Defining a Personal Feminism

Jessica Adams
Bowling Green State University—Firelands

A manifesto is defined in Wikipedia Encyclopedia as "a public declaration of intentions and principles". Merriam-Webster defines manifesto as "a written statement declaring publicly the intentions, motives, or views of its issuer". Both suggested definitions are accurate and informative. Unfortunately when one inquires, "What is a manifesta", one yields no results. Several notable examples are given, such as Marx's Communist Manifesto, as well as The SCUM Manifesto by Solanas. My question is this: We retrieve results which in one case are advocating a communist society and the other ridding society of an entire gender yet we cannot publish the female tense of this word? Manifesta is the "female version" of this word but is not recognized in reference books such as Webster's Dictionary or Encarta Encyclopedia. Is this to imply that a woman does not have anything suitable to publicly declare? Is a female incapable of possessing valid intentions? Or is this just another way that society undermines a woman, even in the year 2007?

A manifesto serves a simple purpose- action. Everyone wants something and to engage in a manifesto/a is to declare what it is one desires. This idea sounds so basic, yet the very problem addressed above creates a negative undertone. I have an issue with the fact that while manifesta may just be a play on the word, it is not recognized. As a word that means so much and is used in a political fashion one would think it would at least be politically correct. Right or wrong, this finding only enriches the focus of my manifesta.

As a female there are certain things expected of me. I am expected to continue the human species. I am expected to take large part in the raising of those offspring. I am expected to join in the union of marriage to the man with whom I choose to "continue the species". I will be the nurturer, the companion, the wife, mother, grandmother.

These are my "duties" as a woman. As a child I was given "gifts" to prepare me for these duties. I had dolls to prepare for motherhood, a kitchen set for domestication, make-up to attract men. Spending time with grandma was a fine cover-up for the three hour long etiquette lecture on sitting up straight, breasts out and napkin in the lap. Who hasn't been forced into the dreaded "trying-on of the wedding dress" by their mother? There I stood in the attic, my back-yard football grass-stained knees poking out as I twirled around raising the long dress up with my arms bruised from the punches of my brothers. As women, we have all been there. We are trained from birth to be mothers and wives, when are we trained to be women?

We must start with the question: Do all females know what it truly is to be a woman? Ask someone today who they picture when they hear the word "woman". More than likely she will resemble an icon like Carol Brady, June Cleaver, Madonna or Britney Spears, before she resembles Jane Addams, Eleanor Roosevelt or, God forbid, a single female without a child. Being a woman means much more than being a wife and mother but the meanings have become one. Unfortunately how a woman is defined does not allow her to think past being anything more than a wife or mother even if she is in the midst of a successful career. The goal in mind with this manifesta is to not only raise awareness of how we are defining a woman but to instigate change.

Webster defines woman as an adult female person. Her definition in the Encarta Dictionary (at everyone's fingertips on Microsoft Word) involves uses as "domestic employee" and "wife or girlfriend", but don't worry, there is a note that says this may be offensive to some people. Hell yeah, especially after viewing the definition of man! He gets credited as a person, "the human race", "employee or worker", "authority figure", and my personal favorite: "virile person- the personification of qualities traditionally associated with the male sex, including courage, strength, and aggression, or somebody with such qualities" because this only pertains to men (please feel free to sense the sarcasm). Man is given at least fifteen definitions, woman receives five.

Even better than this dictionary definition is the legal definition

of woman that both the US House and Senate agree upon: "the term `woman' means a female human being who is capable of becoming pregnant, whether or not she has reached the age of majority". If as a woman you agree with this definition, then read no further. I find this appalling. Is my grandmother, post menopausal, not a woman? The very woman that taught me what was "ladylike" is not a woman? Is the woman sitting in the fertility clinic unable to conceive not a woman at all? What about those women that were born male? Do they even stand a chance with this definition? Are we just that, producers of offspring?

A woman is not simply a noun; she is a series of nouns. She is compassion, strength, assertiveness, guidance, knowledge, a nurturer, etc. Is it fair to take these characteristics, cross them out and label her as just a female human? Or just a mother? A male gets full credit of being the human race, all I want is the same respect for women. I am not just a female, I am not just a mother, I am a person, something not even included in my definition. It boggles my mind that, justly so, a woman can look at her daughter and explain to her that the world defines her based on her child bearing ability, but she can look at her son and tell him he is a person whether or not he ever yields any children.

I suggest a definition that is more broad and encompassing of all women. Keep in mind that this is a working definition. Whether complete or not, many more women are rightfully defined as so with this suggestion. This is my suggestion:

Woman: a person that possesses majority feminine qualities (up to one's own discretion), including but not limited to having female reproductive organs that she has the choice to use for reproduction, recreation, both or neither

With this new classification I hope to start a new way of thinking for a new generation of thought. I want the girls of today to see a definition that rightfully defines a woman positively. I want people to see the difference we are allowing between man and woman, even in the year 2007. I want to stress awareness that inequality is still very much present, it is in our language, the sources we use for research and knowledge attainment. Allowing the present definition to be used is enhancing thoughts of inequality between sexes.

My first goal is to generate awareness. Previous to this manifesta I was not aware of the simple definition offered to women. I believe that the definition, offered by sources such as Merriam-Webster, is simple because it was created by simple-minded people. Awareness itself will compel reactions. Once the groundwork is set, and reactions are present, there will be change. I have faith in woman, as well as man, that as times change, they will agree that meanings should as well. My second goal is the change itself. Implementation of my suggested definition is not necessary, but termination of the present legal definition is a must.

Women have gained the right to vote, enfranchisement, the right of education, sexual freedom, religious freedom, etc. Men were given this; women had to work for it, and still we are slighted. I am not asking for some radical feminist group to be formed. I am not declaring that what I have to say should be implemented into a child's education. I am not running to the government forcing my ideas on them. I am simply asking for equality. I am demanding respect. I want to look in a dictionary and see a definition that embraces what a woman really is: her heart, soul, character, personality, not just her uterus. I want proof that the battles fought by women before me were worth fighting and that their hopes, dreams, dare I say- their manifestas, are being carried out.

Since I have given several definitions, I think it's only appropriate to end with this:

Change: to become or make something different.

Are you up to it?

References

Cline, Austin. What is a Woman?. 4/2005. 12/6/06 < http://atheism.about.com/b/a/165778.htm>.

Lee, Janet and Susan M. Shaw, Eds. Women's Voices, Feminist Visions: Classic and Contemporary Readings. 3rd edition. Boston: McGraw-Hill, 2007.

"Manifesto." Wikipedia. 2006. Wikipedia, the free encyclopedia. 12/6/06 <http://en.wikipedia.org/wiki/Manifesto>.

Robinson-Houx, Anne-Marie. The Changing Role of Women in Society. 12/6/06 < http://www.amrrhm.supanet.com/index.html >.

Ryken, Dr. Philip G. What it Means to be Woman. 5/9/1999. 12/6/06 <http://www.tenth.org/wowdir/wow1999-05-09.html>.

"Woman." Merriam-Webster Online. 2006. 12/6/06 <http://www.m-w.com/dictionary/woman>.

"Woman." Wikipedia. 2006. Wikipedia, the free encyclopedia. 12/6/06 <http://en.wikipedia.org/wiki/Woman>.

Biographical Information

Jessica Adams graduated with an Associates of Applied Science in Human Services from Bowling Green State University in May, 2007. This manifesta was written as part of her research in Women Studies during Spring of 2007. She has a deep appreciation toward the women of the past, present and those looking at the future of women as a strong entity. Ms. Adams believes that awareness and assertiveness combined will create new opportunities for women, thus changing the world. Ms. Adams serves the community as a mental health and chemical dependency hotline crisis counselor for Firelands Counseling and Recovery Services.

Jessica Adams
1107 Hunters Way
Sandusky, OH 44870
jcadams@bgnet.bgsu.edu

The Validity of Students' Evaluations of Teaching Effectiveness (SETS)

Mohannad AL-Saghir
Department of Environmental and Plant Biology
Ohio University—Zanesville

Introduction

Students' evaluations of teaching effectiveness (SETs) are collected in Northern American universities, and have been used in universities at the worldwide level. They are widely endorsed and supported by teachers, students, and administrators, and have stimulated hundreds of studies. The purposes for collecting SETs, SET dimensions, reliability, validity and generalizability, potential biases in SETs, and the use of SETs for improving teaching effectiveness are investigated in this paper based on survey which includes 15 faculty members from different departments at Virginia Polytechnic Institute and Sate University, Blacksburg, Virginia. The survey was done by the author between September 2005 to December 2005 by e-mails or in person interviews (See appendix A).

Purposes of SETs and their Multiple Dimensions

SETs provide diagnostic feedback to the faculty for improving teaching. Additional benefits of collecting SETs are: 1) to measure the teaching effectiveness for personnel decisions; 2) to provide information for students for the selection of courses and instructors (Marsh, 2001).

SETs are collected in order to help increase and maintain the quality of teaching and this is the ultimate (and by far the most important) reason why. Additional benefits of doing this are: 1) to give students a feeling of empowerment and to recognize that they are "paying customers" that deserve to have input and to provide information for students for the selection of courses and instructors; and "2) provide faculty additional data to judge the performance of faculty" Professor Robert Jones (Head of Department of Biological

Sciences at Virginia Polytechnic Institute and Sate University) said.

Teaching is a complex process with multiple dimensions (such as teacher communication and interaction with students, students' engagement and knowledge of the subject and so forth). Therefore, reflection of this multidimensionality is a challenging task. In general, SETs don't reflect the multidimensionality of teaching. One number (e.g., the current "overall" score) can not provide a full measure of teaching quality. Neither can the total Student Perceptions of Teaching (SPOT) system that is currently used, even if we add additional questions. Student perceptions at best are only one data point of many that are needed to judge quality of teaching. Though they can be made to do so and they occasionally do so. That is due to the students' perspective in terms of rating the instructor and the format of SETs. Part of the reason that they are not more helpful is that most students think in terms of rating the instructor rather than providing constructive criticism. "Part of the reason is the "fill in the blank" format of the questionnaires. Part of the reason is that the faculty do not convey to the students serious interest in profiting from student criticisms" according to Professor Richard Burian (Professor of Philosophy in Science and Technology Studies) said.

At the same time, SETs may differ in terms of the questions included, in the way the teaching is operated and constructed, and in the particular dimensions that are included in that operation (Marsh, 2001). The content and coverage of the questions do influence the validity and usefulness of the information obtained from SETs.

If a survey instrument contains not well defined assortment of questions or poorly formatted or inappropriate questions and SETs are summarized by an average of these questions, then SETs will not provide useful information. Therefore, careful attention should be given to the components of teaching effectiveness that are to be measured (Marsh, 2001).

Three overlapping approaches are suggested by Marsh and Dunkin (1992) to reflect and evaluate the multiple dimensions in SET instruments: (1) empirical approaches such as factor analysis and multitrait-multimethod analysis; (2) logical analyses of the content of effective teaching and the purposes the ratings are intended to serve;

and (3) a theory of teaching and learning. Most instruments are based on the first two approaches, particularly the second.

Stability and Reliability

In general, SETs are relatively stable and reliable. One has to know they do slightly vary, however, so a few tenths of a point difference between two numbers does not indicate a difference (e.g. a score of 3.5 and 3.7 are essentially the same). The students take this exercise rather seriously. "In my experience they are very stable and consistent from semester to semester in the same class" Professor Brent Opell (Professor of Biology) said.

The reliability of SETs can be determined from studies that assess error due to the lack of agreement among different students within the same course (Gilmore, Kane, & Naccarato, 1978). The correlation between responses by any two students in the same class (Marsh, 1987) is in the .20s but the reliability of the class-average response depends upon the number of students rating the class: .95 for 50 students, .90 for 25 students, .74 for 10 students, and .60 for five students. Given a sufficient number of students, the reliability of class-average SETs compares positively with that of the best objective tests.

Many studies have indicated that the age of the instructor and the years of teaching experience are related negatively to SETs (Feldman, 1983), and effect is likely different with the particular SET dimension. It has been suggested that SETs may increase somewhat during the first few years of teaching (Simpson and Judy, 2000; Sojka et al., 2002). In addition, there seems to be a variation that depends on student number: smaller classes versus larger ones (100+) (Simpson and Judy, 2000; Sojka et al., 2002). It has been argued that SETs are reliable indicators of the student reactions to the instructor, instead of the subject material they are likely to remember five years after the class. It has also been suggested that students cannot recognize effective teaching until after they are expected to apply this knowledge in subsequent coursework, or after their graduation. However, studies show good agreement between responses by current students and alumni (Centra, 1979, 1989; Marsh, 1987). In a study by Overall & Marsh, 1980, ratings in 100 classes correlated .83 with ratings

by the same students when they again evaluated the same classes retrospectively several years later, at least one year after graduation. These studies indicate that SETs for alumni and current students are very similar.

SETs are a function of the instructor rather than the course that is taught

My personal view is that they are a function of the instructor and not the material. There are faculty who claim that their course or material is just hard to teach or students don't like it as much and that is why then don't do so well on evaluations.

I have heard this for a number of years, but there is never any objective evidence provided for this claim. Their claim also seems to be disproved by the fact that in every course the department teaches there are faculty who get very good student reviews.

Therefore, I have come to believe that the fault may lie in those who make such claims and not the material that they are teaching. "Mostly it is the teacher, I believe. But there are large influences of class size, whether it is a required course, whether a freshman versus sophomore or senior course, a lab versus a lecture course, etc" Professor Jonessaid.

When the same instructor teaches several courses, the degree of correlation between respective SETs for each course has been questioned. Another unclear correlation is that of SETs of the same course taught by different teachers. Results have been shown to indicate a relationship between the SETs and the instructor who teaches a class, as opposed to the subject material of the particular class being taught. Thus, for example, Marsh (1987) reports that for the overall instructor rating, the correlation between ratings of different instructors teaching the same course (i.e., a course effect) was -.05, while correlations for the same instructor in different courses (.61) and in two different offerings of the same course (.72) were much larger. These results support the validity of SETs as a measure of teacher effectiveness, but not as a measure of the course effectiveness that is independent of the teacher. Gilmore, Kane, and Naccarato (1978) suggest that ratings for a given instructor should be averaged

across different courses to enhance generalizability. If it is likely THE VALIDITY OF STUDENTS'EVALUATIONS OF TEACHING EFFECTIVENESS (SETS) that an instructor will teach many different classes during his or her subsequent career, then tenure decisions should be based upon as many different courses as possible.

Validity

There is no single factor of effective teaching that is sufficient for evaluation, and thus SETs are difficult to validate. Researchers have focused on a narrow approach and validity that is based on student learning as the only criterion of effective teaching. However, this limited approach inhibits a better understanding of SETs and what kind of information can be obtained by SETs. Marsh (1987) advocated a construct validation approach in which SETs are appeared to be related to various other indicators of effective teaching and specific rating factors are appeared to be highly correlated with the most logically and theoretically variables. Within this network, the long-term stability of SETs, the generalizability of ratings of the same instructor in different courses, and the agreement in ratings of current students and alumni all these support for the validity of SETs. In addition to student learning, there are other criteria such as changes in student behaviors, instructor self-evaluations, and the ratings by colleagues and administrators. A construct validity approach to the study of SETs now is widely accepted (Howard, Conway, & Maxwell, 1985; Cashin, 1988). However, the drawback of this approach is obtaining criterion measures that validly reflect effective teaching. Criterion measures that lack reliability or validity should not be used as indicators of effective teaching for research, policy formation, feedback to faculty, or personnel decisions. "It is my experience that those who score high in SET instruments, also tend to be strong in other dimensions of teaching, because high scores tend to indicate such things as passion for teaching, attention to details, concern, and respect" Professor Jones said.

Potential Biases

As are all surveys, SETs are biases. It is important to

understand the nature of the biases and how they can be controlled. A large study of potential biases to SETs is frequently theoretical and methodologically flawed. Centra (1979) and Marsh (1987) reviewed several large-scale studies of the multivariate relationship between a comprehensive set of background characteristics and SETs. They found between 5% and 25% of the variance in SETs could be explained by the content of the SET items and questions, the background characteristics, may be the academic discipline, and the institution(s) where the study was conducted. In two comprehensive multivariate studies (Marsh, 1987) of 16 background characteristics explained about 13% of the variance in the set of SEEQ dimensions. However, the variance varies from more than 20% in the overall course rating and the learning/value dimension, to about 2% of the organization and individual rapport dimensions. They find that more favorable ratings correlate with higher prior subject interest, higher expected grades, higher levels of workload/difficulty, and a higher percentage of students taking the course for general interest only. The analyses demonstrate that prior subject interest have the strongest impact on SETs, and that this variable accounts for about one-third of the relationship between expected grades and SETs. Part of this relation reflects a positive relation between students learning and SETs (Marsh, 1987; Marsh & Dunkin, 1992, 1997; Marsh & Roche, 1994, 2000). Marsh (2001) argue that "if a particular background variable has a similar influence on multiple indicators of teaching effectiveness, then that background variable may reflect a valid influence on teaching effectiveness. Similarly, if the pattern of relations between a particular background variable and multiple dimensions of SET match a priori predictions, then the results may support the construct validity of the SETs instead of a bias". This research suggests that this is not correct and SETs are biased. There is a good correlation between showmanship and between ease of getting a good grade and high scores on these forms. In addition, we are all humans and we have biases. For these reasons, there is considerable bias toward a particular kind of teaching, independent of the instructor's effectiveness in getting students to learn. "Humans all have biases (expected grade is one). However, even with the biases in these instruments, they provide

some valid data that are useful for improving teaching quality and making comparisons across faculty" Professor Jones said.

Summary

The literature search and the current entry demonstrates that SETs are not multidimensional, reliable and stable, but primarily a function of the instructor who teaches a course rather than the course that is taught. It has been shown that SETs relatively valid against a variety of indicators of effective teaching and relatively affected by a variety of potential biases. In spite of all the above criticisms (both implicit and explicit), This research indicates that the scores are useful to the faculty and the administration and the student. For faculty, they often convey weak points that need to be worked on. For administration, because the ratings are fairly stable, they provide one reasonably stable indicator of certain kinds of strengths that are (or are not) possessed by individual faculty members. When combined with other measures (e.g., peer evaluations and outcome assessment tools), they can contribute to a reasonably balanced evaluation of an individual's strengths and weaknesses as a teacher. "I agree, particularly with the faculty feedback and administrator side, because I have witnessed this personally. I do have a strong opinion about student choice of courses, however." Prof Jones said. It is required that each instructor add a course-specific section meant to assess what students believed that they have learned and how (they believe) the course and the teaching of the material can be improved. In some cases nothing would come of this, but (I believe) in a significant number of cases the results would be quite helpful. It might be possible to generate an index that took into account both the perceived difficulty of a course and how well the student liked the course. However, this could be misleading as a poor teacher could make even fairly easy material seem difficult or uninteresting.

A 'construct validation approach' is suggested for application in research, where SETs are designed in a multidimensional way to reflect teaching effectiveness, a single criterion of teaching effectiveness is unsatisfactory on it its own, and any elucidation, however tentative, of relations with validity criteria and with potential

biases should be evaluated critically in different contexts and in relation to multiple criteria of effective teaching.

However, there are few other indicators of teaching effectiveness other than SETs whose use is systematically supported by research findings. As noted by Cashin (1988), "student ratings tend to be statistically reliable, valid, and relatively free from bias, probably more so than any other data used for faculty evaluation."

References

Cashin, W. E. (1988). *Student Ratings of Teaching. A Summary of Research.* (IDEA paper No. 20). Kansas State University, Division of Continuing Education. (ERIC Document Reproduction Service No. ED 302 567).

Centra, J. A. (1979). *Determining faculty effectiveness*. San Francisco, CA: Jossey-Bass.

Centra, J. A. (1989) Faculty evaluation and faculty development in higher education. In J.C. Smart (Ed.), *Higher Education: Handbook of theory and research*. *Supplementary Vol. 5* (pp. 155-179). New York: Agathon Press.

Feldman, K. A. (1983). The seniority and instructional experience of college teachers as related to the evaluations they receive from their students. *Research in Higher Education,* 18: 3-124.

Feldman, K. A. (1987). Research productivity and scholarly accomplishment: A review and exploration. *Research in Higher Education,* 26: 227-298.

Gilmore, G. M., Kane, M. T., & Naccarato, R. W. (1978). The generalizability of student ratings of instruction: Estimates of teacher and course components. *Journal of Educational Measurement,* 15: 1-13.

Howard, G. S., Conway, C. G., & Maxwell, S. E. (1985). Construct validity of measures of college teaching effectiveness. *Journal of Educational Psychology,* 77: 187-196.

Marsh, H. W. (1981). Students' evaluations of tertiary instruction: Testing the applicability of American surveys in an Australian setting. *Australian Journal of Education,* 25: 177-192.

Marsh, H. W. (1982). SEEQ: A reliable, valid, and useful instrument for collecting students' evaluations of university teaching. *British Journal of Educational Psychology,* 52: 77-95.

Marsh, H. W. (1983). Multidimensional ratings of teaching effectiveness by students from different academic settings and their relation to student/course/instructor characteristics. *Journal of Educational Psychology,* 75: 150-166.

Marsh, H. W. (1984). Students' evaluations of university teaching: Dimensionality, reliability, validity, potential biases, and utility. *Journal of Educational Psychology,* 76: 707-754.

Marsh, H. W. (1986). Applicability paradigm: Students' evaluations of teaching effectiveness in different countries. *Journal of Educational Psychology,* 78: 465-473.

Marsh, H. W. (1987). Students' evaluations of university teaching: Research findings, methodological issues, and directions for future research. *International Journal of Educational Research,* 11: 253-388.

