

Illinois State University
1999 Teaching Symposium
Sponsored by the Center for the
Advancement of Teaching

Program

Sessions: Pages 2-5
Abstracts: Pages 6-23

Registration table located outside Old Main Room.
Everyone is welcome to attend.
No admission charged.

Visitors should use the Locust Street parking lot
just north of the Bone Student Center.

If you need an accommodation based on your disability,
please contact the CAT office at 438-3694.

10 a.m.–3 p.m.

Circus Room—Lower Level—Poster presentations available for review; Unit displays; Food and beverages

Posters on Review

- A. *Student Surveys: Using the Web to Collect Feedback From Students*
Charles Bristow, Instructional Technology Development
Anne Bettendorf, Biology Department
H. Tak Cheung, Biology Department

- B. *Science Attitude of the 101 Student Population*
H. Tak Cheung, Biology Department
Cynthia Moore, Biology Department
Brian Bergstrom, Biology Department
Tom Adams, Biology Department
Jennifer Biser, Biology Department
Charles Bristow, Instructional Technology Development

- C. *Evaluation of the Course Components of Concepts of Biology 101*
Anne Bettendorf, Biology Department
Becky Anderson, Biology Department
Jennifer Smith, Biology Department
Jennifer Sunley, Biology Department
Charles Bristow, Instructional Technology Development
H. Tak Cheung, Biology Department

- D. *Job Hunting 102: Researching a Prospective Employer*
Katherine Weir, Milner Library

- E. *Using a Research Project to Increase Students' Knowledge of Careers in Their Discipline*
Margaret Nauta, Psychology Department

- F. *Reducing Statistics Anxiety Through Writing Assignments*
Jeffrey Kahn, Psychology Department

10–10:50 a.m.

Circus Room—Posters on review—See page 2

- (1) Old Main Room—Paper Presentations
NetForum: How Computer-Mediated Communication Promotes Peer Interaction and Mentoring
Sophia McClennen, Foreign Language Department

Taking Physics Undergraduates to Beijing for Summer Research
Shang-Fen Ren, Physics Department

An Experimental Evaluation of Web-Based Tutorial Quizzes in a U.S. Government Course
Gary Klass, Political Science Department; Lane Crothers, Political Science Department

- (2) Founder's Suite—Panel Presentation
Faculty Conceptions of Student Engagement and Involvement
Deborah Gentry, Family & Consumer Science Department; Ronald Mottram, Art Department; Dent Rhodes, Curriculum & Instruction Department; Margaret Haefner, Office of the Provost

11–11:50 a.m.

Circus Room—Posters on Review—See page 2

- (3) Old Main Room—Panel Presentation
The Leisure of Learning
Margaret Haefner, Office of the Provost; Karen Coats, English Department; Sheamus Mannion, Graduate Student; Reef Morse, Department of Chemistry; Vickie Squier, Undergraduate Student
- (4) Founder's Suite—Panel Presentation
The Semester After: The Influence of Foundations of Inquiry
Lisa Hinchliffe, Milner Library; Cheri Simonds, Communications Department; Claire LaMonica, English Department; Valeri Farmer-Dougan, Psychology Department

Noon–12:50 p.m.

- (5) **Old Main Room—Keynote Speaker—Dr. Raoul Arreola, director of Educational Evaluation and Development and professor of Health Sciences Administration, University of Tennessee—Memphis.**

“Changing Times, Changing Roles: Teaching in the 21st Century”

Raoul A. Arreola received his doctorate in educational psychology from Arizona State University in 1969. Dr. Arreola also holds an undergraduate degree in mathematics. During the period from 1969 to 1979 he was on the faculty of Florida State University where he taught educational psychology, statistics, and personnel evaluation. He also served in the administrative positions of director of the Office of Evaluation Services and associate director of the Learning Systems Institute.

In 1979 he became director of the Center for Instructional Services and Research at the University of Memphis where he directed the faculty development, faculty evaluation, and instructional support programs for the campus and taught educational psychology and statistics.

