this is what we're doing? Is it because of our lingering suspicions that nothing valuable, serious, or constructive can come of play? Or is it because upsetting this split between work and play causes us to reconsider our duties and responsibilities as teachers? Or is it because we simply don't know what play actually is? These issues—children at play, the work/play dichotomy, what we're doing in the classroom, and why we're doing it, and what goes on between teacher and student—coalesce, I believe, when we theorize "play" as the valuable, indispensable pedagogical tool that it is.

McKinney, Kathleen *Beyond the Classroom: Out of Class Learning in Sociology.* Paper presentation, session 2, page ?.

In this article, we (co-authors are Maria Tchernykh, Karey Vacca, and Janice Malak) report on a study about the experiences of graduating sociology majors with out-of-class learning opportunities (OOCLO). Research questions included the following: What is the nature of participation in out-of-class learning for our sociology majors? What barriers do students see to engaging in such experiences? What supports for involvement do students recognize? What are students' overall attitudes about OOCLO? All students from one large, public, mid-western university who were enrolled in the required senior experience course in an academic year were given the self-administered questionnaire. Results indicate most students are infrequently involved in more passive OOCLO. Lack of time is reported as a critical barrier to participation. Factors viewed as key supports for participation included convenient/spare time, useful and interesting activities, and teacher encouragement to attend. Structural factors were more important for participation than were individual characteristics. We conclude with a discussion of the implications for Sociology instructors and departments.

Polanin, Richard *Active Teaching Strategies for Technical Course.* Paper presentation, session 9, page ?.

Although the percent of manufacturing employees in the United States has steadily decreased through the twentieth century, the skills required to operate and maintain manufacturing equipment has steadily increased. Manufacturing in the United States provides employment and real income on which the balance of the economy relies. From basic industries like steel and chemical production to consumer products to sophisticated electronics, a steady supply of well-prepared workers is essential to the smooth operation of manufacturing systems.

This presentation describes the active teaching methods, strategies, and partial content for preparation of entry-level employees into manufacturing industries. Specific strategies used to develop thinking skills at various cognitive levels, psychomotor skills to perform physical tasks required to maintain and operated equipment, and the affective thinking for a broad overview of manufacturing's role as part of the economy will be discussed.

In addition, as comprehensive community colleges generally have an open enrollment policy, a wide variety of learning styles and ability is mixed into each class. The presentation will include some strategies and learning assignments that will address the variety of learning styles typically found in a student cohort.

The development of real world course content is a function of the relationship between local industry and the community college. The presentation reviews the role of advisory committees, input from part-time instructors working in industry, and the advantages of consulting in the development of course content. The information from partnerships may be used to develop learning assignments to shorten the transition time required by students as they enter industry.

Finally an integrated approach to the development of multi-technology manufacturing systems will be presented. The model will stress the need to use fundamental skills developed in mathematics, writing, and science classes to solve problems.

Rattenborg, Allison *The Use of Reading Objectives and Participation Sheets to Assess Students' Preparation for and Participation in the Basic Communication Course.* With Tim Schlosser, Cheri Simonds and Becky Erxleben. Panel presentation, session 10, page ?.

Getting students to participate in the classroom can be a daunting task. Two tools that promote student participation are reading objectives and participation sheets. Reading objectives, "a ticket into class," are objective questions about the assigned reading for each class period. These questions provide evidence of students' engagement in class material. Participation sheets are used daily to rate students' involvement in the classroom. This method asks students to self-assess their own preparation for and participation in class based on a set of criteria. These two tools help students learn how to become more active class members and how to self-assess their own performance. The teaching strategies developed by the presenters will be offered as a source for discussion in creating a participation friendly environment.

Rhykerd, Robert *Illinois State Agriculture Student Contest: Crop Production and Marketing.* With Douglas Kingman, Kerry Tudor, and Bryon Wiegand. Poster presentation, page ?.

A vast majority of college agricultural students come from non-farm backgrounds and are unfamiliar with basic production operations and marketing strategies. There is a need to

familiarize today's college agriculture students with these operations. To meet this need a contest will be held annually at the Illinois State University Farm located near Lexington, IL. The purpose of the contest is to provide a holistic approach to agricultural production and marketing, which represents a practicum of the undergraduate program in agriculture at Illinois State. Teams will consist of 5 undergraduate students representing a student organization. Each team will be assigned one 5-acre plot and will grow soybeans in odd numbered years and corn in even numbered years. Teams will design and implement their own fertility program, tillage program, seed selection, seeding rates, pest management, and marketing strategies. Crop production strategies will be reviewed by a committee of Illinois State Agriculture faculty to ensure environmental quality. Teams will use the same plot of land annually to encourage long-term management decisions. Yield will be measured by weight and largest profit will be calculated from a spreadsheet designed for this contest by Illinois State faculty. The team with the highest profit margin will be declared the contest winner.