Marsh, H. W. (1993). Relations between global and specific domains of self: The importance of individual importance, certainty, and ideals. *Journal of Personality and Social Psychology,* 65: 975-992.

Marsh, H. W. (1995). Student evaluation of teaching. In T. H. Husen & T. N. Postlethwaite (Eds.), *International encyclopedia of education*

(2nd edition). Oxford: Pergamon Press.

Marsh, H. W., & Bailey, M. (1993). Multidimensionality of students' evaluations of teaching effectiveness: A profile analysis. *Journal of Higher Education,* 64: 1-18.

Marsh, H. W., & Cooper, T. L. (1981). Prior subject interest, students' evaluations, and instructional effectiveness. *Multivariate Behavioral Research,* 16: 82-104.

Marsh, H. W., & Dunkin, M. (1992). Students' evaluations of university teaching: A multidimensional perspective. *Higher education: Handbook on theory and research. Vol. 8.* (pp. 143-234). New York: Agathon.

Marsh, H. W., & Dunkin, M. J. (1997). Students' evaluations of university teaching: Amultidimensional perspective. In R. P. Perry & J. C. Smart (Ed.), Effective teaching in higher education: Research and practice. (pp. 241-320). New York: Agathon.

Marsh, H. W., & Roche, L. A. (1992). The use of student evaluations of university teaching in different settings: The applicability paradigm. *Australian Journal of Education,* 36: 278-300.

Marsh, H. W., & Roche, L. (1993). The use of students' evaluations and an individually structured intervention to enhance university teaching effectiveness. *American Educational Research Journal,* 30: 217- 251.

Marsh, H. W., & Roche, L. A. (1994). *The use of students' evaluations of university teaching to improve teaching effectiveness.* Canberra, ACT: Australian Department of Employment, Education, and Training.

Marsh, H. W., & Roche, L. A. (2000). Effects of grading leniency and low workloads on students'evaluations of teaching: Popular

myth, bias, validity or innocent bystanders? J*ournal of Educational Psychology,* 92: 202-228.

Marsh, H. W. (2001). Students' evaluations of Teaching. *University of Western Sydney.*

Overall, J. U., & Marsh, H. W. (1980). Students' evaluations of instruction: A longitudinal study of their stability. *Journal of Educational Psychology,* 72: 321-325.

Simpson, P. M. and S. Judy A. (2000). Student evaluations of teaching: An exploration study of the faculty response. *Journal of Marketing Education*, Vol 22 No 3, pp.199-213.

Sojka, J., Gupta, A. K., Deeter-Schmeiz, D. R. (2002). Student and faculty perceptions of student evaluations of teaching. *College Teaching*, Vol 50 No 2, pp.1-6.

Appendix A

The Survey that has been made by the Author includes 15 professors working in Virginia Polytechnic Institute and Sate University.

1. Why SETs (Students' Evaluation of Teaching Effectiveness) are collected?

2. Do you think SETs reflect the multidimensionality of teaching? Why Y or N?

3. Are SETs reliable and stable? Why Y or N?

4. SETs are a function of the instructor who teaches a course rather than the course that is taught? Do you agree or disagree and why?

5. SETs are relatively valid against a variety of indicators of effective teaching? Do you agree or disagree and why?

6. SETs are relatively unaffected by a variety of variables hypothesized as potential biases? Do you agree or disagree and why?

7. SETs are seen to be useful by faculty as feedback about their teaching, by students for use in course selection and by administrators for use in personnel decisions? Do you agree or disagree and why?

8. What are the pros and cons of SETS here in Virginia Tech? How we can improve SETs?

Effectiveness of a Workshop on the Scholarship of Teaching and Learning

Beth Dietz-Uhler
and
Cathy Bishop-Clark
Miami University

Abstract

To help faculty better understand the ways to conduct research on teaching and learning in their classrooms, we designed a workshop. The primary goal of the workshop was to model how we think of our classroom as a place to study teaching and learning. In the workshop, we reviewed definitions and basic processes of the scholarship of teaching and learning (SoTL), motivations for engaging in SoTL, examples of our own SoTL projects, and then provided a framework for participants to develop their own SoTL projects. Assessment of the workshop suggested that participants believed it met the stated goals and was successful in motivating them to complete a SoTL project.

Effectiveness of a Workshop on the Scholarship of Teaching and Learning

As faculty on regional campuses, we face some interesting challenges. Among them is finding the time and acquiring the resources to engage in required scholarly activity. Because our resources tend to be limited, we are compelled to identify alternate or nontraditional venues with which to engage in scholarly activity. Although the idea is certainly not new, we propose that the classroom be viewed as a space for scholarly activity. Indeed, the scholarship of teaching and learning (SoTL) has received considerable international interest since first introduced in the early 1980's (Healey, 2003). Because our own SoTL activity has proven rewarding and profitable, we designed a workshop to encourage participants to approach their classrooms as a research space. In this manuscript, we report on the components of the workshop and its effectiveness in meeting the goals

of promoting SoTL activity.

The Workshop

The workshop included several different components. First, we provided a brief review of the SoTL literature, focusing on definitions, purposes, basic processes, and evaluation of SoTL. Second, we presented a framework for conducting research, and then presented participants with four examples of our SoTL projects using the framework. Finally, we worked with participants to develop their own SoTL project using this framework.

Overview of Scholarship of Teaching and Learning Literature

We began the workshop by presenting and discussing several definitions of SoTL. The one focused on most extensively was offered by Shulman (1999):

> "An act of intelligence or artistic creation becomes scholarship when it possesses at least three attributes: it becomes public, it becomes an object of critical review and evaluation by members of one's community, and members of one's community begin to use, build upon, and develop those acts of mind and creation". (p. 15)

We also presented some of the purposes of engaging in SoTL activity, including the need to produce formal, peer-reviewed communications about teaching and learning (Healey, 2003), to gain a sense of self-fulfillment and commitment to being the best instructor one can be (Kelly-Kleese, 2003), to reflect on one's own teaching (Nelson, 2003), and to assess innovations in the classroom, curriculum, or discipline (Saylor & Harper, 2003).

We examined the basic research processes involved in any SoTL project. These include the establishment of a purpose, problem or goal; review of the relevant literature; selection of appropriate methods to address the purpose; report of results; critique and dissemination of the project; and then a critical reflection of the scholarship (Saylor & Harper, 2003).

We concluded this portion of the workshop with a sense of how SoTL work is evaluated. More specifically, we presented six criteria that can be applied to any form of scholarship (Glassick,

Huber, & Maeroff, 1997). These criteria are clear goals, adequate preparation, appropriate methods, significant results, effective presentation, and reflective critique.

Research Framework

In this portion of the workshop, we presented participants with a basic framework with which to conceptualize the research process. The framework involves a series of five steps:

1. Identify the research question or problem or issue.
2. Choose an appropriate methodology to design a study.
3. Collect the relevant data to address the research question.
4. Analyze the data and draw conclusions.
5. Report the research findings.

Using this framework, we modeled for participants how we initiated and completed four different SoTL projects. These projects included an assessment of the effectiveness of classroom activities designed to improve students' understanding of issues in virtual communication, a project on how service learning impacted students in a systems analysis class, an experiment designed to test whether virtual communication improves subsequent face-to-face classroom discussions, and a protocol analysis of a novice programmer's problem-solving ability. For each of these projects, we showed participants how we worked through each of the five steps of the research framework. We also made clear to participants that each of these projects led to peer-reviewed conference presentations and publications.

Designing a SoTL Project

The majority of the workshop was devoted to working with participants to design their own SoTL projects. We did so by posing questions or providing information for each of the steps as well as illustrations from previous SoTL activties. In fact, several specific examples of very different past projects were used to highlight the issues at each step. The idea of the workshop was to provide workshop participants with both a structure for creating their own projects as well as stimulate thought by giving previous examples.

Identify the research question or issue

For this step in the research process, participants were prompted with questions such as, "Is there a problem or issue in teaching or learning that needs to be addressed?", "Are there classroom activities or projects that can be assessed to determine if learning is improved or attitudes toward the material changed?", "Is a type of pedagogical approach you are using more effective in improving learning than another type of approach?". They were asked to think about these questions and write one problem or issue or question that they wanted to explore. For example, to illustrate this phase we discussed how the research question for one particular project was "How do novice computer programmers learn to program?" This was in fact a real question that drove a recent research investigation.

Design the study

Participants were presented with a variety of different research design and data collection approaches, including a case study, a survey or questionnaire, experiments or quasi-experiments, behavioral observation, archival research, focus groups, examinations, and hybrid approaches. For each of these approaches, a brief description was presented. Then, participants were asked to choose at least one of the research designs that were most suited to their question or issue. They were also asked to decide what variables would need to be measured and to construct a detailed plan for measurement. Again, to illustrate this phase we followed with the study of novice programmers. To better understand how novice programmers do in fact program we did a case study of a single programmer. We discussed and illustrated how the research question drives the choice of design.

Collect the data

Before detailing a data collection plan, participants were prompted with several questions to consider. For example, participants were asked to consider whether Institutional Review Board approval would be needed, whether the data would be collected by them or someone else, whether students' responses would be anonymous, and

whether they needed to photocopy students' work. After pondering these and other relevant issues, participants were asked to indicate how they will collect data and what issues needed to be considered before data collection. In the case of our novice programmer example, we collected data by having the programmer talk aloud as the/she solved a program (a protocol analysis). We audio taped as the programmer talked aloud. If the programmer ever stopped talking, the researcher simply asked the programmer "What are you thinking?" The data was then transcribed into a text file.

Analyze the data

Before detailing a plan for data analysis, participants were asked to consider such issues as what software, if any, would be needed to analyze data, who will analyze the data, what types of inferential and descriptive statistics, if any, were needed, and what results will lead to a confirmation or disconfirmation of the research hypothesis. In our example, the data collected was qualitative. The researcher gained insight to the research question by carefully analyzing the data that was collected. The researcher then compared the protocol analysis to the literature about novice and expert programmers.

Report the findings

Participants were provided with a list of SoTL journals and conferences to consider. They were then asked to indicate which conferences they would consider presenting their results at and what journals they would consider to publish their findings. In the novice programming example, the results were published in a journal which specialized in computer science education.

Assessment

The workshop was attended by 17 faculty from various disciplines, including accountancy, English, computer science, sociology, history, chemistry, and physics. At the completion of the workshop, participants were asked to complete an assessment. The following tables detail the results of this assessment. The quantitative

questions were based on a 7-point scale, with higher scores indicating more favorable results.

Table 1. Quantitative results.

Item	Mean	Standard Deviation
If one of the goals of the workshop was to better understand the motivations behind SoTL, how successful was it in meeting that goal?	6.92	.29
If one of the goals of the workshop was to develop a better understanding of the different kinds of SoTL projects, how successful was it in meeting that goal?	6.00	.74
If one of the goals of the workshop was to provide a framework for designing your own SoTL project, how successful was it in meeting that goal?	6.50	.52
If one of the goals of the workshop was to help you design an outline of your own SoTL project, how successful was it in meeting that goal?	6.08	.29
How likely are you to actually complete the SoTL project you outlined today?	4.83	1.19
How likely are you to recommend this workshop to a colleague?	6.67	.49

As Table 1 indicates, participants reported that the workshop was successful in meeting its stated goals. Participants also indicated that they were likely to complete the SoTL project that they outlined during the workshop.

The following tables contain sample verbatim responses from

open-ended questions.

Table 2. Verbatim responses about what was best liked.

What did you like best about this workshop?
I like the workbook & the attitudes of the facilitators. I like any gathering of my colleagues during which we discuss teaching.
Useful framework provided-made SoTL seem doable. Facilitators were encouraging and knowledgeable. Time to actually begin thinking.
Interaction during workshop with other participants and presenters.
The clearly identified definitions and processes in support of SoTL. You completed the picture very well-what is SoTL, why do it, and how.

Table 3. Verbatim responses about workshop improvement.

What can the workshop facilitators do to improve this workshop in the future?
I wish we had talked about the "policy" aspect of the purposes of SoTL.
For people like me, who take a while to warm-up to brainstorming and processing-possibly ask participants to bring with them to the workshop a classroom problem or issue they'd like to explore.
Personally, I think the workshop format per se is not as useful as hearing more details about your own example projects. I always feel I need more info & knowledge to answer workshop questions effectively.
More time-maybe this should be a half day workshop?

Table 4. Verbatim responses about follow-up workshop.

Would you like to see a follow-up to this workshop? If so, then what topics might be included?
Yes, IRB-I still avoid going there. IRB training block I think it's going to take too long, etc. I'd like to see this follow-up linked to the SoTL working group-perhaps use that group meeting to pull people in and then decide what forms of SoTL support would be helpful. All this was very overwhelming to me. Perhaps this workshop could be made into two. More workshops-maybe those designed to help guide people who have some semi-solid ideas. Yes-let's continue the dialogue! I don't know. Everyone is at such a different stage that it might be more beneficial to have a listserve or something for ideas & collaboration.

These verbatim responses suggest that participants appreciated working in a community atmosphere and appreciated the research framework we provided. They also indicated that the workshop should be longer or divided into more manageable, less overwhelming segments.

Future Plans

We intend to conduct this workshop in the future. Motivated by comments we received about following up on this workshop, we would also like to pursue the formation of a SoTL faculty learning community (FLC). Such a community would allow us to provide more hands-on training for participants interested in pursuing a SoTL project from start to finish. On the basis of this workshop, there

appears to be a need for the formation of a SoTL FLC.

Biographical Information

Beth Dietz-Uhler is Professor of Psychology at Miami University Middletown. Her research interests include the scholarship of teaching and learning, computer-supported interaction, and sport fans. She is interested in the use of technology in teaching and learning and teaches several online distance learning courses. She can be reached at uhlerbd@muohio.edu.

Cathy Bishop-Clark is a Professor of Computer and Information Systems and Assistant Dean of Miami University Middletown. Her research work has been primarily in the area of computer science education. She also has done interdisciplinary work in a variety of areas. She can be reached at bishopcu@muohio.edu.

Correspondence concerning this manuscript should be addressed to Beth Dietz-Uhler, Department of Psychology, or Cathy Bishop-Clark, Computer and Information Technology, Miami University, Middletown, OH 45042. Electronic mail may be sent to uhlerbd@muohio.edu. or bishopcu@muohio.edu. Telephone correspondence: 513.727.3200.

References

Healey, M. (2003). The scholarship of teaching: Issues around an evolving concept. *Journal of Excellence in College Teaching, 14*, 5-26.

Kelly-Kleese, C. (2003). Community College Scholarship. *Journal of Excellence in College Teaching, 14*, 69-84.

Glassick, C. E., Huber, M. T., & Maeroff, G. I. (1997). *Scholarship*

assessed: Evaluation of the professorate. San Francisco, CA: Jossey-Bass.

Nelson, C. E. (2003). Doing it: Examples of several different genres of the scholarship of teaching and learning. *Journal of Excellence in College Teaching, 14*, 85-94.

Saylor, C. & Harper, V. (2003). The scholarship of teaching and learning: A faculty development project. *Journal of Excellence in College Teaching, 14*, 149-160.

Shulman, L. S. (1999). Taking learning seriously. *Change, 31*, 10-17.

Discovering Culture through Textiles and Texts: Projects that Combine Language and Art

Kelly Frigard
and
Isabel Parra
University of Cincinnati—Clermont

> *The text is an entity woven together out of other entities, a textile, and the process by which texts are created, through material and physical effort in social life, brings material culture and language into connection.*
> -- Henry Glassie, from *Material Culture* (45)

Because they blend together different materials, textiles are a perfect theme to learn about how people work together to express themselves and to learn. This article describes a successful cross-disciplinary project involving students studying Spanish and Art at the University of Cincinnati, Clermont College. Through collaboration and looking beyond the standard boundaries of the classroom, students learned about traditional fabrics from around the world. They also learned how fabric can do much more than make the clothes we wear to school and work every day. The outgrowth of this project was an exciting art exhibit entitled, *"Fabrics from Around the World*" at the Clermont College Art Gallery, where students displayed artwork and gave poster presentations that celebrated other cultures, while reflecting elements of their own experience.

Building an Inter-disciplinary Collaboration

The idea for this collaboration was born while brainstorming activities to celebrate International Education Week (IEW) on our campus. We realized that to get more students involved, instructors needed to incorporate diversity-minded activities into the students' regular curriculum. In order for international education week to grow and thrive, we needed to involve more students and instructors. To that

end, it seemed right to create cross-disciplinary activities and then incorporate the activities into existing curriculum goals. Even beyond that, this project would have greater impact on our learning community if it included a public event or spectacle.

In her article "Teaching Art in the Context of Culture: A Study of the Borderlands," Elizabeth Garber (1995) calls for a pro-active style of art education by writing, "We must study to understand varieties and subtleties within the culture, and we must immerse ourselves within it" (p.223). To meet this goal, she describes how the ideal "study and immersion should include both books and contacts within the cultural community. . . develop[ing] new ways of thinking and valuing that are influenced by our interactions with the culture we are coming to understand" (p. 223). For us, the first step of the process had students from a Beginning Spanish class research three Latin American textile traditions, with an emphasis on the social and political underpinnings. These studies in material culture are a natural outgrowth of language instruction because while studying Spanish students learn that language and culture are intertwined. Since it is culture which gives language its meaning, language cannot be separated from its cultural context. Cultural activities provide the "web of meaning" that helps us understand the words we use. The deep connections between fabric and everyday activity are highlighted by Weiner and Schneider (1989) who describe the significant connections between cloth and society: "Indeed, cloth metaphors echo from many parts of the world, today and in the past. Social scientists and laypersons regularly describe society as fabric, woven or knit together" (p. 2). To emphasize this connection even further, students studied how fabrics tell stories. The Latin roots of the two words *textile* and *text* (or *textbook*) are both derived from the word "texere" which means "to weave." Nothing could be more appropriate than having language students investigate the ways fabric can be used for storytelling.

The three traditions examined by the Spanish students were: *"Arpilleras,"* quilted and embroidered stories of lost loved ones during Chile's military dictatorship of the 1970s and 80s; "Q*uipus,"* an ancient Incan system of recording information using colored

strings tied in knots; and the traditions and working conditions of "*Guatemalan Weavers."* After researching how textiles were used as part of life in specific Latin American communities, groups of three to four students from the Spanish class presented their newly-learned knowledge to students studying fiber art and fabric design.

Taking this as a starting point, students in the Fibers class explored the meaning of textiles from around the world through weekly readings and projects designed to create an awareness of the historic origins and rich processes used to make them. Their reading exposed them to meaning-filled fabrics from many parts of the globe. Articles focused on indigenous textile processes and their preservation, including felting traditions from Mongolia, wax batik from Java, shibori from Japan, and bride wealth cloth from Lembata. Students were asked to examine how cloth was made and how cultural traditions were preserved despite modernization and the growing tourist trade.

An important goal of the class collaboration was to build students' awareness of diverse cultural traditions while resisting the western tendency to see non-western cultures as the exotic other. For example, class discussions focused on fair trade organizations and their role in making sure that artisans are paid a living wage. Recognizing the difficulty and effort needed to cultivate these sophisticated techniques in a world of globalized commercial products, one student wrote, "The women in the area took it upon themselves to preserve their textile traditions by partnering with fair trade organizations. Otherwise, the artisans would have to use inexpensive synthetic materials in order to make enough money to survive. The traditional ways take much longer." This and other students comments reflect a growing cultural sensitivity and appreciation for the artistry and expertise needed to make these works.

We also examined the symbolic meaning of cloth in each society and the particular imagery used to express it. Responding to this inter-connection of function and meaning in Mongolian felted rugs, a student writes, "I learned that the distinct look of felt rugs comes from the quilting that is used to strengthen and bind the wool layers together. It is interesting to me that there is no human

or natural representation in the rugs, only symbolic or geometric patterns." Through their examination of diverse traditions, students were able to see the historic importance of cloth, and they also began to see connections with their own history and personal experience with cloth. Another student considered the process of Javanese batik in the following comment, "I found this article very exciting. I have only seen tie-dye T-shirts and never really gave any thought about them. I never knew this kind of history existed. I find it amazing that people put so much effort into fabric. They sometimes put years into a single item." Many of these student responses express an empathy that reaches toward Garber's desire to develop cultural understanding through art education. When she writes, "We must study individually to understand the varieties and subtleties of the culture we teach and write about and with a thoroughness that exceeds most current calls to 'multiculturalism'" (Garber, 1995, p. 229), she emphasizes how hands-on, applied art education combined with cultural studies can offer a vision of life with greater depth than only studying a subject with one discipline.

This long range view gave students perspective as they discovered even more about fabric arts. Simultaneously, with reading the articles, every week the Art students learned how to work with the materials and techniques for making each type of cloth. Each week they were assigned creative projects which incorporated the principles and elements of design including line, value, color, shape, and texture using shibori, batik, felting, spinning, and photographic transfer. Students learned how cultures use these important art elements to unify their designs.

With this background and with a working knowledge of textile processes, students embarked upon their final project, a culmination of these experiences. Our goal for the project was to have students incorporate the knowledge they learned from studying international textiles with meaning from their own lives. The project was open-ended in that students were invited to work in either an abstract or conceptual framework. The most exciting part of these projects was the variety of approaches represented. Some projects investigated the traditional quilts of their grandmothers, while some students were

very interested in felting and the possibilities for avant-garde clothing. The goal of the project was to experiment with these traditions while creating innovative new work.