In 1983 he joined the faculty at the University of Tennessee—Memphis as professor and chairman of the Department of Education. He teaches in the area of academic leadership, educational technology and college teaching techniques, is responsible for conducting professional enrichment seminars on advanced techniques in college teaching and distance education for faculty and for the development and coordination of the campus' distance education programs and facilities.

Dr. Arreola has published in the areas of distance education and faculty evaluation and development. His book *Developing a Comprehensive Faculty Evaluation System* is widely used in colleges and universities in designing faculty evaluation programs. He has served as a consultant to nearly 200 colleges and universities nationally and internationally as well as to several state and federal agencies in designing and developing personnel evaluation and development programs.

1–1:50 p.m.

- (6) Circus Room—Upper Level—Talkback with keynote speaker
Raoul Arreola
- (7) Old Main Room—Panel Presentation
Walvoord's "Good Faith Effort": The Effects of Graded vs. Non-Graded Assignments on Student Engagement
Jack Chizmar, Economics Department; Douglas Turco, Health, Physical Education, & Recreation Department; Mark Walbert, Economics Department
- (8) Founder's Suite—Panel Presentation
Classroom Assessment: Are Students Learning?
Nancy Bragg, Center for the Advancement of Teaching; Jacquelyn Frank, Sociology & Anthropology Department; Yvonne Unrau, Social Work Department; Lisa Hinchliffe, Milner Library

2–2:50 p.m.

Circus Room—Posters on Review—See page 2

- (9) Old Main Room—Paper Presentations
Candy Coated Chi-Square (X) Analysis
Mary Kay Rotsch, Management & Quantitative Methods Department
- The Use of Concept Mapping to Improve Student Performance and Understanding of Strategic Management Concepts: A Comparison of Techniques*
Douglas Micklich, Management & Quantitative Methods Department
- Homophobia 101: Teaching Respect for All*
Travis L. Russ, Communications Department
- (10) Founder's Suite—Paper Presentations
Using Standards Developed By National and International Organizations as a Basis for Global Education
Adel Al-Bataineh, Curriculum & Instruction Department
- Faculty-Directed Library Use Instruction: A Single-Class Retrospective Study*
Joseph Hinchliffe, Milner Library

ABSTRACTS

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

Al-Bataineh, Adel. *Using Standards Developed by National and International Organizations as a Basis for Global Education.* Paper presentation, session 10, page 5.

This presentation examines the use of educational standards and goals developed by UNESCO, the Councils for Social Studies, Geography, and World History, and other organizations as the basis for global education. Also, it reports the findings of a recent study that investigated the goals and standards of these organizations.

There seems to be a clear need for students to learn about different peoples and cultures. One reason for this is that the world has been, and continues to be, unstable politically, economically, and socially. Since the United States is involved in the world's affairs, it is beneficial for students in the U.S. to learn about its peoples and cultures.

However, since ancient Greek times there has been disagreement about what students should know and be able to do after instruction. Aristotle, for example, observed that "...education should be regulated by law and should be an affair of state.... Since there is a single end for the city as a whole, it is evident that education must necessarily be one and the same for all...but at present there is a dispute concerning its tasks."

The disagreement about educational standards and goals that Aristotle observed in c450 BC continued until the late 1960s. During the intervening years there were numerous attempts to establish standards and goals. Some of these were part of Commission reports such as the Seven Cardinal Principles (Commission on the Reorganization of Secondary Education, 1918). Others were statements made by individuals such as Admiral Hyman Rickover. While there are still no educational goals and standards that are universal, it appears to this researcher that educators may be closer to agreement today than at any time since Aristotle.

In recent years educators in organizations such as the United Nations Educational, Scientific, and Cultural Organization (UNESCO), and the Councils for Social Studies, Geography, and World History have developed sets of goals

and standards that reflect what they believe students should know and be able to do.

Standards and goals developed by these organizations represent a worldwide movement to help students learn about other peoples and cultures. Educational institutions in the United States need to take into consideration standards that were recommended by these organizations.

Bettendorf, Anne. *Evaluation of the Course Components of Concepts of Biology 101.* With Becky Anderson, Jennifer Smith, Jennifer Sunley, Charles Bristow, and H. Tak Cheung. Poster presentation, page 2.