Schmidt, Klaus *An Interdisciplinary Collaborative Project.* With Maria Canabal. Paper presentation, session 2, page ?.

The presentation discusses the outcomes of a study supported by a CAT grant, that represents the collaboration between two departments at Illinois State University, who share the common goals of exposing students to active learning and student engagement in a most accurate, real-life working experience. These goals were achieved by forming interdisciplinary teams and by providing the opportunity to enhance team learning. Within these teams, students from the Technology department (TEC) shared their technical expertise with students from the Family and Consumer Sciences department (FCS), whereas students from FCS provided the content about consumer issues for the project. The materials produced in this project included Web sites, databases, on-line and downloadable brochures, and newsletters related to consumer issues such as those confronted by the elderly and low-income consumers.

Simonds, Brent *Selecting Articles for Analysis: An Instructional Innovation for COM 260.* Paper presentation, session 6, page ?.

Communication 260 is a required class for all mass communication majors at Illinois State University. The stated goal of the course is to provide students with a framework by which they can analyze mass media content and the role that it serves in a democratic society.

To help accomplish course goals, students are required to critique two mass media messages using techniques learned from class lectures and discussions. Past experience has shown that only a few students pick articles that exhibit bias, controversy, and persuasion and are, therefore, appropriate for this sort of analysis.

A pre-treatment survey was administered that investigated students' strategies for locating articles to critique and what sort of instruction would help them with this task. "Personal Interest" was the top strategy for selection and "More Examples" was the top response for additional instruction needed.

Before beginning the second assignment, students were given an example article and a sample analysis was performed orally by the instructor. The article was selected because it came from an "elite" mass media source and was aimed at getting the audience to choose sides in a

controversial issue. It also contained easily identifiable biases, possible fallacious reasoning, and an analogy.

After completing the second writing assignment students again answered survey questions as to their article selection strategies. The top response for strategy was "Bias/Slanted" and the top answer for additional instruction was "Nothing." The treatment appears to have enabled students to locate appropriate articles for critique, which allowed them to accomplish course goals.

Steger, Theresa *Under Construction: Using Metaphors to Foster Teacher Development, Expertise, and Reflective Practice.* Paper presentation, session 3, page ?.

The design and preliminary results of a project exploring the use of metaphors as a teaching tool in higher education will be presented. The study was a preliminary examination of patterns in teacher candidates' response to a "roadway" metaphor used to foster autobiographical awareness as part of a preservice education class. Students' perceptions of learning and content and depth and breadth of reflection in written assignments were investigated. Consideration is given to ways the metaphor learning experience may impact teacher candidates' work in other course assignments. Implications for teaching and learning in higher education will be discussed and directions for future research in this area of SoTL will be addressed. Participants will have an opportunity to engage in dialogue designed to highlight the usefulness of metaphor as a tool for fostering self-reflection, particularly inquiry into one's own learning. Funding for this research project came from the Carnegie Foundation through a Scholarship of Teaching and Learning Grant (Center for the Advancement of Teaching) at Illinois State University.

Troxel, Wendy *What Our Students Tell Us: A Discussion of Current Survey Data.* With Jamie Young. Panel presentation, session 7, page ?.

Ward, Dane *Enhancing the Quality of Student Research: Libraries and Critical Thinking in the Classroom.* Paper presentation, session 6, page ?.

Students often struggle in their efforts to conduct effective research (in the library or elsewhere), and then to write papers based on that research. Generally, students are able to find plenty of information. However, one of their greatest challenges here revolves around issues of critical thinking. Many students experience difficulty evaluating the information that they find and the sources in which it is found. In this age of information, students require increasingly sophisticated cognitive tools to help them identify credible information and logical arguments. Academic libraries are rapidly evolving in ways that can help students develop their critical thinking and research skills. In this session, participants will apply three critical thinking concepts (facts, inferences and assumptions) to information that originates from a variety of sources. They will also examine differences among four types of information, as well as quick strategies for evaluating sources of information.

For more information, contact

Doug Hesse

Director, Center for the Advancement of Teaching
ddhesse@ilstu.edu, 309 438-5943