A few months later, the two classes combined their efforts again to create an art exhibit shown during International Education Week 2006. In addition to the delicate fiber creations from the art class, informational posters in the gallery displayed the research from the presentations of the Spanish class. The creative and academic work of these classes created a learning opportunity for the entire college. More than a hundred members of the Clermont College community attended the exhibition's festive opening, with additional people visiting the gallery during open hours throughout the month.

These types of projects are very important because they show that class material is not an isolated experience and how cultural awareness makes students better citizens. By exploring cultural traditions of international textiles, students opened a window to discover an appreciation for the labor and artistry involved. This is shown by comments we received from the Clermont community during the show, including: "Wonderful show with many interesting styles and methods from around the world. I learned from your exhibit and certainly students did too." and "I really like how cultures from around the world are so unique. I really liked seeing how the projects were so different from one another." The audience was also interested in the concept of cross-disciplinary collaboration as expressed in the following comment, "What a great idea for collaboration! I enjoyed the exhibit very much and am impressed with both the themes and varied interpretations within them which your students so successfully accomplished."

Conclusions:

This is the second year we have combined the curricula of our classes to create an exhibit for International Education Week. It is a tradition we hope to continue for years to come. Collaborating with another class and preparing work that will be shown to the general public is an excellent way to develop students' sense of empathy and critical thinking skills. Students recognize that their efforts

are important and not "just something for the grade." Producing this collaborative project has definitely been a learning experience for both faculty and students and it has been a way to connect the campus at large. As we reflect on the achievements of weaving together our college community, an unexpected benefit grew from this faculty collaboration. Our intention was to provide activities to get students involved in mind-expanding, "global consciousness raising" experiences. Inadvertently, while developing these learning experiences we have made connections between like-minded professors who see the advantages of international education. We now seek ways to knit our courses together across disciplines, and through such interdisciplinary activities we provide our students with role models for "thinking outside of the box" and expanding their perspectives. Through collaboration, we create connections between disciplines. The connections, in turn, help students see more of the world around them.

References

Garber, E. (1995). Teaching Art in the Context of Culture: A Study in the Borderlands. *Studies in Art Education,* 36 (4), 218-232.

Glassie, H. (1999). Material Culture. Bloomington, IN: Indiana University Press.

Weiner, A.B., & Schneider, J. (Eds.). (1989). Cloth and Human Experience. New York: Wenner-Gren Foundation for Anthropological Research.

Biographical Information

Isabel Parra, is an Assistant Professor of Spanish in the Division of Humanities and Social Sciences at the University of Cincinnati-Clermont College. She teaches Spanish Language and Hispanic Culture courses, and she is currently the Academic Coordinator for Foreign Languages in her Division. She earned a M.A. in Spanish and a Doctorate of Education with concentrations in Literacy/TESL from the University of Cincinnati. Her dissertation was written about oral proficiency testing and language progress over time. Her current interests include writing about cultural diversity in the classroom and encouraging students to study abroad.

isabel.parra@uc.edu
University of Cincinnati, Clermont College
4200 Clermont College Drive
Batavia, OH 45103

Kelly Frigard received her MFA in Inter Media art from the University of Iowa in 1996. She has traveled widely to northern climates pursuing her interest in traditional art forms including weaving, knitting, spinning wool, and felting. As a visiting artist in the arctic region of the Northwest Territories she worked with an Inuit women's sewing co-operative and learned how to work with seal and caribou skins. In 1997 she received a Fulbright Fellowship to study traditional textiles in Sweden at Saterglantan Hemslojdens gard in Insjon and Handarbetets Vanner in Stockholm. Following her interest in felting and natural dyes, she also taught and studied at Jurva College of Arts and Crafts in Jurva, Finland. She is currently an Assistant Professor of Art and Area Coordinator of the Art program at University of Cincinnati's Clermont College in Batavia, Ohio.

kelly.frigard@ucedu
University of Cincinnati, Clermont College
4200 Clermont College Drive
Batavia, OH 45103

Family Matters: Family Patterns of Perceived Social Support and Family Intrusiveness of Rural/Appalachian Regional Campus Students.

Steven M. Toepfer
and
David M. Dees
Kent State University—Salem

Abstract

This exploratory study examines the interrelationship between Family Social Support and Intrusiveness in university females. The comparison groups consisted of students that attend a regional campus of Kent State University located in a rural/Appalachian setting (n=146) and students attending college in a Midwestern urban center (n=71). Findings indicate two significant differences between these groups; 1) rural/Appalachian students report less perceived social support and 2) substantially higher levels of intrusiveness from their families. These findings are connected with the literature on rural/Appalachian culture. Implications and future directions of this research are also discussed.

Introduction

A new Assistant Professor (Toepfer) raised and educated in urban centers in both the Northeast and Midwest moved to rural Columbiana County to begin his career at Kent State University Salem. He immediately noticed differences between student populations. He began to learn more about these differences through class discussions, writings and his Appalachian peers (Dees), realizing that these students face a unique reality when attempting to achieve a college education. As a professor of Human Development and Family Studies some patterns stood out more than others. One of the strongest dynamics, which seemed to cut across age, gender or educational background, included the infusion of family issues by students into the classroom, office appointments, and casual conversations. This practice had been a rare occurrence at the residential-urban universities. Students

at Salem invoked family related conversations for a host of reasons; non-attendance, late projects, themes for assignments, as inspiration for personal decisions such as choice of career, and even to facilitate a more personal student-professor relationship – most notably invitations to family parties, cookouts and a bonfire. Thus, this new professor set out to understand the new teacher-student dynamic.

Various studies have defined and examined how rural/ Appalachian culture affects students' educational expectations and experiences (Ali & McWhirter, 2006; Ali & Saunders, 2006; Chenoweth & Galliher, 2004; Dees, 2006; Hektner, 1995). Additionally, various texts describe the uniqueness of Appalachian history and cultural heritage (Abramson & Haskell, 2006; deMarrais, 1998; Drake, 2001; Jones, 1994; Obermiller & Maloney, 2002; Williams, 2002). The focus of this study was an attempt to verify if and how much the Appalachian cultural reality of significant family relationships, described in the literature, might help educators better understand the complexities of the family-student-educator dynamic as observed by faculty at the regional campus. In doing so, caution was taken to maintain sensitivity to the challenge of Billings, Norman and Ledford (1999). These authors state:

> Appalachian scholars have come to recognize that there are many Appalachias, and applying generalizations often contradict local heritage and experiences. Like other American minority groups, Appalachians resist classification. Their culture is dynamic and they are constantly in the process of re-defining their identity (pp. x-xi).

Therefore, the findings in this study should not be generalized to all students who attend regional campuses throughout Ohio. This investigation explores key differences, in particular, relationships with the family that exists between Kent State University Salem Campus students and residential students who attend a large mid-western urban university. The researchers hypothesized that they would find measurable differences concerning the impact of student-family relationships between Appalachian students and their residential-urban centered counterparts. Specifically, the goal of this investigation is

to better understand the existing and rich anecdotal family dynamics empirically by quantifying perceived social support from the family (PSS) and family intrusiveness (FI) between the urban-residential students (URS) and the KSU-Salem (KSU) students.

Perceived Social Support

Social support has been defined as the subjective evaluation of the quality of social support received and available (Procidano, 1992). The concept of perceived social support conveys the importance of interpersonal networks and the extent to which an individual believes his or her needs for support, information, and feedback are fulfilled (Caplan, 1974; Procidano & Heller, 1983). Perceived social support has strong interpersonal connections that, while often measured individually, clearly relate to important social networks or reference groups such as the family and peers (Gottlieb, 1981; Heller & Swindle, 1983; Ologun & Ibigbami, 2006). Gottlieb (1981, 1978) demonstrated that social support is in fact related to interpersonal factors and called these dynamics interpersonal helping relationships. Hirsch (1979, 1980) referred to this as network density and emphasized the importance of ties among members in a network. The current investigation explores potential differences between URS and KSU groups regarding these helping behaviors and perceived social support.

Family Intrusiveness

Family intrusiveness is the degree to which a family promotes intimacy and minimizes conflict and inappropriate emotional intrusiveness (Bartle-Hering & Gavazzi, 1996; Gavazzi, 1993, 1994; Gavazzi, Goettler, Solomon & McKenry, 1994; Minuchin, 1974). It refers to the unique strategies each family employs to regulate and develop the boundaries of its emotional life (Constantine, 1986). The concept of boundaries has been used in the family literature to describe family structure and emotional boundaries (Minuchin, 1974). Friedman (1991) referred to elevated levels of family intrusiveness as inappropriate boundary strategies that limit one's ability to function in close relationships without having their thinking, emotions, and behavior involuntarily governed by others. Boundary management

is often conceptualized as continuous, ranging from disengaged to enmeshed (Hoffman, 1981; Minuchin, 1974). The disengaged family has a relative absence of strong emotional connections and operate with rigid or restricted emotional dynamics. Conversely, the enmeshed family is an error-activated system that is typically over involved with one another and exhibit diffuse emotional boundaries (Hoffman, 1981). The point along the disengaged-enmeshed continuum a family functions indicates relative patterns of distance regulation that help explain how a family system responds to members emotionally. These emergent intimacy-conflict patterns constitute the emotional life of the family and signify identity tasks that include management styles for emotional regulation, interpersonal household maintenance, and the management of changes in family structure over time (Hess & Handel, 1985). Effective families support a healthy tolerance for individuality and self-differentiation (Bowen, 1978), expect cooperative interactions (Toepfer & Gavazzi, 2007), as well as identity development and the capacity for intergenerational intimacy (Allison & Sabatelli, 1988).

The intent of this investigation is to empirically explore and illuminate the role of family intrusiveness as a potential differentiating factor between URS and KSU students. It was hypothesized that a difference would be found, reflecting the KSU student's willingness to invoke one's family in their educational experience.

Participants

Two samples were drawn representing each of these groups. The first university sample consisted of all residential students in an urban setting. The second sample was drawn from an entirely non-residential group of female students attending a regional campus located in a rural/Appalachian area. The first sample collected was the urban-residential group which had a disproportionately low number of males (n=8). As a result the males were dropped from the KSU sample (n=42) to control for sex. Participants were given class participation credit for taking part. They were asked by the primary investigator to read and sign a consent form while seated in a quiet room. A short battery of assessment instruments including Perceived Social Support Scale for the Family and the Family Intrusiveness

Scale were provided for both samples. The entire procedure took approximately 40 minutes per student to complete. Each student was assigned a code number as to assure anonymity.

Residential respondents from the urban university totaled 71 in number, made up 32.7% of the sample. The average age of the residential sample was 21.54 (range: 18-25; SD = 1.56; Median = 21). The racial composition of the participants was random and consisted of 92.3% Caucasians, 4.6% African-Americans, 1.5% Hispanics, and 1.5% checked the "other" category. At the time of the study the sample consisted of 1.4% freshmen, 12.9% sophomores, 35.7% juniors, 48.6% seniors, and 1.4% graduate students.

The KSU participants totaled 146, accounting for 67.3% of the sample. The average age of this sample was 22.85 (range: 16-49; SD = 6.93; Median = 20). The racial composition of the participants was random and consisted of 96.6% Caucasians, 0.7% African-Americans, 0.7% Hispanics, and 1.4% checked the "other" category. The sample consisted of 58.2% freshmen, 18.5% sophomores, 10.3% juniors, 4.8% seniors, and 6.2% "other" option.

Instruments

The *Perceived Social Support Scale – Family Version* (PSS-Fa) is a 20-item questionnaire developed to represent different ways in which family members might be involved in the adolescents' and young adults' lives. The PSS-Fa is a family support measure that indicates family intimacy tolerance. The Perceived Social Support scale was found to possess both high test-retest reliability (r = .83 over a 1-month interval) and internal consistency (Cronbach alpha = .90) on the preliminary version of the scale (Procidahno, 1983). The *Family Intrusiveness Scale* (FIS) is a 13-item questionnaire that assesses family functioning in terms of distance regulation (Gavazzi, Anderson & Sabatelli, 1995). Higher scores indicate "nonlegitimate family involvement" in the respondent's life and is viewed as "antithetical to individual health and adjustment and family cohesion" (Gavazzi, Reese, & Sabatelli, 1998, p.68), suggesting over involvement and possible enmeshed patterns. Previous studies show the FIS as internal consistency, using Cronbach's alpha (1951) to establish reliability,

with findings of .91, .88, and .89. Construct validity ranges between .49 - .76 according to factor analysis (Gavazzi, Reese, & Sabatelli, 1998).

Results

A Levene's t-test was conducted for both URS and KSU Salem groups. A significant positive correlation was found for PSS ($F(1, 211)=23.2$, $p<.05$, $t=14.83$) and FIS ($F(1, 211)=12.6$, $p<.05$) using the Levene's Test, indicating unequal variances between URS and KSU students. Perceived social support demonstrates highly significant variance between the urban-residential or URS students and the KSU Salem group. The urban-residential group reports significantly more social support from their family than does the KSU Salem group. Family intrusiveness also showed a statistically significant difference between the two groups. Specifically, the KSU Salem students report their families as more intrusive and overly involved in their lives.

Discussion

The results clearly show unequal variance between family intrusiveness and perceived social support, indicating significant differences between the KSU Salem (KSU) and urban- residential students (URS) for both variables.

Family intrusiveness, as noted, differed significantly between the two groups and indicates unique strategies each family employs to regulate and develop the boundaries of emotional life. The KSU Salem sample reports family members as overly involved in their lives. Family involvement in various domains such as decision-making, extra-familial ties, as well as global qualities of involvement appears to be normative for this group. The URS sample reports less intrusive experiences. This finding is easily connected to the literature on rural/Appalachian students. Extended family connections and involvement are described in numerous sources on rural/Appalachian culture (Higgs, Manning & Miller, 1995; Jones, 1994; Obrien, 2001). As Jones (1994) notes, "Appalachian people are family-centered" (p. 75). He states:

The Appalachian family is subject to the same stresses

> and strains that affect all American families, and there is alienation, divorce, and abuse here as everywhere, but there is strong attachment and commitment to the extended family in Appalachia that is becoming rare in a land where most of us live someplace other than where we were born (p. 80).

Given the literature on Appalachian culture, it is not surprising that, if the KSU Salem students identify as rural/Appalachian individuals, these two groups would differ in terms of family intrusiveness. It appears that the cultural value of family connectedness is shared by these students. However, labeling this deep family involvement as reaching the "emeshed" state of unhealthy behavior would be inappropriate for this group. The statistical findings only suggest differences between the groups and should not be viewed in terms of healthy or unhealthy family relationships. Nevertheless, the data does suggest that more research needs to be done on defining family intrusiveness that examines the influence of culture on family relationships.

Perceived social support is reported as significantly less available to the KSU Salem students the URS group. This may be due to less parental support for their university endeavors and/or they simply are from families that are less expressive in terms of social support. At this juncture this is conjecture. However, the research on rural/Appalachian students provides insight into this finding. Education can create conflict in the lives of both parents and children in a rural/Appalachian setting. For both children and their families education is perceived, in some cases, to mean leaving the community and family (Gibbs, 1995; Hektner, 1995). Therefore, due to this reality, these students may be correct in that there is less emotional support for their educational endeavors. Additionally, in some cases, the students own sense of guilt about the prospects of education leading to leaving causes them to perceive less emotional support. In either case, more sophisticated research is needed in this area to verify this finding and the supporting literature.

These two findings present an interesting picture of the complex life of the KSU Salem students. One the one hand, the

family is participatory and intrusive in the lives of these students. Yet, at times there is a perceived lack of emotional support for their endeavors. According to these results, this complex push-pull family relationship creates a unique experience for these students which are not shared by their urban-residential counterparts. As Jones (1994) notes, "Independence and self-reliance were traits to be admired in the frontier. People banded together to help one another in communities, but the person who did not or could not look after himself and his family was pitied" (p. 52).

It is possible that this Appalachian cultural value "taking care of yourself" leads to a perceived lack of social support. When this cultural value is matched with the expectation of family involvement these students represent a very complex cultural reality described in the literature. More research is needed on this issue, but without question the KSU Salem students' college experience, in terms of family intrusiveness and social support from the family, is significantly different than the urban-residential counterparts.

Limitations

Obvious limitations exist for this study. The exploratory nature of this investigation prevents causal conclusions. Explaining the intrusive-social support connection remains outside the scope of this investigation. A more rigorous design, based on the current findings for direction, is called for in order to better understand the affects of perceived social support and family intrusiveness on regional campus students. A more diverse sample with regard to race and sex would certainly enhance the current findings. Future studies concerning social support and family intrusiveness should consider diversifying the sample and a more rigorous design to answer some of the questions generated by this investigation. For example, social status and class, not controlled in this study, may impact some of the family relational differences. Additionally, attitude towards education, educational background, opportunities to institutions of higher education and academic preparation are all factors that may be influenced by SES and, in turn, may have influenced our findings. Future within-group studies are needed to control for the SES differences.

This investigation yields significant data concerning key interpersonal differences among regional campus students verses urban residential university students. The findings presented here regarding perceived social support and family intrusiveness illuminate new inroads for understanding the rural/Appalachian regional campus college student experience.

Suggestions for Educators

As noted, this study should not be viewed as a cause and effect relationship. However, it does provide some insight for professors teaching within regional campus environments. Understanding our students makes us better educators. For example, at times we have all listened to professors' concerns about students not willing to come to them to get assistance with difficult course material. By understanding that it may be a cultural value (independence/self-reliance) that leads students' to make these choices, as professors we should be challenged to find different ways to connect with our students, without compromising their value system, to help improve their learning. Similarly, understanding the importance of family may inform some of our expectations and interpretations of student behaviors that seem different than our own preconceived notions of college students.

We are not suggesting that educators should romanticize rural/Appalachian cultural values. Instead, striving to understand our students' educational experiences will inform our teaching strategies and improve the learning environment. Discovering better ways to communicate with our students can only lead to more inviting educational experiences and subsequently improved student learning.

References

Abramson, R. and Haskell, J. (Eds.) (2006). Encyclopedia of Appalachia. Knoxville, TN: University of Tennessee Press.

Ali, S. R. & McWhirter, E. H. (2006). Rural Appalachian youth's vocational/educational postsecondary aspirations. Journal of Career Development 33(2), 87-111.

Ali, S. R. & Saunders, J. L. (2006). College expectations of rural Appalachian youth: An exploration of social cognitive career theory factors. The Career Development Quaterly, 55, 38-51.

Allison, M., D., & Sabatelli, R., M. (1988). Differentiation and individuation as mediators of identity and intimacy in adolescence. Journal of Adolescent Research, 3, 1-16.

Bartle-Hering, S. E., & Gavazzi, S. M. (1996). Multiple views on family data: The sample case of adolescent, maternal, and paternal perspectives on family differentiation levels. Family Process, 35, 457-472.

Billings, D. B., Norman, G. and Ledford, K. (1999). Back talk from Appalachia: Confronting stereotypes. Lexington, KY: University of Kentucky Press.

Bowen, M., (1978). Family therapy in clinical practice. New York: Aronson.

Caplan, G. (1974). Support systems and community mental health. New York:
Behavioral Publications.

Chenoweth, E., & Galliher, R. V. (2004, October 15). Factors influencing college aspirations of rural West Virginia high school students. Journal of Research in Rural Education, 19(2). Retrieved June 26, 2007, from http://www.umaine.edu/jrre/19-2.pdf.

Constantine, L. L. (1986). Family paradigms, New York: Guilford Press.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of sets. Psychometrika, 16, 297-334.

deMarrais, K. B. (1998). Urban Appalachian children: An “invisible minority” in city schools. In S. Books (Ed.), Invisible children in the society and its schools (pp. 89-110). Mahwah, NJ: Erlbaum.

Dees, D. M. (2006, June 28). "How do I deal with these new ideas?": The psychological acculturation of rural students. Journal of Research in Rural Education, 21(6). Retrieved June 26, 2007from http://www.umaine.edu/jrre/21-6.htm

Drake, R. B. (2001). A history of Appalachia. Lexington, KY: University of Kentucky Press.

Friedman, E. H. (1991). Bowen theory and therapy. In A. S. Gurman & D. P. Kniskern , Handbook of family therapy: Volume II (pp.134-170). New York: Brunner/Mazel.

Gavazzi, S. M. (1993). The relation between family differentiation levels in families with adolescents and the severity of presenting problems. Family Relations, 42, 463-468.

Gavazzi, S. M. (1994). Advances in assessing the relationship between family differentiation and problematic functioning in adolescents. Family Therapy, 21, 249-259.

Gavazzi, S. M., Goettler, D. E., Soloman, S. P., & McKenry, P. C. (1994). The impact of family and peer differentiation levels on adolescent psychosocial development and problematic behaviors. Contemporary Family Therapy, 16, 431-448.

Gavazzi, S. M., Reese, M. J., & Sabatelli, R. M. (1998). Conceptual development and empirical use of the family intrusiveness scale. Journal of Family Issues, 19(1), 65-74.

Gavazzi, S. M., Anderson, S. A., & Sabatelli, R. M. (1993). Family differentiation, peer differentiation, and adolescent adjustment in a clinical sample. Journal of Adolescent Research, 8, 205-225.

Gibbs, R.M. (1995). Going away to college and wider urban job opportunities take highly educated youth away from rural areas. Rural Development Perspectives 10, 3: 35-44.

Gottlieb, B. H. (1978). The development and application of a

classification scheme of informal helping behaviors. Canadian Journal of Behavioural Science, 10, 105-115.

Gottlieb, B., H. (1981). Social support and social participation among residence of a married student housing complex. Canadian Journal of Behavioural Science, 22, 46-52.