The Concepts of Biology course is designed specifically for the new inner core requirements in the science literacy sequence. The course utilizes instructional technology in conjunction with the traditional pedagogical approaches in science instruction.

The objective of Concepts of Biology is to provide undergraduate students at Illinois State University with a better preparation for their understanding of themselves and the interaction between the living world and the physical world, while incorporating a Web-based instructional approach.

A survey was developed to evaluate the effectiveness of the three course components: lecture, laboratory, and the study session. The laboratory provides the students hand-on experience, and the study session includes interactive quizzes, group discussions, and a self-learning project. The survey is an important tool for improving the Biology 101 course. Student feedback is used in enhancing the 101 course and in the development of the course each year. The poster presentation will demonstrate the structural components of the course, data from the spring semester 1999 survey, and student feedback concerning the 101 course.

Bragg, Nancy. *Classroom Assessment: Are Students Learning?* With Jacquelyn Frank, Yvonne Unrau, and Lisa Hinchliffe. Panel presentation, session 8, page 5.

The main objective of this pragmatic session will be to familiarize participants with the practice of using classroom assessment techniques to gain feedback in order to understand and improve student learning. The session will begin by demonstrating an assessment technique. In particular, participants' prior knowledge and understanding of classroom assessment will be assessed. Participant feedback will then be used by panel members to present an overview of classroom assessment.

This introduction will be followed by classroom assessment experiences of each panel member. Panel members will share what they did, what they learned, and how they used or will use their insights to make changes in their approaches to teaching and learning. They will also address unanticipated benefits such as improved student/faculty relationships. Copies of *Classroom Assessment Techniques* by Thomas A. Angelo and K. Patricia Cross will be available for perusal. Session participants will discuss various classroom assessment techniques and consider which techniques would make the most sense for gaining feedback in their individual situations.

Bristow, Charles. *Student Surveys: Using the Web to Collect Feedback From Students.* With Anne Bettendorf and H. Tak Cheung. Poster presentation, page 2.

Large-scale student surveys can be logistically difficult. Difficulties arise in finding sufficient class time, and with collection and tabulation of responses (particularly for short answers or comments). Use of a Web-based survey can alleviate these difficulties. Web-based surveys allow students to complete the survey at a time and place of their own choosing. This allows them the opportunity to think about their responses and make more useful comments.

Surveys can be implemented using any of several Web page authoring programs. We used FrontPage to develop surveys for Biology 101: Fundamental Concepts in Biology. Features of the forms allow control over how questions and answers are presented, what kind of data can be entered in

a text field, and which answers are required for the survey to be submitted. Results can be dealt with in different ways, such as saving to a text file, saving to a Web page, or sending as an e-mail message. When results are saved as a text file, they can be easily imported into a spreadsheet for tabulation.

We have implemented Web-based surveys in an ongoing effort to improve and enhance the Biology 101 course. Student feedback is vital in order to make meaningful improvements to the course. Their perceptions and recommendations are an integral part of course development from year to year. We conducted a survey at the end of the 1999 spring semester with a small credit as an incentive. The questions were mostly multiple choice with the opportunity to add comments. This combination of question types allowed for simple scoring of the multiple choice questions with the additional information provided from comments on different topics. We received 600 useable responses from a class of 1085 students.

Used under the right circumstances, Web-based surveys can be an invaluable tool for assessing student attitudes, perceptions, and feedback.

Cheung, H. Tak. *Science Attitude of the 101 Student Population.* With Charles Bristow, Jennifer Biser, Tom Adams, Brian Bergstrom, and Cynthia Moore. Poster presentation, page 2.

The objective of Concepts of Biology 101 is to better prepare undergraduate students at Illinois State University for their understanding of themselves and the interaction between the living world and the physical world while incorporating a Web-based instructional approach.

The Concepts of Biology 101 course is designed specifically for the new inner core requirements in the science literacy sequence. The course utilizes instructional technology in conjunction with the traditional pedagogical approaches in science instruction. The student enrollment for the 101 course is set at twelve hundred each semester and is comprised primarily of non-majors. Because of the class size, the Web-based survey was implemented. The Web-based survey had been used previously in the 101 course (Course Components, spring 1999). Web-based

surveys allow the student flexibility in choosing the time and place of when they would like to take the survey.