Hektner, J. (1995) When moving up implies moving out: Rural adolescent conflict in the transition to adulthood. Journal of Research in Rural Education, 11(1). Retrieved June 27, 2006 from http://www.acclaim-math.org/docs/jrre_archives/v11,n1,p3-14,Hektner.pdf

Heller, K., Swindle, R. W., (Eds.) (1983). Social networks, perceived social support, and coping with stress. In R. D. Felner, L. A. Jason, J. N. Moritsugu, & S. S. Farber, Preventtive psychology: Theory, research and practice (pp. 87-103). New York: Pergamon.

Henderson, S., Duncan-Jones, P., McAulley, H., Ritchie, K. (1978). The patient's primary group. British Journal of Psychiatry, 132, 74-86.

Hess, R. D., & Handel, G. (1985). The family as a psychosocial organization. In G. Handel (Ed.), The psychosocial interior of the family (pp.10-24). New York: Aldine.

Higgs, R. J., Manning, A. N. and Miller, J.W. (Eds.) (1995). Appalachia inside and out. Vol. 2, Knoxville, TN: University of Tennessee Press.

Hirsch, B. J. (1979). Psychological dimensions of social networks: A multimethod analysis. American Journal of Community Psychology, 7, 263-278.

Hirsch, B. J. (1980). Natural support systems and coping with major life changes. American Journal of Community Psychology, 8, 159-172.

Hoffman, L. (1981). Foundations of Family Therapy: A conceptual framework for systems change. Basic Books, Inc., Publishers. New York.

Leighton, A. H. (1959). My name is legion. New York: Basic Books.

Jones, L. (1994). Appalachian values. Ashland, KY: Jesse Stuart Foundation.

Minuchin, S. (1974). Families and family therapy. Cambridge, MA: Harvard University Press.

Obermiller, P.J. and Maloney, M. E. (Eds.) (2002). Appalachia: Social context past and present, 4th Ed. Dubuque, IO: Kendall/Hunt.

O'Brien, J. (2001). At home in the heart of Apppalachia. New York: Random House.

Ologun, A. O., & Ibigbami, O. S. (2006). Post-traumatic stress disorders after childbirth in Nigerian women: Prevalence and risk factors. International journal of Obstetrics & Gynaecology, 113(3), 284-288.

Procidano, M. E. (Eds.) (1992). Measures of perceived social support from family and friends: Meta-analyses of reliability and validity. In C. D. Spielberger & J. N. Butcher, Advances in Personality Assessment, 9, 1-26. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Procidano M. E., & Heller, K. (1983). Measures of perceived social support from friends and from family: Three validation studies. American Journal of Community Psychology, 11(1), 1-24.

Toepfer, S. M., & Gavazzi, S. M. (2007). Combining paper-and-pencil questionnaires and projective techniques to measure family distance regulation and interpersonal relatedness: An incremental validation study. Marriage & Family Reivew, 42(2), 77-94.

Williams, J. A. (2002) Appalachia: A history. Chapel Hill, NC: The University of North Carolina Press.

Biographical Information

Dr. Steven M. Toepfer is an assistant professor in Human Development and Family Studies at Kent State University's Salem Campus. He teaches undergraduate courses and conducts ongoing research regarding adolescent development, distance regulation, multi-method assessment of individuals and family systems, family impact on individual development, and projective assessment.

Kent State University Salem
2491 State Route 45 South
Salem, OH 44460
330.337.4285
stoepfer@kent.edu

Dr. David M. Dees is an assistant professor in Educational Foundations at Kent State University Salem Campus. He teaches undergraduate and graduate courses in educational foundations, ethics, and educational psychology. His research interests include the study of teaching artistry, the development of transactional awareness in educators, and educational issues in rural/Appalachian settings. He has published several papers in a variety of journals on each of these issues.

Kent State University Salem
2491 State Route 45 South
Salem, OH 44460
330.337.4285
ddees@kent.edu

Preparing Allied Health Care Students to Serve Latino Communities

Deborah Themudo
University of Cincinnati—Raymond Walters

Preparing Allied Health Care Students to Serve Latino Communities

Across the United States, limited access to health care has been a reoccurring problem. Latinos reported experiencing problems in health care situations relating to both language and culture (Pew, 2001). Twenty-nine percent of Latinos reported they had problems communicating with health care providers because of their language, and 18 % percent reported problems because of their race or ethnic background. Controversial as it may seem, before it is possible to expect all providers of health care services to communicate with patients in Spanish, it may be necessary for the United States education system to adopt the mastery of a second language as a normal part of education for all citizens. In the mean time, our task at Raymond Walters College is to prepare the Allied Health care students to work with this under-served population.

The U.S. Department of Health and Human services defines Health Literary as "the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions." These are the skills that all people need, for instance, to find their way to the right place in a hospital, fill out medical and insurance forms, and communicate with health care providers. These issues have been addressed by Downing and Roat (2002), and the following resources were suggested: native Spanish-speakers as primary health care providers, native English-speaking providers with extensive training in Spanish, extensive ESL (English as Second Language) training for Latinos, interpreters, volunteers from community service agencies, family and friends as resource support, and telephone and video

interpreting.

Acknowledging that a pool of native Spanish speaking physicians and staff are not immediately available, and training English-speaking medical professionals to use Spanish medical terminology is at least a three year process, the medical community recognized the enormous task ahead of them. Ideally, all immigrants would have access to English language training and the time needed to devote to their language studies. Qualified medical interpreters are overextended even in a city the size of Cincinnati. Many clinics use volunteers from community service agencies, but when the volunteers are not available, the immigrants' access to timely health care is once more compromised. Using children and family members as interpreters can be embarrassing and uncomfortable in medical situations. Additionally, many times the family members do not understand the medical terminology and may misinterpret a diagnosis or worse yet, misinterpret the directions necessary for prescription medicines. Telephone and video interpreting requires expensive equipment not always available in most public health care settings.

Furthermore according to the National Council of La Raza (NCLR) even though Latinos in the United States are affected by a wide range of risk factors and diseases, many health disparities they experience could be prevented by access to timely health care. The NCLR cites the biggest barriers to this access may be lack of health insurance and an inadequate supply of language services (NCLR, 2007). This study explores student and faculty attitudes in the Allied Health Programs and Raymond Walters College/University of Cincinnati toward working with the growing Latino population in the Greater Cincinnati area. The RWC Foreign Language Department has already created new Spanish language courses to improve the second language skills of the RWC Allied Health Care students. The need for specialized language and culture skills for health care professionals is an issue that faces many allied health programs as local populations become more diverse.

In 1998 the American Medical Association reported that low literacy in English is a barrier to effective access to health care. The Test of Functional Health Literacy in Adults (1995) findings

reported that low proficiency English patients' failures to seek medical assistance led to treatable diseases turning into chronic conditions, and many times, costly hospitalizations. Shame and low functional literacy were the most frequently mentioned reasons for not seeking medical care. (Downing, 2002) The study found that 15 percent of these low literacy English speakers could not read and interpret a prescription bottle with instructions to take one pill by mouth four times per day, 37 percent of this population did not understand instructions to take medication on an empty stomach, and 48 percent could not determine if they were eligible for free health care offered at local clinics. The most important aspect of treatment success was the level of communication established between the practitioner and the patient. This relationship strongly influences the patient's willingness to comply with the provider's therapeutic plan. Cultural literacy, including differences in eye contact, personal space, touching behaviors and social stigmas were also cited as important treatment issues. Given this barrier to timely health care, the present study was created to survey the attitudes of students and instructors in current medical training programs at RWC towards the need for specialized language and culture skills.

While most of the 38 million Latinos who make up 13 percent of the United States population speak English and believe that English competency is a necessity for success in the United States, nonetheless, there is a portion of the Latino population that needs language support systems while learning English. Medical forms are rarely translated, and there is a lack of professional interpreters and translators well versed in medical terminology. The implementation and enforcement of strong Low English Proficiency (LEP) guidelines would ensure that these individuals who are still learning English have equitable access to the health care system that they very often support with their tax dollars. Since the Latino community represents the largest racial and ethnic minority in the United States, the NCLR encourages the federal government to construct systems of support to aid the development of a culturally-competent, multi-lingual medical force. Nevertheless, current laws are inadequate in providing options that allow Latinos to access appropriate health care despite the immigrants' contributions to

this country. Here again, it is obvious that colleges need to intervene and respond to this health care crisis by creating programs for students that address the problem.

Responding to this health care crisis, the Foreign Language Department has implemented Spanish for Health Care classes to prepare our Allied Health students to work with the growing Latino community in the surrounding counties. We asked ourselves how these demographics affected what we teach, and we started new training programs. The 2000 US census data told us that there are now more than 70,000 Spanish-speaking immigrants in this area. Census data on the U.S. Latino population for the last ten years showed us enormous growth. For example, in Hamilton County the population grew by 83%; in Clermont County 114 %; in Butler County 225%; in Warren County 211% (U.S. Census, 2002).

In order to assess the RWC Allied Health Program participants' knowledge of this situation, this study was completed. The results of this needs assessment survey, "Spanish for Health Care Providers (Student and Faculty Opinion Surveys, March 2004)," are presented below. The participants included faculty members (27) and students (108) from the Nursing, Dental Hygiene and Radiology departments. The students surveyed range in age from eighteen to fifty years of age. The questions and results are reported below. Students and faculty responded to questions 1-4, rating their answers on a Likert scale of responses from strongly disagree to strongly agree. Questions 5 and 6 were yes/no options, and questions 7 was a short answer question.

1. I believe I could be working in clinical situations with Latino patients.
2. I would experience problems communicating with patients in Spanish.
3. I expect a Spanish/English interpreter to be available at all times.
4. I feel some second language training in Spanish would be beneficial to my career.
5. Time permitting, would you enroll in a Spanish course designed for health care providers?

6. Would you consider participating in a Service Learning opportunity or clinical experience outside the United States?
7. Have you ever studied a foreign language? If so, how long?

Responding to questions 1-4, the majority of students and faculty agreed that they will be working with Latinos in the community and that they will experience communication problems in Spanish. Both students and faculty acknowledged that some understanding of Spanish would be beneficial and that a qualified bilingual interpreter will probably not be available at all times (see Table 1).

In addition, if given the opportunity, students would consider taking a Spanish for Health Care course, and the participating faculty would support the development of such a course. The response to a Service Learning opportunity to work in health clinics outside the United States as part of a study abroad program was not as positive (see Table 2). Neither group felt that they could participate or support such a project because of the demands of their studies or family obligations.

In conclusion, the RWC Allied Health students and faculty realize that they can no longer view the world through a single cultural lens. They are motivated by community attitudes and demographics to seek at least minimal proficiency in one language other than their first language, however, they do not recognize this need as a high priority for which they would make other sacrifices in their daily lives to obtain. A globally competent student recognizes the work of cross-cultural understanding for personal fulfillment as well as for professional advancement. Perceiving this need, the Foreign Language Department has designed and implemented a new course, Spanish for Health Care Providers. In addition, the department now offers a Costa Rica Study Abroad Program (Intensive Spanish Language Training and Latin American Culture) in Heredia, Costa Rica, and will offer a new Service Learning component to this program in the summer of 2008. The faculty, staff, and students are beginning to see this education as more of a priority than before. As a direct result of participating in the Costa Rica study abroad course, students realized that they were

willing to make service learning a higher priority in their educational choices.

The second language acquisition of the RWC Allied Health care programs continued to be assessed to determine ways to the meet the ongoing needs of the Latino community. The process of completing the needs assessment survey and the reflection that accompanied this task may have made the problems of inadequate language and culture preparation more salient to the participants. It is possible that the first step of building an awareness of the needs of a specific community is to help health care providers reflect on their preparation to serve this community. The action steps of addressing the inadequacies could then be easier to enact once awareness has been raised. This is the case for expanding offerings concerning Spanish language and culture courses designed for health care providers at Raymond Walters College.

Table 1. Questions 1 to 4.

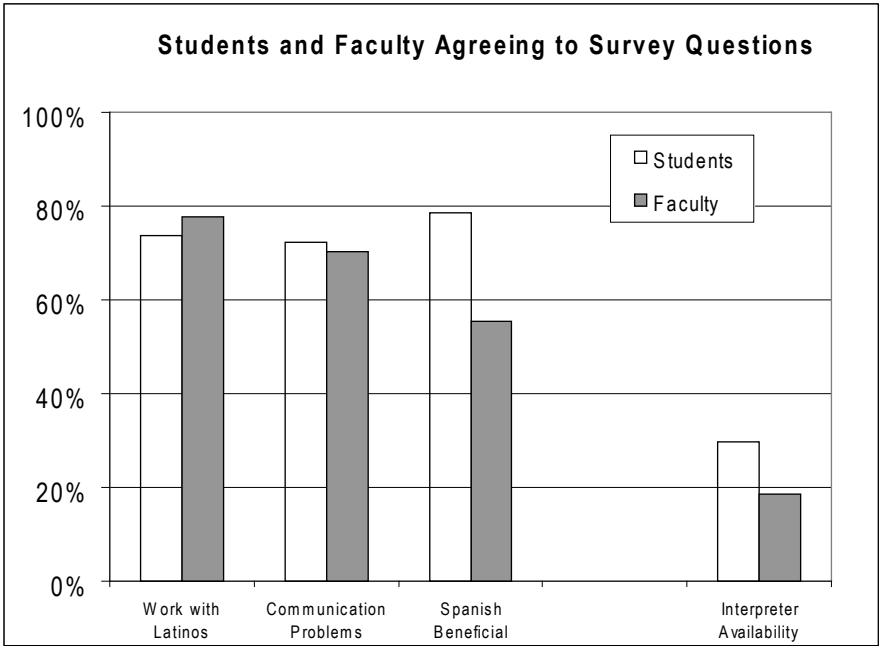
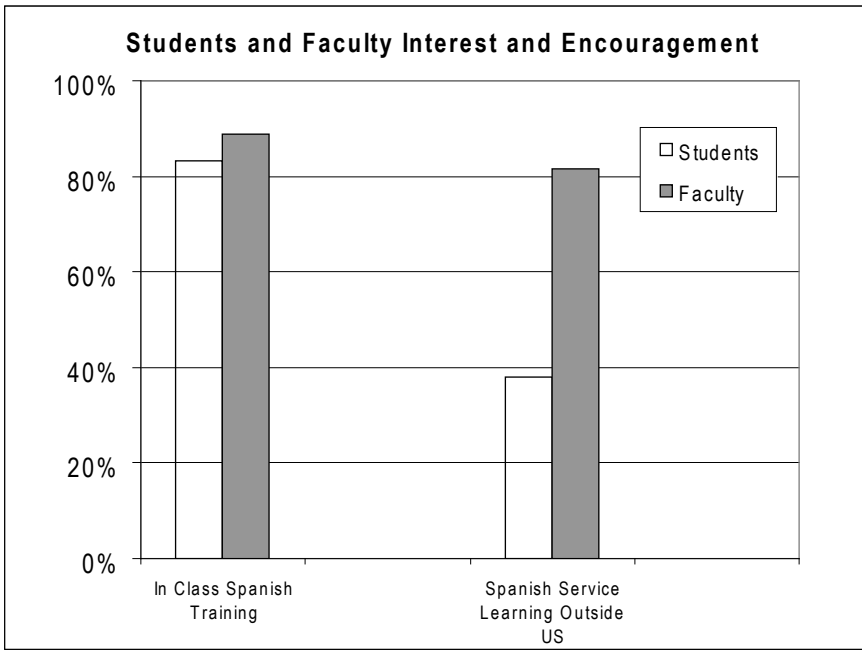


Table 2. Questions 5 and 6.



References

Alcalay, R., Saboga, F. and Gribble, J. (1992). "Profile of Latino Health and Implications for Health Education." *International Quarterly of Community Health Education, 12* 2: 151-22.

Bedolla, M. (1997). *Essential Spanish for Healthcare*. San Antonio, TX: Random House.

Chase, R. and Chase, C. (1998). *An Introduction to Spanish for Health Care Workers*. New Haven, CT: Yale University Press.

Chong, N. (2002). *The Latino Patient: A Cultural Guide for Health Care Providers* Yarmouth, MN: Intercultural Press.

Downing, B. and Roat, C. (2002). "Models for the Provision of

Language Access in Health Care Settings", *National Council on Interpreting in Health Care*, Albany, NY. Education Series, Inc.

Pew Hispanic Center/Kaiser Research Review. (2004). Survey Brief, 2002 National Survey of Latinos. Public Opinion and Media Research Program. Publication Number: 7005.

Rush, P. (2003). *Spanish for Health Care*. Upper Saddle river, NJ: Prentice Hall.

Therrien, M., and Ramirez, R.. (2000). *The Hispanic Population in the United States: March 2000, Current Population Reports.* Washington, EC: Bureau of the Census.

Tirado, M. (199. "Tools for Monitoring Cultural Competence in Health Care." San Francisco, CA: Latino Coalition for a Healthy California.

Biographical Information

Deborah Themudo

Currently a Spanish instructor at the University of Cincinnati/ RWC, Deborah has been an advocate for second language acquisition for the past fifteen years. She has lived and studied in Spain and Mexico and in 2004 received a scholarship from the Consulate of Spain to pursue studies at the Universidad de Granada in Spanish cinema. She has taught Spanish and English as a Second Language for Xavier University, holds a Master of Arts degree in Spanish Language and Literature from Marquette University and does medical interpreting in community health clinics and local hospitals. Her current research is devoted to the development of training programs encouraging access to health care for Latinos in the Greater Cincinnati area. She has organized two study abroad programs to Costa Rica and has been invited to teach at the Universidad de Juan Carlos, Madrid, in the summer of 2008.

Examining the Issue of Academic Plagiarism: What Do Students at Wright State University Lake Campus Know about Plagiarism?

Dave D. Hochstein, Judith Brewer, Melissa D. Steinke, and J. Drew Taylor
Wright State University—Lake

Abstract

Plagiarism is a serious, complex problem for university undergraduate and graduate students to face. Many remain uncertain as to exactly what plagiarism is, the many forms that plagiarism can take, and how to avoid committing plagiarism. In addition, attempts by faculty to warn students about plagiarism and then to detect and "penalize" plagiarism after it occurs most often lead to negative experiences for both faculty and students. This pilot survey study, conducted at Wright State University Lake Campus, was initiated for the purpose of clarifying what students know about plagiarism. The survey included basic demographic questions and assessment of the students' self-perception of their understanding of plagiarism, followed by examples of potential plagiarism including the use of paraphrasing, direct copying, and quoting. The students completing the survey had to determine for which of these examples plagiarism had occurred. On average, students overestimated their ability to detect plagiarism, with no student accurately identifying all of the plagiarized material as such. However, direct copying was correctly identified as plagiarism by students at higher rates than paraphrased material and quotations, suggesting that at least some student plagiarism may be unintentional, resulting from students' naïve understanding of plagiarism.

Examining the Issue of Academic Plagiarism: What Do Students at Wright State University Lake Campus Know about Plagiarism?

Wright State University Lake Campus is a small regional campus located in west central Ohio. It is a commuter campus that offers a wide variety of academic programs including associate

degrees, baccalaureate degrees, and master's level degrees. A rash of recent problems with plagiarism involving Wright State University Lake Campus students throughout academic disciplines resulted in concerned discussions among campus faculty and staff. This led to the current collaborative project between the Education and Psychology departments, the purpose of which was to find at least partial answers to certain guiding questions. These guiding questions relate to why our students plagiarize, whether they plagiarize intentionally, if they understand what plagiarism actually is, if we as faculty have our own clear understanding of plagiarism, how we as faculty can accurately detect plagiarism, what the penalties should be when students plagiarize, and how we as faculty can better educate our students so they do not commit plagiarism.

Plagiarism is certainly not new to academia, and it is not new to the Lake Campus. Student plagiarism has been a concern of higher education teachers for some time, but has received increased attention in recent years (e.g. Harris, 2004; McCabe, Trevino, & Butterfield, 2001). This is, at least in part, because of the increased presence of news reports of high-profile plagiarism (e.g. Forbes, 2003; Mehegan, 2006). In addition, the opportunity to plagiarize has never been greater. The growth of the Internet has created nearly unlimited access to research documents, but that same growth has made it more difficult to detect plagiarism by students (Hannabuss, 2001). Given the enormity of the task of better understanding and formulating potential solutions for plagiarism problems at a branch campus, the first step in the study was the creation of a student survey designed to generate data related to the first three of our essential questions including why our students plagiarize, whether their plagiarism is intentional, and whether they truly understand what plagiarism is.

In order to understand why our students plagiarize, we have to ask if their plagiarizing is intentional or not. There is abundant evidence that at least some students knowingly do so. For example, a CBS news poll in 2006 revealed that 20% of teenagers admitted to using the internet for plagiarism. Arguably more disturbing is the market demand for plagiarized materials by students, with the website cheater.com offering over 200 different essays for sale on the topic of

abortion as of November 2007. However, CBS' figure does not include those teenagers who plagiarized unknowingly (Harris, 2004). Thus, when trying to understand why students plagiarize, we must take into account those students who are not aware that they are doing so.

Another factor impacts the reasons for student plagiarizing is their understanding of what the term constitutes. Breen and Maassen (2005) report that their students could define plagiarism, but often had difficulties understanding when paraphrasing required citations. The current study addresses this point by having students utilize their own private definitions to determine if our text samples are plagiarized or not.

Method

Participants

128 participants (102 female), ranging in age from 17 to 46 completed the survey. One participant's survey was removed from the data pool, as she indicated that no plagiarism occurred in any of the examples.

Materials

A survey was developed by the authors to collect participants' educational history and training in plagiarism. The survey also assessed the students' self-perception of their understanding of plagiarism. The majority of the survey consisted of 16 passages of text, with a possible example of a plagiarized version of that text following each passage. Students had to determine for which of these examples plagiarism had occurred. Of the 16 passages, five were followed by examples of direct plagiarism (where portions of the original passage were copied without citing the original author and/or without putting the copied material within quotes) and five were followed by examples of indirect plagiarism (through paraphrasing without citing the original author). The remaining six passages were not examples of plagiarizing. All text passages on the survey were taken directly from the Indiana University School of Education website (www.indiana.edu/~istd/examples.html). A copy of the survey (without the original page

breaks) can be found in the Appendix.

Design and Procedure

Participants were given the surveys in several different types of classes within the Education and Psychology Departments. Participants were assured that their results were anonymous and confidential, and were given extra credit points for their participation.

Results

When asked if the Lake Campus could do more to assist students with academic writing, 41% (n = 52) indicated yes and 10% (n = 13) indicated no, with the remainder not responding. When asked if they understood when to cite sources, 95% (n = 123) indicated they did. When asked if they understood how to cite sources, 87% (n = 112) indicated they did. When tested on their understanding, however, none of the participants correctly identified the plagiarism status of all 16 passages. The eight most accurate participants correctly identified 14 of the 16 (88%) passages. On average, passages were correctly identified 63% of the time. The average rate of identification of non-plagiarized passages was higher (87% accuracy) than that of plagiarized passages (48%). The average rate of identification was higher for direct copying (59%) than it was for paraphrased or reworded material (37%). No significant correlations were found between participant class experiences and accuracy rates, though this may have been influenced by the roughly 25% of students who did not give full information about their class experiences.

Discussion

The results of the current study provide valuable insight into the issue of plagiarism, and provide a foundation for future research. It is clear that while our students thought they understand plagiarism, a direct test of that understanding indicated otherwise. For paraphrased or re-worded passages, the students actually performed at levels (37%) below those expected for chance (50%). Even for those passages copied directly from the source material, rates of identification (59%) were only slightly above those expected for chance. The causes of this

discrepancy between the students' self-identified knowledge and their actual performance need to be further examined.

The inability of students to accurately identify plagiarized passages suggests that at least some of their own plagiarism may be unintentional. Students who cannot accurately single out examples of other's plagiarism may very well have difficulty avoiding it in their own writing (e.g. Breen & Maassen, 2005). Additional student surveys that require students to write their definition of plagiarism might add further illumination to the interplay between how students understand plagiarism in a theoretical sense and in an applied situation.

Originally, the current study was to examine the correlation between the level of education that students had previously obtained in this topic and their ability to detect plagiarism. Unfortunately, the current study was not able to consistently measure the level of education that students had previously obtained in this topic. However, a modification of the way those types of questions are asked may allow us to shed light on this in the near future.

In conclusion, the current study suggests that the reason that students plagiarize may, at least in part, be due to not having an adequate enough understanding of the topic to detect it in concrete examples. Unintentional plagiarizing could very well be the result. As the project results are shared with the Faculty Senate at the Lake Campus, a worthy goal is to formulate a campus-wide plan to address plagiarism more effectively.

References

Breen, L. & Maassen, M. (2005). Reducing the incidence of plagiarism in and undergraduate course: The role of education. *Issues in Educational Research, 15(1),* 1-16.

CBS News. (2006, June 13). Poll: 1 In 5 teens use web to cheat. Retrieved November 28, 2007, from http://www.cbsnews.com/stories/2006/06/12/gentech/main1701357.shtml?source = search_story

Forbes, D. (2003). Noted blogger cops to copying. *Wired.* Retrieved November 28, 2007, from http://www.wired.com/politics/law/news/2003/04/58346?currentPage=all

Hannabuss, S. (2001). Contested texts: issues of plagiarism. *Library Management, 22(6/7),* 311-318.

Harris, R. (2004). Anti-plagiarism strategies for research papers. *VirtualSalt*. Retrieved February 11, 2007, from http://www.virtualsalt.com/antiplag.htm

Indiana School of Education. (2005). How to recognize plagiarism. Retrieved April 6, 2007 from http://www.indiana.edu/~istd/examples.html

McCabe, D., Trevino, L., & Butterfield, K. (2001). Cheating in academic institutions: a decade of research. *Ethics and Behavior, 11(3),* 219-232.

Mehegan, D. (2006). Viswanathan book deal raises more questions. *Boston Globe.* Retrieved November 28, 2007, from http://www.boston.com/ae/books/articles/2006/04/29/viswanathan_book_deal_ raises_more_questions/

Appendix

Plagiarism Questionnaire:

Please note, the following questionnaire should be answered anonymously. Either write in an answer or circle the answer that best fits you.

- Age: _____
- Gender: _____
- Number of College Credit Courses Completed: _____
- Number of College Writing Intensive Courses Completed: _____
- Number of College English Courses Completed: _____
- Major: _____

1. Have you ever had a class in high school or college that taught you step by step how to write a research paper?

High school:	College:
Freshman _____	Freshman _____
Sophomore _____	Sophomore _____
Junior _____	Junior _____
Senior _____	Senior _____

2. On a scale of 1-10 (10 is high), how would you rate your learning experience in that specific class?

High School _____ College _____

3. Do you understand when it is necessary to list your sources? (Y/N answer only)

4. Do you understand how to list your sources? (Y/N answer only)

5. Do you own a handbook on either MLA or APA style? (Y/N answer only)

6. Do you refer to your handbook when writing? (Circle one)

Regularly Often Sometimes Seldom Never

7. Do your college instructors at the Lake Campus require you to submit papers in APA or MLA style? (Circle one)

Regularly Often Sometimes Seldom Never

8. Do you seek help with writing research papers (Circle one)

Regularly Often Sometimes Seldom Never

9. From where do you seek help? (Circle one for each possibility)

a. Academic and Instructional Services (AIS)

Regularly Often Sometimes Seldom Never

b. Professors

Regularly Often Sometimes Seldom Never

c. Peers

Regularly Often Sometimes Seldom Never

d. Family members

Regularly Often Sometimes Seldom Never

e. Other

Regularly Often Sometimes Seldom Never

10. Do your college instructors address the issue of plagiarism with you? (Circle one)

Regularly Often Sometimes Seldom Never

11. How many papers have you written in college that required either MLA or APA style?

_____Freshman
_____Sophomore
_____Junior
_____Senior

12. Do you think we can do more at the Lake Campus to assist students with academic writing? (Y/N answer only)

13. For the following questions, you will be given a source text and a student text. Your goal is to correctly identify the student text as either an example of plagiarism or as an example of correct citing. Read the example carefully!

1. Original Source Material: Technology has significantly transformed education at several major turning points in our history. In the broadest sense, the first technology was the primitive modes of communication used by prehistoric people before the development of spoken language. Mime, gestures, grunts, and drawing of figures in the sand with a stick were methods used to communicate -- yes, even to educate. Even without speech, these prehistoric people were able to teach their young how to catch animals for food, what animals to avoid, which vegetation was good to eat and which was poisonous.	Source: Frick, T. (1991). *Restructuring education through technology*. Bloomington, IN: Phi Delta Kappa Educational Foundation.

1. Student Version: In examining technology, we have to remember that computers are not the first technology people have had to deal with. The first technology was the primitive modes of communication used by prehistoric people before the development of spoken language.

1. Is the student's version plagiarized? Y N

2. Original Source Material: Constructivism is a movement that extends beyond the beliefs of the cognitivist. It considers the engagement of students in meaningful experiences as the essence of learning. The shift is from passive transfer of information to active problem solving. Constructivists emphasize that learners create their own interpretations of the world of information.	Source: Heinich, R., Molenda, M., Russell, J. D., & Smaldino, S. E. (1999). *Instructional media and technologies for learning.* Upper Saddle River, NJ: Prentice-Hall.

2. Student Version: Constructivists do not hold views entirely opposed to those of the cognitivists. The position of constructivists "... extends beyond the beliefs of the cognitivist" (Heinich, Molenda, Russell, & Smaldino, 1999, p. 17).

References: Heinich, R., Molenda, M., Russell, J. D., & Smaldino, S. E. (1999). *Instructional media and technologies for learning.* Upper Saddle River, NJ: Prentice-Hall.

2. Is the student's version plagiarized? Y N

3. Original Source Material: The concept of systems is really quite simple. The basic idea is that a system has parts that fit together to make a whole; but where it gets complicated -- and interesting -- is how those parts are connected or related to each other.	Source: Frick, T. (1991). R*estructuring education through technology.* Bloomington, IN: Phi Delta Kappa Educational Foundation.

3. Student Version: A system has parts that fit together to make a whole, but the important aspect of systems is how those parts are connected or related to each other (Frick, 1991).

References: Frick, T. (1991). R*estructuring education through*

technology. Bloomington, IN: Phi Delta Kappa Educational Foundation.

3. Is the student's version plagiarized? Y N

4. Original Source Material: Theories differ from philosophies and models of teaching. A philosophy is a value system, whereas a theory seeks to explain real-world events and can be certified through scientific investigation. Models of teaching are approaches to the management of some aspect of classroom instruction and they may not be independent of subject area, grade level, age of the student, or the setting for learning. A characteristic of learning theories is that they address the underlying psychological dynamics of events. Thus, they provide a mechanism for understanding the implications of events related to learning in both formal and informal settings.	Source: Gredler, M. E. (2001). *Learning and instruction: Theory into practice* (4th ed.). Upper Saddle, NJ: Prentice-Hall.

4. Student Version: Theories and philosophies are different from each other because theories seek to explain real-world events and can be certified through scientific investigation. Learning theories address the underlying psychological dynamics of events, so they provide a mechanism for understanding the implications of events related to learning in both formal and informal settings.

4. Is the student's version plagiarized? Y N

5. Original Source Material: An important characteristic of instructional-design theories is that they are design oriented (or goal oriented). This makes them very different from what most people usually think of as theories. Theories can be thought of as dealing with cause-and-effect relationships or with flows of events in natural processes, keeping in mind that those effects or events are almost always probabilistic (i.e., the cause increases the chances of the stated effect occurring) rather than deterministic (i.e., the cause always results in the stated effect).	Source: Reigeluth, C. M. (1999). What is instructional design theory and how is it changing? In C. M. Reigeluth (ed.), *Instructional-design theories and models volume II: A new paradigm of instructional theory,* (pp. 1-29). Mahwah, NJ: Lawrence Erlbaum Associates.

5. Student Version: Reigeluth (1999) states that we can think of theories "... as dealing with cause-and-effect relationships or with flows of events in natural processes," and goes on to say that they may be either "probabilistic (i.e., the cause increases the chances of the stated effect occurring) rather than deterministic (i.e., the cause always results in the stated effect)" (p. 7).

References: Reigeluth, C. M. (1999). What is instructional design theory and how is it changing? In C. M. Reigeluth (ed.), *Instructional-design theories and models volume II: A new paradigm of instructional theory,* (pp. 1-29). Mahwah, NJ: Lawrence Erlbaum Associates.

5. Is the student's version plagiarized? Y N

6. Original Source Material: Developing complex skills in the classroom involves the key ingredients identified in teaching pigeons to play ping-pong and to bowl. The key ingredients are: (1) inducing a response, (2) reinforcing subtle improvements or refinements in the behavior, (3) providing for the transfer of stimulus control by gradually withdrawing the prompts or cues, and (4) scheduling reinforcements so that the ratio of reinforcements in responses gradually increases and natural reinforcers can maintain their behavior.	Source: Gredler, M. E. (2001). *Learning and instruction: Theory into practice* (4th ed.). Upper Saddle, NJ: Prentice-Hall.

6. Student Version: Inducing a response, providing for the transfer of stimulus control by gradually withdrawing prompts or cues, reinforcing subtle improvements in the behavior, and scheduling reinforcements so that natural reinforcers can maintain their behavior are the key ingredients identified both in teaching pigeons to play ping-pong and in developing complex skills in the classroom.

References: Gredler, M. E. (2001). *Learning and instruction: Theory into practice* (4th ed.). Upper Saddle, NJ: Prentice-Hall.

6. Is the student's version plagiarized? Y N

7. Original Source Material: During the last decade, there has been a shift from "instructivist" approaches towards "constructivist" approaches in the field of instructional design. Instructivist approaches reflect the belief that the role of knowledge is basically to represent the real world. Meaning is eventually determined by this real world and [is] thus external to the understander.	Source: Merriënboer, J. J. van. (1997). *Training complex cognitive skills.* Englewood Cliffs, NJ: Educational Technology Publications.

7. Student Version: Over the last ten years, there has been a marked change from "instructivist" points of view to "constructivist" points of view among instructional designers. Instructivist points of view hold the belief that the role of knowledge is fundamentally to represent the real world. In this view, meaning is determined by the real world and is therefore external to the learner.

References: Merriënboer, J. J. van. (1997). *Training complex cognitive skills.* Englewood Cliffs, NJ: Educational Technology Publications.

7. Is the student's version plagiarized? Y N

8. Original Source Material: Assess: determine the value of one or more properties of some entity. Cognitive Assessment: the entity is a person's state of mind, and the property concerns what he or she does or does not know. Since mental states cannot be directly observed, we need to plan stimulus situations and observe responses of persons (i.e., test them). Plan stimulus situations: • Does the assessment match the learning objective? (See Mager book, Measuring Instructional Results.) • Is it safe to infer from the behaviors observed, and in the context observed, that the learner does or does not have the cognitive property? • Is it possible that the learner could have this property and not be able to perform successfully? • Is it possible that the learner could not have this property and yet be able to perform successfully? • In other words, is the assessment valid in terms of its congruence with the property under consideration? Source: Frick, T. (1997). Assessment. Bloomington, IN: Indiana University School of Education, unpublished lecture notes.	Source: Gredler, M. E. (2001). *Learning and instruction: Theory into practice* (4th ed.). Upper Saddle, NJ: Prentice-Hall.

8. Student Version: Frick (1997) explains that in order to do cognitive assessment, we need to create observable situations in which we can infer learning achievement. This is necessary since we cannot

read people's minds directly. The observable situations need to be congruent with instructional objectives, such that valid inferences can be made concerning learning achievement, according to Frick.

References: Frick, T. (1997). Assessment. Bloomington, IN: Indiana University School of Education, unpublished lecture notes.

8. Is the student's version plagiarized? Y N

9. Original Source Material: ... constructivist theory rests on the assumption that knowledge is constructed by learners as they attempt to make sense of their experiences. Learners, therefore, are not empty vessels waiting to be filled, but rather active organisms seeking meaning. Instead, knowledge must develop and continue to change with the activity of the learner. It seems clear from remarks of constructivist researchers that constructivist learning goals are best met through a variety of instructional conditions that differ from any proposed by theorists like Gagné.	Source: Driscoll, M. P. (2000). Psychology of learning for instruction (2nd ed.). Needham Heights, MA: Allyn & Bacon.

9. Student Version: The basic tenet of constructivism holds that learners themselves construct knowledge, rather than receive it from outside themselves. The instructional conditions for learning proposed by Gagne do not support the kind of learning assumed by the constructivists.

References: Driscoll, M. P. (2000). Psychology of learning for instruction (2nd ed.). Needham Heights, MA: Allyn & Bacon.

9. Is the student's version plagiarized? Y N

10. Original Source Material: Technology has significantly transformed education at several major turning points in our history. In the broadest sense, the first technology was the primitive modes of communication used by prehistoric people before the development of spoken language. Mime, gestures, grunts, and drawing of figures in the sand with a stick were methods used to communicate - yes, even to educate. Even without speech, these prehistoric people were able to teach their young how to catch animals for food, what animals to avoid, which vegetation was good to eat and which was poisonous.	Source: Frick, T. (1991). *Restructuring education through technology*. Bloomington, IN: Phi Delta Kappa Educational Foundation.

10. Student Version: History has demonstrated that technology affects education profoundly. Considering the definition of technology broadly, one may say that prehistoric people used primitive technologies to teach skills to their young (Frick, 1991).

10. Is the student's version plagiarized? Y N

11. Original Source Material: A naïve mental model in the context of computer programming is that a computer is an intelligent system, and that giving directions to a computer is like giving directions to a human being.	Source: Merriënboer, J. J. van. (1997). *Training complex cognitive skills*. Englewood Cliffs, NJ: Educational Technology Publications.

11. Student Version: One kind of mental model for the computer is the naïve model. According to van Merriënboer (1997), "A naïve mental model in the context of computer programming is that a computer is an intelligent system, and that giving directions to a computer is like

giving directions to a human being" (p. 145).

References: Merriënboer, J. J. van. (1997). Training complex cognitive skills. Englewood Cliffs, NJ: Educational Technology Publications.

11. Is the student's version plagiarized? Y N

12. Original Source Material: In the traditional behavioral paradigm, feedback is the consequence of a response, typically reinforcement for an appropriate behavior.	Source: Driscoll, M. P. (2000). *Psychology of learning for instruction* (2nd ed.). Needham Heights, MA: Allyn & Bacon.

12. Student Version: Feedback is not conceived of identically between the various schools of thought in instruction. In the traditional behavioral paradigm, feedback is the consequence of a response. That response is typically reinforcement for an appropriate behavior.

12. Is the student's version plagiarized? Y N

13. Original Source Material: Instructional design theory requires at least two components: methods for facilitating human learning and development (which are also called methods of instruction), and indications as to when and when not to use these methods (which I call situations). Although the term "context" has a similar meaning in lay language and is often used in education, not all aspects of the context influence which methods should be used. Therefore, I use the term "situation" to refer to those aspects of the context that do influence selection of methods.	Source: Reigeluth, C. M. (1999). What is instructional design theory and how is it changing? In C. M. Reigeluth (Ed.), *Instructional-design theories and models volume II: A new paradigm of instructional theory.* Mahwah, NJ: Lawrence Erlbaum Associates.

13. Two components must be present in an instructional design theory. The first component is methods for facilitating human learning and development. The second is those aspects of the context that do influence selection of methods, or the situation.

References: Reigeluth, C. M. (1999). What is instructional design theory and how is it changing? In C. M. Reigeluth (Ed.), Instructional-design theories and models volume II: A new paradigm of instructional theory. Mahwah, NJ: Lawrence Erlbaum Associates.

13. Is the student's version plagiarized? Y N

14. Original Source Material: At this stage the reading strategy adopted by the reader depends on the particulars of the task. The tendency to 'get on with it' seems firmly established in users of manuals and the present sample reported moving freely from manual to system in order to achieve their goal. Only three readers manifested any tendency to read around an area or fully read a section before moving on and even these admitted that they would be tempted to skim, and tend to get bored if they felt that they were not resolving their problems and only read complete sections if all else failed.	Source: Dillon, A. (1994). *Designing usable electronic text: Ergonomic aspects of human information usage.* London: Taylor & Francis.

14. Student Version: The readers of technical documentation manuals do not read those manuals in linear order. They are impatient to be about their work, jump from the text to the task and back, and only stop to read in-depth if they have no other choice.

References: Dillon, A. (1994). Designing usable electronic text: Ergonomic aspects of human information usage. London: Taylor & Francis.

14. Is the student's version plagiarized? Y N

15. Original Source Material: While computers are very good at certain tasks, such as diagnosing equipment malfunctions or performing mathematical functions, they are morons at doing things your dog or cat can do, such as recognizing you and acknowledging your presence. Computers lack qualitative intelligence, that is, the ability to identify those features that make each of us unique and different.	Source: Frick, T. (1991). *Restructuring education through technology.* Bloomington, IN: Phi Delta Kappa Educational Foundation.

15. Student Version: Computers can do some things and not others. They do not have the ability to identify those features that make each of us unique and different, but they are very good at diagnosing equipment malfunctions or performing mathematical functions.

References: Frick, T. (1991). Restructuring education through technology. Bloomington, IN: Phi Delta Kappa Educational Foundation.

15. Is the student's version plagiarized? Y N

16. Original Source Material: Media experiences equal human experiences.... People's responses show that media are more than just tools. Media are treated politely, they can invade our body space, they can have personalities to match our own, they can be a teammate, and the can elicit gender stereotypes. Media can invoke emotional responses, demand attention, threaten us, influence memories, and change ideas of what is natural. Media are full participants in our social and natural world.	Source: Reeves, B., & Nass, C. (1996). *The media equation: How people treat computers, television, and new media like real people and places.* Cambridge, MA: Cambridge University Press.

16. Student Version: Reeves and Nass (1996) describe many experiments they have carried out to test the theory that people interact with media as if it were other people. They have shown in multiple ways that even when people know objectively that images of people on television screens are not real, or that computers are machines instead of human beings, we treat these things as if they were real -- were human.

References: Reeves, B., & Nass, C. (1996). The media equation: How people treat computers, television, and new media like real people and places. Cambridge, MA: Cambridge University Press.

16. Is the student's version plagiarized? Y N

Answer Key (Y = yes for plagiarized. N = no for not plagiarized.)

1. Y	2. N	3.Y	4. Y	5. N
6.Y	7. Y	8.N	9. N	10. Y
11. N	12.Y	13. Y	14. Y	15.Y
16. N				

Biographical Information

Dave D. Hochstein, Department of Psychology, Wright State University Lake Campus; Judy Brewer, Education Department, Wright State University Lake Campus; Melissa D. Steinke, Education Department, Wright State University Lake Campus; J. Drew Taylor, Education Department, Wright State University Lake Campus;

Dave D. Hochstein earned his PhD in Psychology from the University of New Mexico. He also earned a B.A. in Psychology and a B.A. in Philosophy/Religion from Buena Vista University. He is currently a faculty member at WSU-LC. Areas of study include memory for icons in Augmentative and Alternative Communication devices and for spatial location. He can be reached at dave.hochstein@wright.edu.