In an effort to continuously shape the 101 course, we are interested in looking at the demographics of our student population and determining the general science attitude of our 101 students. Their perceptions are an integral part of the course development process from year to year. From previous student comments, many students are either put off by or apprehensive about taking a science course.

Results from the survey will be used to identify students that might need more assistance from their teaching assistants in the understanding of the biological concepts. We are reviewing data to see if there is an improvement in their science attitude while taking the 101 course (pre- and post-test results). In addition, we are using student feedback in course development.

Gentry, Deborah. *Faculty Conceptions of Student Engagement and Involvement.* With Ronald Mottram, Dent Rhodes, and Margaret Haefner. Panel presentation, session 2, page 3.

In December 1998, Illinois State University joined with many other colleges and universities nationwide to participate in the Carnegie Teaching Academy Campus Program. The primary purpose of the program is to enhance and promote the scholarship of teaching. The American Association for Higher Education and the Carnegie Foundation for the Advancement of Teaching sponsor this four-year project, with support from the Pew Charitable Trusts. A full description of this program can be found at the following Web site: <http://www.aahe.org/teaching/Carnegie/academy1.htm>.

The first phase of Illinois State participation in the program involved groups of faculty members, students, and administrators discussing the following: A suitable definition of scholarship of teaching; supports for and barriers to engaging in the scholarship of teaching; and possible campus research projects that would serve to illustrate high-quality scholarship of teaching. This presentation will highlight the results of these discussions.

One research question identified for campus investigation is: What are faculty and student conceptions of “engagement” and “involvement”? As a means of initiating the

second phase of Illinois State participation in the Carnegie program, the presenters will solicit ideas from audience members regarding suitable definitions of “involvement” and “engagement,” and ways each is demonstrated by students in college/university settings, particularly here at Illinois State University.

Haefner, Margaret. *The Leisure of Learning.* With Karen Coats, Sheamus Mannion, Reef Morse, and Vickie Squier. Panel presentation, session 3, page 3.

A panel of Illinois State University professors and students will discuss the extent to which the learning environment at Illinois State encourages students to engage in learning at a slower pace—a leisurely pace—so that they can wrestle with challenging issues and develop a love of learning. The academy, in general, often seems caught up in an ethic of learning that suggests “more is better” and that those students who work the hardest and fastest are considered to be the best. For the students’ part, it seems that whatever leisure time they have is to be spent on any activity other than learning. This panel will address the following aspects of the leisure of learning:

- ´ How can we define the leisure of learning?
- ´ What things do we currently do to discourage the leisure of learning?
- ´ What things do we currently do to encourage the leisure of learning?
- ´ What new ideas do people have to encourage the leisure of learning in our classes and among students outside of class?
- ´ As professors, to what extent do we model learning and scholarship that is engaging, challenging, and contemplative?

Audience participation throughout the time period will be encouraged.

Hinchliffe, Joseph. *Faculty-Directed Library Use Instruction: A Single-Class Retrospective Study.* Paper presentation, session 10, page 5.

This paper examines the effect of prescriptive, faculty-guided library research instruction on student term paper quality. At a major midwestern university, students in an intermediate political science class were offered an opportunity to have their library research evaluated as part of a term paper project. Following instruction by a librarian, an instructor review of a research plan, a research log, and an annotated bibliography, as well as other intermediate writing steps, students completed a term paper. After controls for subject specific knowledge were applied, documented student research has an independent, direct and statistically significant effect of approximately one mark, e.g., from a C to a C+ on the final term paper grade. Although modest, this persistent, measurable, and product of only short-term efforts suggests important benefits to students of faculty guidance in library instruction.

Of course, in idiosyncrasies related to the instructor, the course, or the students may have contributed to the results presented here. Research on this model of faculty involvement in other settings is required to establish the generalizability of the results. Regardless of the precise magnitude of the effect, the results show a quick method available to faculty for improving student term papers.