Judy Brewer is a graduate of Manchester College with a B.A. in English Education. She earned her M.A. in English Education from Ball State University. Post-Master's work at Wright State University includes Ohio licensure studies in Supervision and Administration. In addition, she is a Fellow of the Ohio Writing Project and a WSU Adolescent Literacy Specialist. She is currently Instructor of Teacher Education and Co-director of the Reading Center at Wright State University Lake Campus. Brewer has served as a trainer for Ohio's SIRI initiative since 1999, and she is currently a literacy trainer for the Ohio CORE initiative. She also serves as an Action Research Advisor for Miami University in its MAT program, as well as an adjunct writing instructor for Miami University's GEAR Up program. Areas of study include Reading Assessment and Instruction; Brain-based Learning; Classroom Management; Standards-based Education; and Curriculum Development. She can be reached at judith.brewer@wright.edu.

Melissa D. Steinke (steinke.16@wright.edu) and J. Drew Taylor (taylor.154@wright.edu) are both seniors in Middle Childhood Education at Wright State University Lake Campus where they are long-time student employees of the Reading Center, assisting with research and development, as well as with program administration.

Preconceived Notions In and Out of the Classroom: A Critical Incidents Analysis of Culture Shock In Colombia, South America.

Timothy J. Jurkovac
Bowling Green State University—Firelands

Introduction

This narrative describes an important lesson I learned while on faculty leave during the 2005 spring semester in Colombia, South America. My goal was to conduct ethnographic fieldwork on daily life in Colombia. I spent six months living and working in Bucaramanga, the seventh largest city in the country. I had the opportunity to become immersed in the culture, travel extensively and teach two elective courses to high school students. However, opportunities for both personal and professional growth were inevitably made problematic because of the culture shock I experienced by failing to take into account one of the basic tenants of ethnographic research.

Ethnography involves collecting cultural data in the field through detailed observations and interviews that requires the researcher to become an active participant in the everyday social life of the people being studied. The goal is to document and subsequently understand reality from the perspective of the native. Yet like any research methodology, this data gathering technique involves pitfalls. According to Anthropologist David W. McCurdy (2000), the greatest danger in doing ethnographic research is developing a set of preconceived notions about what to expect prior to starting the research process. It is a simple yet profound methodological proposition. Developing expectations of what will be observed not only places boundaries on what can be documented, but can also increase likelihood of experiencing the dizzying effects of culture shock when these expectations prove unfounded. Even though I had taught this methodological procedure for the last 15 years and had hammered home McCurdy's warning to my anthropology students, this was I would still make the egregious error as I began my research.

This was not my first trip to Colombia. I had previously been there in 1992 and 1997 to visit my brother, who is currently the Director of Colegio Panamericao, a not for profit, parent owned bilingual school outside Bucaramanga in Floridablanca. He has lived in Colombia for the past 21 years. During those trips, I traveled to destinations like Cartagena and Medellin and spent a lot of time with some of the vast social network of international educators and native Colombians he had met over the past two decades. So while I was able to feel a sense of comfort in knowing that my brother and his friends would be constant companions throughout my stay, the anxiety of being in a strange environment and the resulting culture shock was something I was expecting. Even though my previous visits to the country gave me a grasp of the culture, I was certain that some degree of frustration and uncertainty that inevitably results from being in a different social environment for an extended period of time awaited me.

However, it was not the role of being a stranger in a strange land that would cause me the most anxiety. The culture shock and subsequent feeling of inadequacy I would come to deal with on a regular basis was grounded in the most unlikely of places. Rather than experiencing uncertainty because of my inability to speak the language or understand the many subtle nuances of daily life in Colombia, the problems I encountered were actually manifest in a high school classroom. In essence, I thought that teaching two elective courses would help me to nurture a sense of self worth that I expected to be somewhat elusive during a six month period of cultural adjustment. It seemed logical to assume that being able to interact with and intellectually challenge the students would help me adjust more easily to the daily dilemmas that would arise from not being in my normal surroundings. However, it was actually teaching these courses that produced most of the culture shock I experienced during my time in Colombia. Prior to employing a critical incidents approach to analyze what I experienced, some background on Colombian culture needs to be discussed.

Cultural characteristics of Colombia

The uniqueness of Colombian culture can be documented in a variety of contexts. The primacy of social class distinctions, a rigid code of formality in social situations and the ambiguous nature of time are all very distinct components of the country's social structure. While I was confronted with cursory evidence of some of these cultural variations during my earlier visits, being able to adjust to them as they manifest on a recurring basis for six months was what I expected to be the most troubling aspect of my stay.

Social class distinctions are more readily noticeable and wedded into the structure of social life in Colombia. In fact, this structured inequality is the foundation for much of the rules that guide appropriate social interaction. It is estimated that nearly 60% of Colombians live below the poverty line www.cia.gov, January 10, 2006). This number is indicative of the glaring disparity of wealth that is evident as one travels throughout the country. Much of this is a result of the ongoing civil war that pits the leftist rebel forces of the FARC (Revolutionary Armed Forces of Colombia) against the right wing paramilitaries of the AUC (United Self-Defense Forces of Colombia). The struggle for territory often times drives low income peasants from their farming villages to cities where begging and crime are often their only means of survival. Those that remain have often begun cultivating the prosperous coca crop that is now targeted for eradication by the Colombia Government with the cooperation of the United States. Rampant governmental and judicial corruption further enhances the problem, as does the cultural belief that accepts class differences and inequality as part of the "natural order of things" (Hutchinson et. al., 1987). Everywhere I traveled there was abundant evidence of the struggle for survival most Colombians endure on a daily basis.

Formality in how individuals present themselves and interact in public is also a unique element of Colombian culture. While interior areas like Bogotá and Medellin are more rigid in their attitudes and behavior than people in coastal areas like Cartagena, formalized criteria for structuring social relationships are common in most parts of Colombia. According to Hutchinson et. al. (1987), "The Spanish

colonial influence preserved in Colombia, evidenced in customs and language usage, have been actively preserved in Colombia, more than in most other Latin American countries (p. 75). For example, Spanish language offers two ways to refer to someone in conversation with the pronoun you. The more informal form "tu" is used with social equals such as friends or family members while the more formal form "usted" is used when conversing with people of higher social status, the elderly or strangers. To use the more informal form "tu" in these more formal social encounters is considered disrespectful.

The unstructured focus on time is another unique characteristic of Colombia culture. To say that Colombians are less concerned when it comes to scheduling formal business appointments or informal social activities is an understatement to say the least. Hutchinson et. al. (1987) explains that "A Bogotano who arrives within about twenty minutes of an agreed appointment time may not even mention his or her lateness, and a new expatriate may overcook more than one dinner before realizing that many guests will arrive an hour or more after the time they were invited" (pp. 77-78). This behavior should not be taken as being rude; rather it is simply that Colombians assign a different meaning to the time that is set.

To reiterate, I had envisioned that upon arriving in Colombia, these cultural differences would be the foundation of the culture shock I was about to go through at length. However, that was not to be the case.

The Nature of Culture Shock

Culture shock is generally associated with the negative feelings one encounters when confronted with a different set of socio-cultural expectations of day to day life. The concept was first identified by Oberg (1960) as being the negative experience one has in a new cultural setting. Specifically, this disease model approach highlighted the "anxiety that results from losing all of our familiar signs and symbols of social intercourse" (p. 177). In this same vein, others subsequently elaborated on this operational definition to describe the debilitating effects of culture shock in relation to cultural fatigue (Guthrie, 1975), language shock (Smalley, 1963), role shock (Byrnes,

1966) and an identity crisis (Weaver, 1994). The resulting numbers of cultural dilemmas that emerge from losing cues of familiarity lead to further communication breakdowns that only enhance feelings of self doubt and insecurity. Inevitably, this confusion can often lead to not only a sense of loss and feelings of incompetence but also a sense of anger and disgust directed toward the host culture (Furnham and Bochner, 1986).

However, culture shock is not always associated with a series of negative experiences. A growth model approach differs significantly from past research because it stresses the personal growth and cultural learning that often results from experiencing the initial frustration of a new culture. What often can result is a more productive cross cultural learning experience. According to Adler (1975),

> "In one sense then, culture shock is a form of alienation. In another sense however, it suggests the attempt to comprehend, survive in, and grow through immersion in a second culture. Although culture shock is most often associated with negative consequences, it can be an important aspect of cultural learning, self-development and personal growth" (p. 14).

Being that culture shock is a profoundly personal experience that can be either problematic or productive; a critical incidents approach developed by Flanagan (1954) goes beyond the collection of stories and anecdotes compiled by the researcher experiencing culture shock to address the effects, impact and subsequent resolution of the incident in question. In describing culture shock as either positive or negative, the researcher puts into context the events taking place prior to the incident, what responses were initiated by the individual, the consequences of that behavior, and whether or not the individual had an opportunity to change these consequences (Flannigan, 1954). According to Pederson (1995),

> Critical incidents are based on real-life situations and typically involve a dilemma where there is no easy or obvious solution. The objective of critical incidents is to stimulate thinking about basic and important

> issues which occur in real-life situations. By analyzing the incident, participants can imagine themselves in the same situation, develop strategies to deal with that situation, and become more realistic in their expectations. (p. 17)

Pederson (1995) further suggests that a critical incident approach makes it possible to evaluate the problematic situation and the person's behavioral responses over the course of the incident, thereby making it possible to transform the debilitating effects of culture shock into a more positive experience of growth and cross cultural appreciation. The following account details the critical incident I experienced, a series of related events that were grounded in and subsequently heightened by the preconceived notions about the nature and extent of culture shock I anticipated prior to leaving for Colombia.

The Critical Incident

When I arrived in Colombia on December 27th, I quickly settled into the routine of my brother's daily life. Our parents accompanied me on the trip to visit for a month, so many of my first experiences were oriented to getting acquainted with my brother's network of friends and colleagues. We were invited to several dinners and parties organized in our honor during that first month and also took advantage of the holiday to make several day trips to some nearby colonial towns like Giron and Barre Chada.

All the while, I was eagerly anticipating and preparing for the two elective courses I would teach at Colegio Panamericao. My brother had arranged for me to offer a cultural anthropology course as part of the social science curriculum to his graduating seniors and a sociology of sport elective to both seniors and sophomores who chose to take it. While not knowing the language made even the simple task of walking down the street to the "tienda" to get milk or a liter of Coca Cola a cultural adventure, I was much less concerned about teaching in a classroom of bilingual students who were all planning on attending college either in Colombia or somewhere in North America after graduation.

Not only was I excited to meet them, but I also looked forward to developing a sense of rapport that would be vital to my cultural learning experience. I had envisioned that these students would be the key informants I would rely on to provide me with the insight into their culture. My goal was to break down much of the teacher/student barriers by stating that they would teach me as much or more than I would teach them. Unfortunately, this arrangement didn't work out the way I had hoped it would.

Thinking I was ready for this unique classroom experience of teaching high school students from another cultural environment, I had failed to grasp a series of what should have been obvious concerns as I began to teach. For example, I expected that my university background would lead to detailed class discussions about comparing and contrasting life in Colombia to the United States. Because many of the students in class would have the option of studying in the United States after graduation, I was anxious to help prepare them for the upcoming cultural transition they were about to undertake by answering all their questions and providing as much encouragement as possible.

I also assumed that being the director's brother would also intimidate them to the point that they would work hard and behave in class. I assumed they would figure out that any discipline problems in the classroom would in all likelihood be related back to my brother. The mere threat of talking to "the director" about any problematic classroom behavior would be enough to thwart any potential problems, or so I thought. I planned on promoting an informal atmosphere in the classsroom (as I do when I teach my college courses) and believed that I would be able to develop the same positive rapport with these students that I had with students throughout my academic career. In all my years teaching, I have never experienced a discipline problem beyond a cell phone going off in class or some idle talking among a few students that was quickly stifled.

Being that my brother was the boss and appreciating that I had traveled all this way and was willing to spend the second half of their school year learning with and from these students, I wasn't anticipating having to deal with the behavioral issues I confronted

throughout the term.

Before I elaborate further, I should provide a caveat to the following discussion. As I critique the troubling classroom dynamics that caused me so much anguish, I do not mean to imply that all or even most of my students were a problem. There was a significant amount of effort put forth in class from many of my students that taught me much of what I learned about Colombia. I would go as far to say that the rapport I established with some of the students will provide us with the opportunity to stay in contact in the future. But that being said, from my first day in class I struggled more than I ever had to gain control over the classroom environment.

Even though I have taught high school students in PSEOP and Tech Prep programs for years at BGSU-Firelands, I did not fully appreciate what an entire classroom of teenagers would entail by way of discipline. My classes were offered on Tuesday and Thursday afternoon from 1:10- 2:40 p.m. after the students had finished lunch. Being the last class of the day, many were not only tired, but suffering from the proverbial midday food coma. As I would begin class, I noticed many of them slumped over in their chairs and fading in and out of consciousness. Some would also put their heads down on their desk and literally go to sleep. Their lack of subtly was starkly evident when some of them would actually begin to snore as class was getting started.

There were also those who would come from lunch and talked incessantly, so much so that I would sometimes have to ask the same students countless times to please stop disrupting the class. They would initially look at me and smile apologetically, but within a couple of minutes they would continue doing the exact same thing. Their English was fine, so this was not a communication problem. They just chose to ignore me. To be honest, I was astounded with how often I had to deal with this issue. Never before had I experienced on such a regular basis a lack of civility in the classroom.

Beyond the inopportune time of the class, what was probably more of an issue was the fact that the "elective" courses I was teaching had little if any bearing on the students' graduating in June and attend a Colombian college. First of all, the grade I would provide at the

end of the term would be averaged in with the economics course they had taken the first half of the year. But more surprisingly, I discovered toward the end of the term that even if they had failed the course, they knew that this would not prevent them from graduating. In Colombia, grades in high school are far less important than scores on the standardized ICFAS exam that is required of all Colombian students before they graduate. The test is similar to the ACT in the United States but carries much more weight in that the academic skills it purports to measure and the score a student receives is the main criteria for college admission in Colombia. Because these classes that I worked so hard to prepare for were understood to be increasingly meaningless academically, many of the students didn't seem to take much of anything I tried to accomplish too seriously.

This situation put me in a problematic bind. Early on in the semester I sensed that the more frustration and angst I would demonstrate toward what I felt was their rude and uncivil behavior, the more time it would take to gain the rapport I needed to establish with these key informants. Furthermore, the more they continued to demonstrate this benign neglect for what I was trying to do, the less value they were to me as key informants.

Then I had an epiphany in early March while attending a teaching conference in Cali. I was invited to give the Keynote Address to the VIII Annual Teaching Forum at Colegio Bolivar on the impact of television on education and democracy. While the conference was one of the many productive experiences that made it easier to weather the nagging effects of culture shock I was still experiencing, the classroom issues were still troubling me. I was in a bookstore with my brother when I came across a special edition of U.S. News and World Reports. While finding a magazine I was familiar with and could read brought me instant gratification, more importantly this edition was devoted entirely to the topic of the teen brain. The special issue entitled "Mysteries of the Teen Years" documented a variety of areas of concern to parents, teachers or any adult who was trying to understand aspects of the sometimes irrational behavior of teenagers. Finding this magazine inspired me to delve more deeply into empathizing with my students and how I could begin to reach

them in more significant ways.

I spent much of the next two class meetings sharing what I uncovered with my students. I copied several sections from the magazine for them to read and discuss. In prefacing this cross culturally, I discussed research on the decline of civility in the United States and the problems it was creating. In areas such as politics, business, sport and how we conduct ourselves in any public forum, we discussed the consequences a lack of civility could have on the stability of both of our cultures. Then we began to integrate material on areas like the developmental stage of a teenagers brain and the issue that "one of the last parts to mature is in charge of making sound judgments and calming unruly emotions" (Brownlee, 2005, p. 16). It was my hope that by demonstrating a commitment to the sociological tradition of sympathetic understanding and taking the role of the other to better understand their subjectively defined reality, they would begin to meet me halfway in relation to my expectations of civil classroom behavior.

I did achieve some success in this regard. After we spent three weeks informally talking about this and as I listened to issues and concerns that they had about what I had been covering in class, a number of students began to become more involved not just in the course material, but also in helping to maintain a sense of professional decorum and mutual respect in the classroom. When a disruption would occur in class (as it would inevitably do throughout the remainder of the term), other students were now more apt to rebuke those involved before I had a chance to comment or respond. While this process still took up a lot of valuable class time, the rest of the semester was more productive and I was able to gather data from a number of these key informants before the end of the school year.

While I was riddled with a sense of professional failure I had never before experienced, I was also experiencing a greater comfort level with daily life in Bucaramanga as a result of the small amount of success I was having learning Spanish. I found myself spending less and less time reading or watching the DVD's I had brought with me and more time exploring the city on my own. I would spend much of the day shopping for groceries and souvenirs, having a coffee or a beer

at a nearby bar, or exploring the fifteen beautiful parks in the city. I was able to make idle chit chat on a more regular basis and the effort I put forth was generally appreciated by the Colombians I encountered, even when I would struggle or make one of my many routine language gaffes. The longer I was there, the more I settled in and comfortable with Colombian culture I became. What I never expected would cause me any level of distress was what I spent the most time trying to resolve, issues of classroom discipline and creating a productive cross cultural learning experience. This made me realize to never take for granted what to expect in any social environment, something that my training and experience as a social scientist should have enabled me to avoid. It was a difficult yet valuable lesson to learn.

Conclusions

Even without traveling abroad to teach in a foreign country, there is still ample opportunity for educators to experience culture shock on a regular basis throughout the course of any semester, although we might not identify the stress or anxiety of our work in this way. Issues of open enrollment along with the growing number of first generation college students imply that we will continue to see a more diverse (and at times underprepared) student population in the classroom. The danger of developing preconceived notions is not just the domain of those who conduct ethnographic research in the field. As educators, we become so focused on achieving our learning objectives and covering all of the material on the syllabus that there are occasions when we tend to ignore the peripheral issues of what we expect from our students and what our own complacency in that regard inhibits us from addressing. Failing to anticipate these issues because of a predetermined mentality that this semester will be pretty much like every semester is a disservice to our students and limits the positive and productive impact we can have on their lives.

For example, many of our campuses have a large number of nontraditional students who are more likely to be overburdened with family and work obligations than traditional student's who have just graduated from high school. How much do we take for granted their struggles to juggle the many roles they are required to play during a

given day? Just how many of our traditional students are also working full-time jobs to pay for their education? How much time do we spend identifying concerns about student progress and updating them on how they are doing and what changes should be made in their study habits or time management? What measures are taken to address the dynamics of teaching both developmental and advanced students in the same class while still demanding the same high standards from both groups? How often do we really sit down and talk with our students to learn about what their goals are in life? When these issues fail to be addressed because they would take up too much of our time, we actually play a role in making the transition to college more of an experience of culture shock for our students.

With the myriad of professional and administrative responsibilities faculty contend with on a daily basis, many of us don't get to spend a great deal of time thinking about our students and the wide variety of aspirations and abilities they bring to their college experience. Often we look at the class roster at the start of the semester and focus on how many students we have as opposed to who they are, where they come from and what potential roadblocks might hamper their education. The simple lesson of avoiding any preconceived notions and taking nothing for granted that I eventually learned in Colombia can be applied to a variety of issues we as faculty often address in a more cursory manner.

Upon my return from Colombia, I have begun to implement a number of measures to better prepare myself for what I have now come to realize to be the truly unique nature that exists in each classroom. Since most branch campuses are experiencing an influx of high school students on campus as a result of programs like PSEOP and Tech Prep, I have incorporated a section on civility and its importance to a productive learning experience in all of my syllabi. In addition, beyond the detailed midterm progress reports we have been doing at BGSU Firelands since I have been here, I make it mandatory for any student whose grade is lower than a C to visit me during my office hours as soon as possible to talk about why they are struggling. I also hope to be able to make it mandatory for every student to come by for an office visit at some time early in the semester (that is when

I learn to manage my time more efficiently). Even though this can take up a sizeable portion of my day, I have come to understand how worthwhile the effort is and how much students come to appreciate it. When we don't attempt to grasp, or at the very least take for granted the complex nature of the contemporary student's collegiate experience, we neglect just how much a little attention on our part can mean to them. Addressing these issues will also go a long way to reducing the preconceptions we all have about what we do and how we do it.

References

Adler, P.S. (1975). The transitional experience: An alternative view of culture shock. *Humanistic Psychology, 15*(4), 13-24.

Brownlee, S. (2005). Inside the Teen Brain. In Susan Headden (Ed.), *Mysteries of the teen years.* U.S. News and World Reports, (pp.15-21).

Byrnes, F.C. (1966). Role shock: An occupational hazard of American technical assistants abroad. *Annuals of the American academy of political and social science,* 368, 95-108.

Flanagan, J.C. (1954). The critical incident technique. *Psychological Bulletin,* 51, 327-358.

Furnham, A., & Bochner, S. (1986). *Culture shock: Psychological reactions to unfamiliar environments.* New York: Methuen.

Guthrie, G.M. (1975). A behavioral analysis of cultural learning. In R.W. Brislin, S. Bochner & W.J. Lonner (Eds.), *Cross-cultural adaptation: Current approaches.* (pp. 106-139). Newbury Park: Sage.

Hutchinson, W. R., Poznanski, C. A., and Todt-Stockman, L. (1987).

Living in Colombia: A guide for foreigners. Yarmouth ME: Intercultural Press Inc.

McCurdy, D. (2000). Using Anthropology. In James Spradley and David W. McCurdy (Eds.), *Conformity and conflict: Readings in cultural anthropology* (pp. 422-435). Boston: Pearson.

Oberg, K. (1960). Culture shock: Adjustment to new cultural environments. *Practical Anthropology,* 7, 177-182.

Pedersen, P. (1995). *The five stages of culture shock: Critical incidents around the world.* Westport: Greenwood Press.

Smalley, W. (1963). Culture shock, language shock, and the shock of self-discovery. *Practical Anthropology,* 10, 49-56.

Weaver, G.R. (1994). Understanding and coping with cross-cultural adjustment stress. In G.R. Weaver (Ed.), *Culture, communication and conflict: Readings in intercultural relations* (pp. 169-189). Needham Heights, MA: Ginn Press.

Biographical Information

Timothy Jurkovac is an Associate Professor of Sociology at BGSU Firelands. He received his B.A. in Communications from Ohio University and his M.A. and Ph.D. in Sociology from Bowling Green State University. He has published on diverse topics such as public financing of professional sport stadiums and the home court advantage to reaching the visually literate student and has presented at state, national and international conferences in the areas of sport sociology, the impact of television on democracy and education, political advertising and experiential learning.

Using A Failed Experiment As An Impetus To Nurture Motivation In Lab Class And Learn The Scientific Method

Wilhelm Kossenjans
University of Cincinnati—Clermont

Abstract

During the summer quarter of 2005, I taught a section of a five-week introductory biology course for non-majors. While I usually scheduled two very different lab exercises for the same day, e.g., a wet lab and a hike on campus grounds, students were often not very motivated to do either activity. An opportunity to engage students arose when the assay designed to demonstrate the hydrolysis on starch by salivary amylase failed to proceed and students showed considerable interest in finding out what had gone wrong with the assay. I gave the homework assignment to address the question as to what might have interfered with the enzymatic breakdown of starch to maltose. This assignment was to get students ready for an in- lab discussion the following lab period. The discussion led to a series of experiments to find an answer. The results of these lab exercises indicate that curiosity into the reasons why an experiment failed can be a strong motivating factor for learning.

Introduction

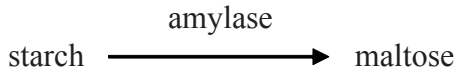
As at many two-year colleges, a considerable number of students at UC Clermont are burdened by extracurricular obligations and lack motivation to study. The reasons are manifold and include that many of my biology students juggle full-time jobs, family with or without a partner, and college. Although a college degree is the obvious goal for students so they are able to get better paying jobs in the future, learning most often takes a back seat to the immediate needs of their family or place of employment. It is, therefore, important that students maximize their study efficiencies and learn

through practical application whenever possible.

In the summer of 2005, I had the opportunity to evaluate whether students' curiosity into a failed biology lab experiment with an established protocol might be a good motivating factor for learning. Through problem-based and collaborative learning techniques and adhering to the process of the scientific method, non-major biology lab students investigated the reason why an experiment with an established protocol had failed.

Approach to the Problem

The collection of lab exercises for the non-majors biology course at University of Cincinnati Clermont College includes following enzymatic reaction:



The protocol used by students to demonstrate the enzymatic conversion of starch to maltose was as described by J.L. Stein Carter in her lab protocol (1994). This assay usually works well and is easily performed by students, including those with limited biology lab experience. All reagents are furnished to students but they provide the amylase themselves by collecting their own saliva. Consumption of the starch in this reaction is confirmed by loss of blue color that appears when starch forms a complex with iodine. In addition, students check for the production of maltose from that reaction by adding Benedict's reagent and heating the test tube contents.

When students in my biology lab class performed the above enzymatic assay and the blue color indicating the presence of starch did not decrease in intensity by the end of the lab period, students wondered why the reaction had not gone forward as anticipated. Since they were curious, I thought it important to nurture their curiosity in order to enhance their motivation for learning. Therefore, students were asked as homework assignment to list possible reasons of what might have interfered with the enzymatic reaction and ways to test for them in order that they be better prepared for further discussion during the following lab period. When lab class met next, students were

asked to share and discuss their answers, first in groups of three or four and afterwards with the whole class. At the end of the discussion period, students were then asked to develop different hypotheses, find a suitable method to test each of them, and choose one experiment for further investigation. Students performed the experiment, collected data, and discussed and interpreted the results. Based on these results, follow-up questions were then developed as part of subsequent homework assignments and group and class discussions were held during the following lab sessions to develop hypotheses, which were then investigated once again using the scientific method. Thus, a logical progression of a small series of experiments was developed and carried out by students using the scientific method. It must be noted that the initial problem and the subsequent sets of experiments were not the focal point of learning, although they were interesting and seemed to motivate students. Instead, the focal point was getting students actively engaged in science experiments and the process of the scientific method, which included making an observation, asking a question based on that observation, formulating a hypothesis, proposing and executing an experiment to test the hypothesis, collecting meaningful data, and drawing a valid conclusion. To confirm and ensure the validity of the results obtained by students during lab, the different experiments were repeated by myself outside of class.

Results and Discussion

Most instructors are keenly aware of the importance of motivating students to learn. In order to motivate students and increase student learning, a variety of teaching tools have been developed. These include problem-based (or inquiry teaching) and collaborative learning. For problem-based learning students are required to use critical and logical thinking and consider alternative explanations (Laine, 2002). This learning activity is usually coupled with cooperative learning, in which "students develop approaches and explanations, exchange information, talk and listen, argue and persuade" to explore a problem (Laine, 2002). In general, I am somewhat apprehensive about using problem-based and cooperative

learning techniques in a non-major's introductory biology lab course at a two-year college because incoming freshmen have little to no lab experience and their repertoire of scientific methods is still extremely limited. In this case, however, students were able to draw from a set of laboratory techniques they were already familiar with from previous lab exercises.

Students' homework assignment addressing the question as to what might have interfered with the enzymatic breakdown of starch to maltose resulted in a variety of responses. These included, for example, that the distilled water used might have been contaminated, the pH of the reaction mix might have been out of normal range, the temperature of the incubator used might have been out of normal range, the saliva used might have been contaminated by food, the solutions used might have not been made up correctly, the chemicals used may have been outdated, and the test tubes may have contained a contaminant. Group discussions and the subsequent class discussion of their homework initially centered on which of the aforementioned carried more weight. However, after some discussion students realized the importance of all of their answers and requested that they simply be allowed to repeat the experiment. While doing so they could then check and ensure that all the experimental conditions necessary for the experiment were met. In addition, a few students asked whether the test tubes used in their initial experiment had been previously used and, when told that that had been the case, requested that an additional set of samples in new (never used) test tubes be added. This way they could test their hypothesis that previously-used test tubes had contained contaminants that inhibited the amylase reaction. Subsequently, students repeated the experiment in its modified form. Results showed that, although this time not completely absent, the amylase reaction was considerably reduced in the previously-used set of test tubes compared to the set of new ones, indicating that a contaminant was present in the previously-used test tubes that had decreased the amylase activity.

Students were elated about the outcome of their first experiment. Not only had they performed a real scientific experiment for which the outcome had not been known beforehand but they

were able to provide the biology lab manager with evidence that the previously-used test tubes contained at least one contaminant that was interfering in biological reaction. Based on this finding, students then asked about the identity of this substance that was inhibiting the amylase-mediated hydrolysis of starch to maltose. They were asked to ponder this question as their next homework, and formulate a hypothesis during their subsequent group and class discussions. As a result, students hypothesized that the previously-used test tubes contained Cascade dishwasher detergent that had remained after incomplete rinsing and inhibited the amylase reaction. To test their hypothesis, a series of tubes containing starch, iodine, and saliva was set up and increasing amounts of dishwasher detergent was added (1 to 5 drops of a 3.5g/l Cascade detergent solution). The results showed enhanced disappearance of the characteristic deep blue color starch produces in the presence of iodine. This came as a surprise to students as this suggested that the Cascade dishwasher detergent enhances the breakdown of starch to maltose rather than decreasing it. In order to collect hard data for this assay, the disappearance of the blue color was confirmed using a spectrophotometer. Thus, the results did not support students' hypothesis that Cascade dishwasher detergent inhibits salivary amylase activity.

Upon discussion of these results, students wanted to confirm that Cascade dishwasher detergent enhances the catalytic breakdown of starch to maltose. Their working hypothesis was that the enzyme component in the Cascade detergent was catalyzing the breakdown of starch to maltose. To test this hypothesis, students checked for the appearance of maltose upon addition of five drops of Cascade detergent solution (3.5g/l) to the test tube containing starch, saliva, and iodine once the characteristic blue color that starch develops in the presence of iodine had disappeared. However, the characteristic yellow-orange color seen upon heating following the addition of Benedict's reagent did not form. Therefore students had to conclude that no maltose formed. Furthermore, students concluded that either a different product was formed during the hydrolytic reaction on starch or, perhaps more likely, that the Cascade detergent simply had broken up the blue starch-iodine complex to form colorless products. Further

research is needed to confirm these conclusions.

Although the set of experiments conducted by students is not the focal point of this paper, the results obtained from these experiments are in themselves interesting. They underscore the need for the glassware used in experiments to be clean. The experiments also indicate that contaminants can and do inhibit certain reactions while they may enhance others. As a result of these experiments, our biology staff now washes test tubes by hand and extensively rinses other glassware following cleaning by the dishwasher. Students and lab personnel clearly learned a valuable lesson here.

Students' curiosity as to the reason why that reaction did not work became a great motivating factor, when the amylase-mediated conversion of starch to maltose failed to proceed, Perhaps it was because their investigations were authentic rather than cookbook duplications of experiments for which the true answers were already known. I believe that students were further motivated through group work in which they were able to compliment each other's ability to think logically or analytically. Subsequently students were able to bring their approaches for solving the problem to the whole class and "talk and listen, argue, and persuade" (Laine, 2002) their points so they could choose as a class on how to proceed to solve their problem. As could be expected, some students did more of one than the others. However, at one point or another, all students participated. Class discussions served to build consensus and brought the best ideas forward, which were then tested further. Through these activities, students became much more motivated, focused their attention much better, and were much more involved in their own learning.

Students also benefited from these lab exercises by familiarizing themselves in depth with the scientific method, i.e., making an observation, formulating a hypothesis concerning some aspect of biology, developing a clearly thought out means of testing this hypothesis, and discussing results obtained when experiments were carried out. In the recent past, assignments for my non-majors' biology course included a scientific method paper as outlined by Janet Stein Carter (1996). However, because this course is taken mainly by incoming freshman, many of whom still lack adequate writing skills,

I have since dropped this assignment and wondered whether learning about the process of the scientific method would be better done in a laboratory setting utilizing a practical application of it. Students in my 2005 summer lab course familiarized themselves well with the scientific method. Initially, group and class discussions took a fair amount of time to formulate their initial observation, question, and hypothesis and to decide on how to properly test it. It became clear to me that for the first problem students were struggling with the fact that their hypothesis was multifactorial, i.e., that the distilled water used might have been contaminated, that the pH of the reaction mix might have been out of normal range, that the temperature of the incubator used might have been out of normal range, etc., and that they were going to test for and collect data for all these possibilities in their first experiment. However, following the initial set of experiments, students became much better at and more efficient in formulating the observation, question and hypothesis. In addition they found it helpful to pool all their hypotheses so they could choose the best one and move on to the testing stage and gather data. Students learned that the scientific method is a process that is based on data obtained from systematic experiments and the proper interpretation of these data. When results showed that the Cascade detergent accelerated the disappearance of the blue color from the reaction mix in the second set of experiments, students came to realize that sometimes results differ from even the most logical hypothesis. Students were even more surprised after the third set of experiments that their interpretation of the second set of experiments turned out to be false, i.e., that Cascade dishwasher detergent had not enhanced the amylase mediated conversion of starch to maltose. This helped to make them understand that science is not necessarily fact or truth but rather a process that continuously helps to refine the truth, as we know it, at a particular time. Therefore, learning about the scientific method in a lab setting has in my opinion been very helpful learning experience for students.

Summary

In summary, curiosity into the reason why one of their experiments did not have the expected results was an effective

motivating factor for my biology students. They became more actively involved in their lab experiments through problem-based and collaborative teaching techniques. In addition, students familiarized themselves extensively with the scientific method by designing, conducting, and interpreting series of experiments, in which one was logically based on the outcome of the previous one. Student learning was therefore considerably enhanced.

References

Laine Phyllis (2002). Symbiosis – The Prentice Hall Custom Laboratory Program for Biology. Pearson Custom Publishing.

Stein Carter, J.L. (1994). "Enzyme Activity." http://biology.clc.uc.edu/courses/bio114/carter.htm. Accessed February 1, 2007.

Stein Carter, J.L. (1996). "General Biology I – Assignment on Scientific Method." http://biology.clc.uc. edu/courses/bio104/carter.htm. Accessed February 1, 2007.

Biographical Information

Wilhelm Kossenjans is an assistant professor of Biology at University of Cincinnati Clermont College. He may be reached by e-mail at Wilhelm.Kossenjans@uc.edu

Regional Campus Teaching Ain't a Joke but Humor Can Make it More Effective

Mark A. Shatz and Stephanie R. Coil
Ohio University—Zanesville

Abstract

Based on our experience of using humor in traditional and online classrooms, we explain how regional campus faculty can incorporate humor into instruction. We identify the benefits of pedagogical humor, guidelines for using humor as an instructional device, and strategies for locating, creating, and incorporating humor.

Regional Campus Teaching Ain't a Joke but Humor Can Make it More Effective

"If you lost your sense of humor, it's time to become an administrator" (Buskist, 2002, p. 192).

Regional campus faculty face numerous pedagogical challenges, such as heavy teaching loads, multiple course preparations, and students often ill-prepared for the university experience. These burdens include the growing demand to offer online courses (Kershaw, 1999), the pressure to teach courses outside one's specialty area (Tang & Chamberlain, 2003), and an increasing number of non-traditional students (Lake & Pushchak, 2007). The varied instructional responsibilities require flexible pedagogy, student-oriented instructional strategies, and the occasional adult beverage.

There is no panacea for the unique challenges of teaching at a regional campus. However, humor is a proven instructional strategy that can enhance three types of learning connections: student-student, student-teacher, and student-material. Humor promotes the student-student connection by creating an inviting classroom environment that fosters group cohesion and promotes learning (e.g., Buskist, 2002; Gorham & Christophel, 1990; Roth, 1997). Humor bridges the student-teacher gap by humanizing the instructor, demonstrating instructor enthusiasm, and increasing the perception of instructor effectiveness

(e.g., Lomax & Moosavi, 2002; Wanzer & Frymier, 1999; Weaver & Cotrell, 2001). Humor facilitates the most important connection, student-material, by increasing student attention and attendance (e.g., Berk, 2000; Davis, 2005), reducing stress of "dread" courses (e.g., Kher, Molstad, & Donahue, 1999; White, 2001), and promoting learning (e.g., Garner, 2006; Ziv, 1988).

Humor is a salient feature of effective pedagogy, and its utility as an instructional strategy should be applied to every educational setting. As James (2004) noted in a commentary recommending the use of humor in online courses, "Because humor is one of the major traits of the best, most effective teachers, it is a characteristic that all teachers should want to hone, practice, and nurture, regardless of medium" (p. 94). In the first study of humor incorporated systematically into online instruction, two Ohio University-Zanesville researchers (LoSchiavo & Shatz, 2005) found that James' claim was justified – humor significantly increased student interest and participation in a General Psychology online course.

When used appropriately, humor is an educational lubricant that can make learning more engaging, enjoyable, and memorable. We identify guidelines for using humor in the classroom, outline strategies for finding pedagogical humor, and explain how to integrate humor into lectures, exam, and online components.

Humor as an Instruction Strategy

As a pedagogical device, humor can promote various objectives, such as increasing student interest and attention, providing students with a "mental break," or promoting the comprehension and retention of a concept. Regardless of how humor is used for instructional purposes, regional campus faculty should consider the following guidelines.

Use Humor Not Comedy

For professional entertainers, funny is funny, and the labels of "humor" and "comedy" are relatively insignificant. For faculty, understanding the difference between comedy and humor is critical for instruction.

The primary difference between comedy and humor lies in the response - comedy elicits a stronger reaction. The expectation for more frequent and stronger laughter is reflected in the labels used in the entertainment world – there is no "stand-up humor" or "sit-hums." Comedy appreciation is more of a reflexive response – it does not take higher-level brain activity to laugh at Will Farrell running around in his underwear.

Humor evokes a weaker response, such as smirking, smiling, or chuckling. Humor appreciation, such as reading the gold standard of humor writing, The New Yorker, requires cognitive understanding before eliciting a reaction. Since humor requires that you "get the joke" before responding, humor directly or indirectly stimulates thinking.

The goal of pedagogical humor is to promote learning. Therefore, instructors should not use comedy to get big laughs because powerful comedy can often overshadow an instructional objective. For example, if an instructor uses a very funny story to illustrate a concept, students are likely to remember the comedy and forget the principle.

The Classroom Is Not a Comedy Stage

The most important consideration for selecting or preparing humor for the classroom is the educational purpose of the humor. Although humor can increase students' overall enjoyment of the educational experience, most of the humor incorporated into a course should serve a specific instructional goal. Otherwise, the course material and the instructor might be perceived as "fluff" (Davis, 2005; Garner, 2006), and students may miss the content of the lecture by waiting the next gag (Stambor, 2006).

The educational context also changes humor expectations. Audiences expect comedians to be funny while students usually expect regional campus faculty to be scholarly, serious, and boring. The lower humor threshold for educational settings benefits instructors in three ways. First, simpler forms of humor that would "bomb" in a comedy venue, such as word-play (e.g., puns, oxymorons) and witty observations, can be used successfully in courses. Second, instructors can use humor in moderation and still be considered effective. Third,

lowered humor expectations also mean that students will likely appreciate any attempt at humor, and perceive the instructor as striving to make the course more interesting.

The last point illustrates a critical difference between comedy and pedagogical humor. "Lame" humor is never appropriate in the entertainment industry but it is effective in the classroom. Students may not laugh but they will recognize and value that the instructor is trying to make the classroom experience more interesting and engaging.

Avoid the "PC" Police

In a comedy venue, anything goes. No target is off-limits, and humor targets include people, places, things, and ideas. The target is often a victim because most humor is the result of ridiculing or attacking the target. As comedian Jay Sankey (1998) observed, "If there's no corpse, there's usually no joke" (p. 29).

Fortunately, most instructors recognize that potentially offensive humor, such as sexist or racist jokes, is never appropriate (Greenwood & Isbell, 2002). Humor also should not be used to embarrass, intimidate, or retaliate against students (White, 2001), or be perceived as critical of any group (Torok, McMorris, & Lin, 2004). Inappropriate use of humor can be offensive, distracting, and seen as a waste of time.

The safest target is always the instructor because self-deprecating humor avoids offending or alienating others, and allows students to view the teacher as more "human." For Ohio regional campus faculty, there is one other safe target – the University of Michigan football program.

"MAP" the Humor

The acronym "MAP" stands for material, audience, and performer, and successful comedy requires that all three elements be properly aligned (Helitzer & Shatz, 2005). The material must be appropriate to the interests of the audience, and the material should match to the persona of the performer. In addition, the audience must complement both the material and the presentation style of the

performer.

The MAP principle applies to pedagogical humor. When preparing humor for the classroom, instructors must be student-oriented and recognize that certain types of humor will not work, such as references to outdated cultural icons or discipline-specific jokes. Although pedagogical humor is most successful when targeted to the students, the humor should also fit the course material and reflect the instructor's personality.

Paint the Humor

Visual humor is especially effective during lectures. Cartoons, illustrations, and photographs can easily be integrated into overhead transparencies or PowerPoint presentations. Although visual humor is usually self-contained (i.e., a caption or the illustration delivers the punch line), there are other ways that instructors can enhance visual humor for lectures. Visuals, such as photographs or illustrations, can be used as a punch line for a joke. For example, when discussing the difficulty of course examinations, the setup would be "And this is how students often feel after an exam…" with a photograph or cartoon of crazed individuals delivering the punch line.

Find Funny, Don't Be Funny

Professional comedians must be inherently funny. Faculty can be humor-challenged and still reap the benefits of pedagogical humor – it's not about being funny but finding funny. Systematically incorporating humor into instruction does not require a keen sense of humor but an awareness of pedagogical issues. For example, every instructor recognizes that students have limited attention spans and that certain material is difficult to comprehend. Acknowledging those instructional facts of life allows instructors to systematically use humor to regain attention and promote comprehension.

The challenge for regional campus faculty is to locate resources that can be easily incorporated into instruction. There is a wide range of humor that can be used in instruction, including quotes, jokes, cartoons, video clip, and classroom exercises, and sources of pedagogical humor are identified in the following section.

Locating Pedagogical Humor

Given the wealth of pre-existing pedagogical humor material available from the sources listed below, we encourage regional campus faculty to follow the selection guidelines mentioned in the previous section. First, does the humor promote an educational objective? Second, will the students understand and appreciate the humor? Third, is the target of the humor appropriate for the course?

Internet

The Internet is the best resource for pedagogical humor. Any search using a discipline and "humor" as descriptors will yield numerous web sites, yet more narrowly focused searches (i.e., "jokes" or "quotes" and a specific discipline topic) will produce more information.

There are numerous jokes and quotes websites, such as brainyquotes.com and quoteland.com, that allow searches by topic or author. Just about every discipline has parody web sites that include satirical material, such as fictitious concepts, theories, and research findings. For example, the Annals of Improbable Research (improb.com) is devoted to unique scientific theories and studies, such as "Stress Analysis of a Strapless Evening Gown" and "The Neural Correlate of Ignorance."