Hinchliffe, Lisa. *The Semester After: The Influence of Foundations of Inquiry.* With Cheri Simonds, Claire LaMonica, and Valeri Farmer-Dougan. Panel presentation, session 4, page 3.

Does Foundations of Inquiry (FOI) make a difference in student performance and achievement? This is an important question. To answer this question, panelists (Simonds and Lamonica) will discuss the thematic and critical connections students make between FOI and other inner core courses and share examples from student writings and discussions that illuminate students' experiences. Farmer-Dougan will discuss recent research into the factors impacting student achievement in FOI and what these results might indicate for future academic success.

The panel also hopes to engage in discussion with attendees about their perceptions and experiences with students who have taken FOI and are now in other general education courses, taking electives, and/or completing major/minor field requirements.

Kahn, Jeffrey. *Reducing Statistics Anxiety Through Writing Assignments.* Poster presentation, page 2.

Undergraduates often suffer from “statistics anxiety,” a fear of statistics that impedes students’ success in quantitative-oriented courses (Schau, Stevens, Dauphinee, & Del Vecchio, 1995). Statistics anxiety is problematic because higher levels of statistics anxiety are associated with poorer performance in courses with quantitative content (Zeidner, 1991). Thus, classroom interventions designed to decrease statistics anxiety may not only increase students’ personal comfort with course material but also their ability to learn the course material. One intervention that is being conducted in Psychological Measurement (PSY 334), a course with a fair amount of quantitative material, is based on the observed health benefits of writing about distress. In Pennebaker’s (1997) research paradigm, students write about their distress for a 10–20 minute period. As a result of this writing, Pennebaker has witnessed a long-term reduction in his research participants’ distress, perhaps because of the cathartic effect of disclosing their emotions. A classroom intervention was thus developed based on Pennebaker’s research in which students in PSY 334 are asked to spend 10 minutes writing about their fears approximately four times throughout the semester, mostly when the quantitative concepts become most complex. Students are simply asked to write constantly for 10 minutes about how they feel about the course material. These writing samples are not collected in order to increase the likelihood that students will write about their greatest fears. Based on Pennebaker’s work, this intervention should reduce statistics anxiety, thereby indirectly improving course performance. Data on the efficacy of this intervention are being collected and will be available by the end of the fall 1999 semester.

References

- Pennebaker, J.W. (1997). *Opening up: The healing power of expressing emotions*. New York: Guilford.
- Schau, C., Stevens, J., Dauphinee, T.L., & Del Vecchio, A. (1995). The development and validation of the survey of attitudes toward statistics. *Educational and Psychological Measurement, 55*, 868-875.
- Zeidner, M. (1991). Statistics and mathematics anxiety in social science students: Some interesting parallels. *British Journal of Educational Psychology, 61*, 319-328.

Klass, Gary. *An Experimental Evaluation of Web-Based Tutorial Quizzes in a U.S. Government Course.* With Lane Crothers. Paper presentation, session 1, page 3.

Web-based tutorial quizzes and examinations are an increasingly common component of both Internet-based distance education classes and traditional courses supplemented with Web-based materials and exercises. Most Web-based course management software packages, such as Mallard, WebCT, TopClass, and "Web course in a box" provide a means of preparing and delivering on-line, interactive tutorial quizzes (Schmitt, 1998).

In the fall of 1998, 120 students in Professor Crothers' American Government and Politics class were randomly assigned to one of four weekly discussion sections. Eight tutorial quizzes were prepared for the course from a multiple-choice database provided by the textbook publisher, each quiz encompassing a single chapter of the text. All students were given a pre-test (an exam covering the first four sections of the course before the Mallard quizzes were introduced). Each section of the course was assigned six of the eight quizzes. To measure the impact of the quizzes on student learning, we compare the relative differences in student scores on two in-class examinations, each covering four chapters, differentiating the components of the exams for which students had taken Mallard quizzes and those for which they did not. The procedure allows us to compare scores between those who had and who had not taken the quizzes on each chapter.

In addition to measuring the experimental effects of the treatment on student learning, we will also be able to

assess attributes of student participation on the assignments, comparing student pre-test scores and demographic characteristics with attributes of student participation in the assignment.

Reference

Schmitt, Jeff. (1998). "WWW Course Management Software-Lists." <http://www.towson.edu/~schmitt/courseware/coursesw.html> (updated 1/29/98, viewed on 10/13/98).

McClennen, Sophia. *NetForum: How Computer-Mediated Communication Promotes Peer Interaction and Mentoring.* Paper presentation, session 1, page 3.

Active learning requires structured educational activities that allow students to develop their skills in a peer-driven environment guided by a professor. NetForum facilitates peer interaction and mentoring within an active learning pedagogy. NetForum is an asynchronous form of computer-mediated communication (CMC). Unlike e-mail which—even as a listserv—has one sender and individual recipients, NetForum (or other forms of electronic bulletin boards) provides:

1. A unique form of communication that compliments classroom discussion and formal writing assignments.
2. An intellectual space which is both interactive and reflective.
3. Critical exchange which is student-driven and highly expressive.
4. A learning community where comments can be observed as they develop over time.

NetForum has been a tremendously useful teaching tool in language courses as well as in graduate seminars. Its specific role in learning does not vary as greatly as the topics and themes discussed. In fact, NetForum consistently assists me in motivating my students to take a leadership role in their academic careers.

Through the forum, students are at liberty to discuss tangential issues without veering the classroom discussion off of the current topic. Additionally, students are able to utilize the forum as a tool for developing critical thinking. How many times has the clocked ticked down to the last

minutes of class just as everyone is excited, involved, and in-tune with the discussion? As students begin packing up their books I mention that we can continue our debate on the forum, and we often do. Space, time, or location no longer limits critical thinking on a topic of study. The advantages of this type of intellectual freedom are extraordinary.

Micklich, Douglas. *The Use of Concept Mapping to Improve Student Performance and Understanding of Strategic Management Concepts: A Comparison of Techniques.* Paper presentation, session 9, page 5.

Previous research (Micklich, 1998) has shown that by using concept mapping, a greater level of understanding of the relationships between strategic management concepts can be gained. Although an increase in exam scores and a certain level of cohesion in a class strategic planning project was attained, overall perceived satisfaction with the exercise was low. This occurred under conditions where greater control was relinquished to the student for map construction and interpretation as the exercise was continued. This question was then posed: if the instructor took a more active role would higher levels of satisfaction, hence translated by better scores, and a smaller standard deviation of these scores, be realized? Results showed the following: the level of satisfaction rose for the experimental group as a whole; the mean score did increase, but at a smaller rate; and the standard deviation of the scores did increase at a greater rate relative to the control group, resulting in better understanding of those concepts and higher levels of perceived satisfaction.

Nauta, Margaret. *Using a Research Project to Increase Students' Knowledge of Careers in Their Discipline.* Poster presentation, page 2.

In order to increase undergraduate psychology majors' familiarity with career opportunities in their discipline, I assigned a career research project as a requirement in the Senior Seminar. Students were required to gather in-depth information about a career of their choosing using any resources they could find, such as printed materials from the library or the career placement services, the Internet, and through informational interviews with faculty and other professionals. Students prepared a written report that included, but was not limited to, information about the following: job duties, related occupations, training and education necessary for entry into the career, places in which people in the career are commonly employed, employment outlook for the next five years, opportunities for advancement, salaries and benefits, lifestyle issues (e.g., whether the job requires travel), and the degree to which the career fits with their personal skills, characteristics, and goals. Students were free to collaborate on their projects with others researching similar careers. In class, each student described the career to the rest of the class through an oral presentation. Students' feedback about the project was quite positive, and all indicated that the assignment should be retained for future semesters, although some stated that the project would have been even more useful if it had been assigned prior to their senior year.

Ren, Shang-Fen. *Taking Physics Undergraduates to Beijing for Summer Research.* Paper presentation, session 1, page 3.

Funded by the National Science Foundation (NSF) International Programs and Material Theory under the Research Experience for Undergraduates (REU), I took two Illinois State physics students to Beijing for summer research for three weeks in the summer of 1999. While we were in Beijing, our students stayed in the foreign guesthouse of Peking University and performed daily research in the Chinese Semiconductor Institute. Our partner in the Chinese Semiconductor Institute arranged for two Chinese graduate students to work together with our

two undergraduates in pairs. Also, arrangements were made to visit their most advanced research facilities and hear lectures by their most active researchers. We also visited some research labs in the Chinese Physics Institute and in the Department of Physics at Peking University. With help from the Chinese scientists and graduate students, our students gained real knowledge and made good progress on their on-going research project on low dimensional semiconductor systems. Their research productivity will be submitted for publication. In addition, our two students, neither of which knew any Chinese or had had any real experience with China before, learned plenty of Chinese culture and made some Chinese friends. They also appreciate their opportunities in the United States more than they did before going on the trip. In this presentation, the purpose, experiences, accomplishments, and problems of this summer research trip will be discussed in detail.

Rotsch, Mary Kay. *Candy Coated Chi-Square (X^2) Analysis.* Paper presentation, session 9, page 5.

My candy-coated chi-square (X^2) analysis presentation will use M&M candy as the data to be analyzed.

Chi-square (X^2) analysis compares observations in data against data expectations. The expectation in this candy example will be equal representation of color within each bag of M&Ms. We will compare the contents of each of our bags of candy against our hypothesis. Our hypothesis is our expectation of equal distribution of color in each bag of candy.

As we perform the chi-square (X^2) analysis, we will record our data observations in chart form. A chi-square (X^2) value is then calculated from our specific "bags of data." Using a value given to us for the area under the chi-square (X^2) curve, the calculated chi-square (X^2) value is now located on the chi-square (X^2) curve.

If the calculated X^2 value is in the reject region, we must reject the hypothesis of equal distribution of color in each bag of candy. If the calculated X^2 value is not in the reject region, then we do not reject the hypothesis of equal distribution of color.

This demonstration is important because by using M&M

candy as our data, we are able to understand visually, mathematically, and tactically the expectation versus observation concept of X^2 analysis. We actually see the data differ from the equal distribution hypothesis. Based upon our confidence parameters, we find the critical value that allows us to reject or not reject the original equal distribution hypothesis.

Now, eat the data! Enjoy! Chi-square (X^2) analysis tastes good!

Russ, Travis L. *Homophobia 101: Teaching Respect For All.* Paper presentation, session 9, page 5.

Extensive research finds that homophobic attitudes are a dominant ideology among our nation's educational system. For example, D'Augelli and Rose (1990) suggested that 30 percent of college freshmen sampled at a state university would prefer an environment with only heterosexuals. Furthermore, 50 percent of the sampled students considered gay men "disgusting," while 98 percent reported having routinely heard disparaging comments about gay men and lesbians from fellow students as well as college staff and faculty.

These attitudes do not only interrupt the classrooms' overall learning processes, but also help to foster an environment that mitigates violence based simply on ignorance. For instance, inside 53 schools surveyed in the state of Washington, 77 incidents of anti-gay harassment and violence have been *reported* in the past three years, with 34 of these incidents serious enough to warrant possible criminal allegations (Safe School Anti-Violence Documentation Project, Washington State – Third Annual Report, 1996). These statistics do not count the numerous cases where victims have been forced to keep silent or were simply afraid to speak out against their assailants.

These statistics, among countless others, served as the impetus for Homophobia 101, a comprehensive training manual designed for educators by educators that teaches participants how to effectively tackle anti-gay biases such as homophobia, heterosexism, and gender-bias in their classroom. While this manual covers a wide range of educational interventions as well as learning assessments,

this particular presentation will focus on three key areas: a) needs analysis—a measurement of participants' existing attitudes toward LGBT populations; b) training rationale—explanation of how classroom silence impairs educational performance; and c) solutions—introduction of skills and tools that reduce prejudice and create an inclusive learning environment for all students regardless of their sexual orientation.

References

- D'Augelli, A.R., & Rose, M.L. (1990). Homophobia in a university community: Attitudes and experiences of heterosexual freshmen. *Journal of College Student Development*, 31, 484-490.
- Safe Schools Coalition of Washington. (1996). *Safe School Anti-Violence Documentation Project*. [On-line]. Available at : <http://www.safeschools-wa.org>.

Chizmar, Jack. *Walvoord's "Good Faith Effort": The Effects of Graded vs. Non-Graded Assignments on Student Engagement.* With Douglas Turco and Mark Walbert. Panel presentation, session 7, page 5.

In 1998, Illinois State University joined many other colleges and universities nationwide in a project on the scholarship of teaching called the Carnegie Teaching Academy Campus Program. Last spring, three objectives were accomplished at Illinois State during the initial phase of the Campus Program's Campus Conversations. Part Two of the Campus Conversations process involves studying and acting on one issue having to do with the scholarship of teaching. The issue for investigation: Student Engagement and Involvement in the University. The purpose of this presentation is to describe the research methods and preliminary findings of a study designed to determine the effects of time-efficient graded course assignments on student engagement. The central research question is: "Are there differences in student course engagement due to "good faith effort" graded assignments?"

Subjects:

Undergraduate students enrolled in two different sec-

tions (one each during the fall and spring semesters) of the same courses taught by the same instructor during 1999-2000 at Illinois State University. Two courses (2 sections for each) will be used for the study:

1. ECO 138 - *Social Science Reasoning Using Statistics*
2. HPR 170 - *Introduction to Leisure and Recreation*

Methods:

1. Pre-test for cognitive level during first week of semester (not graded).
2. Designate treatment (fall 1999) and control (spring 2000) group sections.
3. Provide weekly assignments to treatment (graded) and control (non-graded) groups.
4. Time diary completed during sixth week of semester to chronicle time devoted to course.
5. Post-test for cognitive achievement during final exam.
6. Student reflective statement describing student's level of engagement.

Assignments:

All students in each course section will receive weekly assignments corresponding to course content and readings. Course assignments (termed Good Faith Effort) will be designed to foist the first exposure of new material onto the student working alone, outside of class. In the experimental section, the graded assignments will be factored using Walvoord's recommended grading scheme (below). At the beginning of each designated class session, completed assignments will be submitted to the instructor for time-efficient grading. Assignments from the control course section will not be collected or graded. Instructions pertaining to the Good Faith Effort assignment for the control group will appear on the course outline as follows:

Analysis:

1. Comparison of pre-post tests scores on cognitive achievement.
2. Comparison of scores treatment and control groups.
3. Comparison of time devoted to course—treatment and control groups.

4. Content analysis of reflective statements.

The proposed study will accelerate the momentum on the scholarship of teaching already achieved at Illinois State, and perhaps assist faculty in engaging students and students in becoming and/or maintaining class engagement. This project has received the endorsement of the Center for the Advancement of Teaching (CAT), and may move our institution further through the Campus Program toward membership in the Carnegie Teaching Academy.

Weir, Katherine. *Job Hunting 102: Researching a Prospective Employer.* Poster presentation, page 2.

Librarians at Milner Library reach approximately 10,000 students with a variety of instructional programs each year. Most students receive instruction in conjunction with a course, but other avenues exist. A series of step-in sessions is offered, focusing on the various aspects of information gathering and handling. In addition, the business subject librarian has begun offering special workshops for job-hunting students in conjunction with Senior Day.

"Help! The job recruiters are coming tomorrow!" is a session devoted to researching a prospective employer aimed at non-business majors. Students learn how to research the companies the recruiters represent in order to make a better impression on interviewers and evaluate the organization as a possible employer. No registration is required, and handouts are provided to assist students in their job research. To generate interest in the workshops, they are offered immediately before and after Senior Day. Placement Services publicizes them for the library, and additional signs are posted in the library to encourage attendance.

Each 90-minute workshop includes the presentation, hands-on practice, and a question and answer period. The content is similar to that of a business class on researching a company, but it assumes no familiarity with business terminology or resources. Attendees learn why they should research a prospective employer, how to do it, and some specific print and electronic sources to consult. They learn about factors that influence the success of company

research and why knowledge of the industry is important when interviewing. They are shown how to find basic identifying information about a company, where to dig deeper, how to use 10-K reports without understanding detailed financial statements, and how to place the company in the context of its industry.