Instructional Supplements

An invaluable resource for pedagogical humor is the supplemental instructional packages provided by book publishers. For example, the typical General Psychology package includes a several hundred-page instructor's guide, instructional handouts, video vignettes, CD-ROM research simulations, classroom activities, a test bank, and access to a comprehensive support web site. Given that most instructional supplemental packages include materials with a humorous flair, it illustrates a previous point – instructors must find funny and not be funny.

Students

Instructors can use students to help locate and screen material, especially Internet-based sources. We recommend an extra-credit

activity called the "Contributing Editor" that requires students to find potential sources of humor on a course topic. Besides submitting a copy of the resource, students are required to submit a written report that identifies the source, the topic addressed, and a brief description of how the material relates to the course.

Setting up discussion boards (e.g., "The After Hours Club") allows students the opportunity to post jokes, humorous observations concerning course topics, or links to humorous web sites. If students assist with locating material, then we strongly encourage instructors to identify specific guidelines, such as the criteria described in the beginning of this section. If students do not understand what types of humor are appropriate for the course, then instructors will receive irrelevant generic humor references, such as the cat piano savant on YouTube.

Self

There are several benefits of instructors creating their own humor, such as adding a more personalized touch to the humor, self-disclosing to promote the student-teacher connection, and better matching the humor to the tone and content of the course. Humor can be added to syllabi, handouts, lecture materials, and examinations. For example, advice for students experiencing problems using Blackboard could be, "If you have problems using Blackboard, then take a deep breath, consume an adult beverage, and try again. If you still have problems, drink a stronger adult beverage, and contact the IT Help Desk." For a more detailed explanation of the techniques and principles of humor writing, instructors can refer to various comedy writing books (e.g., Carter, 2001; Helitzer & Shatz, 2005).

Instructors can also use editing software to produce humorous visual materials. For example, the first author posts a family portrait in which his beard is "cloned" onto each family member. Digital videotape cameras can be used to produce brief instructional vignettes, such as a family pet being trained with operant conditioning principles. We strongly believe that integrating personal photographs or "home movies" into instruction adds a more personalized and intimate feel to instruction.

Strategies for Using Pedagogical Humor

There are several ways to interject humor into instruction, and in this section, we offer suggestions for using pedagogical humor in lectures, examinations, and online courses.

Lectures

The placement and duration of humor used in lectures are critical to the flow of instruction. Short, simple jokes are most appropriate for the introduction and transitions while longer pieces are best placed at the end of a unit.

Introductions can include a funny subtitle, a photograph or illustration with an added caption, a reformatted quote, or exaggerated unit objectives. For example, an introduction to a research methods module could include an opening joke (e.g., "Today's lecture will be an experiment - half of you will get real information while the other half gets a placebo.") or a list of research questions yet to be answered with real and fictitious items (e.g., "Is depression caused by drinking Pepsi Blue?").

Humor allows students, as well as teachers, a brief "mental break" from a lecture, and instructors can use transitions to illustrate a concept with topic-related tangents or self-deprecating stories. For example, the first author incorporates a running feature, called "Science is Cool," into lecture modules as an opportunity to facilitate science literacy. By clearly identifying the tangent, students recognize that the material is separate from the lecture. Nevertheless, because the feature tangentially reinforces course topics, the tangents continue to serve as teaching opportunities.

More elaborate and stronger humor is best suited as unit closers. Examples include top ten lists, fictitious experiments, or links to humorous web sites. For example, the closers for a lecture module on abnormal psychology could be a list of factitious disorders, a collection of exaggerated quotes from famous therapists, or a series of silly self-help books. When using more elaborate humor, we often ask students to add their own contributions by posting ideas in a discussion board.

Exams

Although humor may not significantly reduce test anxiety or improve test performance (McMorris Boothroyd, & Pietrangelo, 1997), we believe that the occasional use of humor in examinations is appropriate under certain conditions. First, students should be forewarned that humor would be incorporated into the examinations (e.g., choice "e" is always a joke and never the correct answer). Second, the addition of humor should not interfere with the students' ability to complete the test in the allotted time. Third, practice quizzes and examinations offer an excellent opportunity to incorporate humor without adversely affecting students' grades.

For instructors who are comfortable using humor in course examinations, there are several approaches for adding humor to multiple-choice tests. First, an additional distracter (e.g., choice "e"), such as a joke at the expense of the instructor, can be added to select items. Second, names that appear in items can be reformatted by inserting the instructor's name or creating fictitious names. Third, a "final" item can be added with the setup "The test is over and you..." with funny distracters targeted to the students, instructor, or course. (See Berk, 2000 for additional strategies for infusing humor into multiple-choice examinations.)

Online Instruction

The principles and guidelines described previously apply to the use of humor in online components or courses. Given that humor in online instruction is in essence print humor, the careful selection of humor targets is critical. When potentially "risky" humor is used in the traditional classroom setting, the instructor's verbal and nonverbal cues can signal an impending joke and potentially minimize any negative reactions. In addition, students provide immediate feedback that indicates whether the humor was appropriate and should be used again. In the online classroom, humor cannot be embellished by nonverbal cues or easily retracted. Instructors must carefully consider how students might react before adding humor to the online course.

Conclusion

Regional campus faculty should recognize that humor can be a social lubricant or irritant. Humor that is derogatory or ridiculing has no place in an educational setting, and "over-the-top" humor is distracting, annoying, and unnecessary. Even when humor is used appropriately, too much of a good thing can result in the students perceiving the material as frivolous and viewing the instructor as a jokester rather than a scholar.

When used appropriately and in moderation, pedagogical humor promotes three learning connections: student-student, student-teacher, and student material. The use of humor creates a classroom atmosphere that encourages participation and creativity, "humanizes" the instructor, and makes challenging concepts clearer and more memorable. Instructors do not have to become "class clowns" or entertainers to achieve the benefits of pedagogical humor. The judicious, appropriate, and timely use of humor allows instructors to teach and model a critical educational lesson – learning is fun.

References

Berk, R. A. (2000). Does humor in course tests reduce anxiety and improve performance? College Teaching, 48, 151-159.

Buskist, W. (2002). Effective teaching: Perspectives and insights from division two's 2- and 4- year awardees. Teaching of Psychology, 29, 188-193.

Carter, J. (2001). The comedy bible. New York: Simon and Shuster.

Davis, B.M. (2005). Bored and ignored or gained and maintained: Role of attention in beginning class. Teaching Professor, 19 (6), 2.

Garner, R. L. (2006). Humor in pedagogy. College Teaching, 54 (1), 177-180.

Gorham, J., & Christophel, D. M. (1990). The relationship of teachers' use of humor in the classroom to immediacy and student learning. Communication Education, 39, 46-62.

Greenwood, D., & Isbell, L. M. (2002). Ambivalent sexism and the dumb blonde: Men's and women's reactions to sexist jokes. Psychology of Women Quarterly, 26 (4), 341-350.

Helitzer, M., & Shatz M. A. (2005). Comedy writing secrets 2nd ed. Cincinnati, OH: Writer's Digest Books.

James, D. (2004). A need for humor in online courses. College Teaching, 52 (3), 93-94.

Kershaw, A. (1999). If geography is history, what happens to community colleges? Community College Journal of Research and Practice, 23, 747-756.

Kher, N. M., Molstad, S., & Donahue, R. (1999). Using humor in the college classroom to enhance teaching effectiveness in 'dread courses'. College Student Journal, 33, 400-406.

Lake, E. D., & Pushchak, A. J. (2007). Better allocating university resources to create on-line learning environments for non-traditional students in underserved rural areas. Innovative Higher Education, 31 (4), 215-225.

Lomax, R. G., & Moosavi, S. A. (2002). Using humor to teach statistics: Must they be orthogonal? Understanding Statistics, 1 (2), 113-130.

LoSchiavo, F. M., & Shatz, M. A. (2005). Enhancing online instruction with humor. Teaching of Psychology, 32, 247-250

McMorris, R. F., Boothroyd, R. A., & Pietrangelo, D. J. (1997). Humor in educational testing: A review of discussion. Applied Measurement in Education, 10, 269-297.

Roth, J. K. (Ed.). (1997). Inspiring teaching: Carnegie professors of the year speak. Bolton, MA: Anker Publishing Company, Inc.

Sankey, J. (1998). Zen and the art of stand-up comedy. New York: Routledge.

Stambor, Z. (2006). How laughing leads to learning. Monitor on Psychology, 37 (6), 62.

Tang, T. L., & Chamberlain, M. (2003). Effects of rank, tenure, length of service, and institution on faculty attitudes toward research and teaching: The case of regional state universities. Journal of Education for Business, 79 (2), 103-110.

Torok, S. E., McMorris, R. F., & Lin, W. (2004). Is humor an appreciated teaching tool? Perceptions of professors' teaching styles and use of humor. College Teaching, 52 (1), 14-20.

Wanzer, M. B., & Frymier, A. B. (1999). The relationship between student perceptions of instructor humor and students' reports of learning. Communication Education, 48 (1), 48-62.

Weaver, R. L. II, & Cotrell, H. W. (2001). Ten specific techniques for developing humor in the classroom. Education, 108, 167-179.

White, G. W. (2001). Teachers' report of how they used humor with students' perceived use of such humor. Education, 122 (2), 337-348.

Ziv, A. (1988). Teaching and learning with humor: Experiment and replication. Journal of Experimental Education, 57, 5-15.

Biographical Information

Mark Shatz is a Professor of Psychology at Ohio University-Zanesville. As an educational psychologist, he has presented and published numerous papers on various topics, including test-taking, instructional strategies, and pedagogical humor. He is the coauthor of the top-selling humor writing book, Comedy Writing Secrets (2nd ed), and he teaches Humor Writing (JOUR 488) with its infamous final exam – a performance before a live audience.

Stephanie Coil is a Psychology major at Ohio University-Zanesville.

Mark A. Shatz, Ph.D.
Department of Psychology
Ohio University-Zanesville
1425 Newark Road
Zanesville, OH 43701
740.588.1496
shatz@ohiou.edu

The Effect of Library Training on Scientific Writing in the Organic Chemistry Class

Bozena Barbara Widanski
and
Diana S. Riemenschneider
University of Cincinnati—Clermont

Abstract

For more than four years, UC Clermont Organic Chemistry students have been offered the opportunity to learn about writing scientific articles. During the first two years, it was observed that while writing scientific journal articles for external peer-review, sophomore students needed extra help with information-seeking skills. That finding confirmed the literature data, which showed that science majors in their junior year may have not necessarily acquired basic information literacy skills. Therefore, a UC Clermont librarian was invited to the organic chemistry class where research was conducted to determine whether the library training contributed to scientific writing. In our paper, we will provide an example from our 2005-06 academic year project, discuss results from that study, and propose the way to increase information literacy skills among undergraduate students.

Introduction

Writing is a tool for 1) expressing ideas, 2) supporting independent and interactive learning, and 3) promoting critical thinking. Writing to learn is increasingly being used in science courses including chemistry labs (Tilstra, 2001). However, most writing assignments given in chemistry are reports or essays topics associated with the discipline (Shibley et al., 2001) or using lab reports and essay questions (Goodman and Bean, 1993). Journal-quality articles have been expected in upper-level course directed research. Certainly, the type of the writing project could affect learning achievement (Bangert-Drowns, Hurley, and Wilkinson, 2004). Thus, Bazerman and others suggested a need to introduce students to the scientific article

format (Bazerman, 1988). Introducing students to writing a scientific article early in their chemistry education can provide students with an exciting and crucial introduction to the discipline and can promote students' interest in research (Goodman and Bean, 1993). Therefore, organic chemistry students were offered a realistic experience of being scientific researchers and were introduced to writing scientific articles within a four-year time period. Our previous research has shown that our organic chemistry students needed extra help with information-seeking skills to better understand the concept of 'literature searching' (Widanski and Courtright-Nash, 2006). Students failed to locate, evaluate, and cite sources acceptably in their writing. These findings confirmed that science major students in their junior year may still not have acquired basic information literacy skills (Calderhead, 2000). Information literacy was defined as "the student's ability to perform purposeful library research in a rapidly changing information environment (which may or may not be in the library building)" (Nugent and Myers, 2000). According to the American Library Association's Presidential Committee on Information Literacy (1989) "to be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information" (Cunningham and Lanning, 2002).

With the persisted fast growth of electronic library resources, it is important that students and faculty are informed about what is available in their academic libraries.

> The final report of the American Library Association Presidential Committee on Information Literacy (1998) emphasizes the impact of the information age on all people and the need for everybody to become information literate. The mission of academic libraries is to create a learning environment in which faculty and students are provided with a variety of library resources and ultimately, become competent users. (p. 91-92, Korobili, et al., 2006).

However, some studies conducted in this area have shown that library services are not always properly utilized because of insufficient communication and inadequate interaction between the faculty and

the library (Korobili, et al., 2006). According to Cunningham and Lenning (2002), "establishing a true collaborative effort is perhaps the greatest challenge in promoting information literacy." Different faculty-librarian collaboration models have been proposed but not all were successful in increasing student information literacy skills and developing critical thinking skills (Farber, 1999). Our project proposes a unique, real-life stimulated situation where students were motivated to increase on-line communication, information literacy, and critical thinking skills. Incorporating information literacy into organic chemistry will provide a strong foundation to better prepare students for lifelong learning. Because nearly all science majors take organic chemistry as sophomores, the course will provide a uniform foundation for future success in science.

The Writing Project

The writing project began in response to the perception that there was a need for a more realistic approach to writing and laboratory research in the second-year organic chemistry laboratory and continued as a result of the extremely positive responses from students. Since 2003, each organic chemistry lab class was required to conduct a review of literature, develop a hypothesis, test that hypothesis in the lab, write a journal article, submit the article for review, revise the article, and give an in-class presentation on the project. Each year, improvements were made to the process of learning through writing scientific articles based on the ongoing assessments. One of the research objectives for 2005-2006 academic year was to determine whether the library training contributed to scientific writing. This research objective was based on the following findings from previous research:

> During the focus groups, the primary suggestion that students offered for future writing was to require training in finding literature for the review. Since the literature-search training was optional, some students did not come for training and then had a much harder time than those students who received training. The participants in the focus groups also suggested that

> we give future students practice in writing the review of literature and developing a hypothesis before the quarter in which the research article is researched and written. (Widanski and Courtright-Nash, 2006)

In fall quarter 2005, all organic chemistry students participated in library training and wrote the summary from their literature search on their selected topic. In the following winter quarter 2006, students continued their projects from the previous quarter. They learned about writing scientific articles by developing a hypothesis, conducting laboratory research, participating in on-line writing training, and submitting scientific articles for external peer review. For those purposes, the regular curriculum was adjusted to open the lab for the project: 1) one lab meeting in fall quarter and 2) two lab meetings in winter quarter. The population of the 19 primarily second-year organic chemistry students involved in the project consisted of prebiology, prepharmacy, and premedicine students. All the experiments proposed by the chemistry students included different organic chemistry techniques that were among requirements for the lab. The following are some titles of the experiments that were proposed by students: "Lycopene Levels in Tomato Products," "The Effect of Carbon Chain Length of an Alcohol on the Ester Scent Produced," and "Analysis of Contaminants Found in Gasoline when Stored in Plastic."

Library Training

For the 2005-2006 academic year, the library training was held in a college computer lab. The organic chemistry students were instructed that for a given date, class was being held in the computer lab instead of the chemistry lab. The computer lab which had been prescheduled for the library training, contained a projection unit as well as individual computers for the students. The advantages of the computer lab were not only the ability to demonstrate the literature search process to the students, but also to allow each student to follow along and perform the examples themselves. While most students remembered, a few forgot or had trouble locating the room and were therefore late to the library training. In the subsequent 2006-2007 academic year, the college had purchased a wireless laptop cart

that was scheduled to be delivered to the chemistry lab and helped to eliminate the previous inconveniences of students forgetting or getting lost**.** While the cart did not have the ability to project the demonstration, the librarian was able to talk the students through the process and thereby provide the students with a more relevant hands-on experience.

The importance of hands-on training for library and information literacy skills is demonstrated by the 2003 publication of *Hands-On Information Literacy Activities* by Jane Birks and Fiona Hunt which provides a collection of learning activities for both undergraduate college students and secondary school students. While the book is designed to provide activities solely for teaching information literacy skills, the concept behind the book can be employed in any topic-oriented library training.

For both academic years, after the demonstration, the students were instructed to begin their literature searches while both the librarian and the chemistry professor were present to answer questions and provide assistance. This helped to start the students on their literature searches while also reinforcing the skills presented in the demonstration.

Literature Searching Discussion and Demonstration

The library trainings were begun by directing students to the library site of one of Clermont College's sister colleges, the University of Cincinnati's College of Applied Science. This college's library has a diagram and discussion on the "Cycle of Scientific Research' on the library's web site. (http://www.libraries.uc.edu/libraries/cas/cycle3.html), last accessed 08/19/2007). To aid students in accessing this information, a link to this site was placed on the Clermont College Library's web site. A brief discussion regarding the Cycle of Scientific Research ensued. During the overview of this process emphasis was placed on the importance of library research.

After the Cycle of Scientific Research overview, the different types of resources and their differences were discussed. The difference between articles and books as to the currency of the information was presented, as well as the difference between quality of scholarly/peer-

reviewed articles and popular magazines or Internet sites.

An example of a quality peer-reviewed journal presented was *The Journal of the American Chemical Society*. After talking about the journal and its importance in the chemistry field, the students were led through the process of using the University of Cincinnati's Electronic Journal finder product to view all the available sources and related coverage for the journal. One of the sources available to the students was the OhioLINK Electronic Journal Center (EJC). The students learned how to both browse the journal and how to search the available coverage of the journal using the EJC. The students were then led through a quick demonstration of using the University's Electronic Journal finder to search for all journals whose title contained "organic chemistry" as an alternative means of finding sources.

When everyone seemed comfortable with what had been presented, the librarian discussed the different types of databases and indexes available for finding resources. She explained that not all library search systems (databases and indexes) contained full text of every article, that many just contain citations to possible articles. She also explained that many of the articles cited were available in full text. An overview of the different methods available to determine if the article was available within the University of Cincinnati was then provided. A brief discussion of the Interlibrary Loan (ILL) process was also mentioned in case an article was not available within the University. It was emphasized that waiting until the last minute to do the literature search was potentially a problem, for example, if an article needed to be retrieved through this process.

Students began their literature searches with both the chemistry professor and the librarian available for questions and assistance. As questions arose, the librarian introduced students to additional resources specific to their topics such as biology and medical appropriate databases and indexes. In many cases, students were able to find the full text of articles from the citations, first with the librarians assistance and then on their own.

After the library training class period, the students continued their literature searches. They had been encouraged during the library training to seek the librarian's assistance, if needed. Many students

took advantage of this opportunity via email, phone, and in-person contact. Some students had quick follow-up questions to verify that an article was only available in paper, or to get the name of an index they had forgotten to write down. If the article was available in paper from another library within the University of Cincinnati, instructions on the process for having a copy sent to the Clermont College Library was provided. Others had selected topics for their research that required more in-depth research, and therefore additional help from the librarian was needed. Because the project crossed the fall and winter quarters, a few students contacted the librarian during the break between quarters for help with additional research before they began their laboratory research in the winter quarter.

Findings

Surveys and student' papers were used to determine the effect of library training on scientific writing. Pre-class surveys (control) and post-class surveys were conducted in each quarter. Student's papers were evaluated (based on cited library resources) and compared to the papers from the quarter (year 2004) without library training.

Although all students (in pre-class survey, fall quarter) indicated that they had some experience in writing papers in classes prior to this research project, their experiences were mostly in writing papers in English classes. This reflects what Shibley, Milakofsky and Nicotera, (2001) previously observed that "The practice of developing scientific ideas by writing about a topic is neglected in many beginning science courses to permit comprehensive coverage of the subject matter" even though there have been many articles published on the subject of writing in science courses.

For a writing project to be successful students should become information literate; but to develop information literate skills, students must be computer literate. According to the pre-class survey, most of the students were using the computer every day but not all students were researching on-line or using e-mail prior to this research project. Two students indicated that they never researched topics using on-line library resources and one student never used email. As the research project progressed students increased on-line activity and they felt

better about working on-line. During fall quarter of this research project all students researched topics on-line and communicated using e-mail at least once a week.

Table 1. Frequency of positive responses (strongly agree and agree) in all collected answers from 19 Lab I students.

Pre-class and Post-class Survey, Fall Quarter Frequency of positive responses		
	Pre-class (control)	Post-class
I know the difference between popular and scholarly publications	**10**	**14**
I know what peer-reviewed is and its significance	**13**	**14**
I feel comfortable using electronic databases and indexes	**11**	**16**
I can identify an appropriate database or index for a subject	**8**	**14**
I like to have library training	**7**	**8**

As previous literature showed, students were unaware that they needed help with library search (Widanski and Courtright-Nash, 2006; Cunnigham and Lanning, 2002). Burton and Chadwick noted that "Some students appear to grab the first 10 reasonably relevant items they encounter on the Internet or in the library, regardless of the authority or appropriateness of the sources." (Burton and Chadwick, 2000). One benefit of the library session may be that after this project the number of students that felt comfortable using electronic databases and indexes increased (Table 1). In addition, more students felt that they were able to identify an appropriate database or index for a subject.

Since library training was part of their own research project students saw this training as an important activity. James Elmborg

argues (Elmborg, 2003) that information literacy can be inspiring and interesting if it emphasizes "real thinking" and encourages students "to see the importance of the library in the development of their ideas" (p. 73).

In fall quarter, our post-class survey showed that most of the students (15 students out of 19 students responded) recommended library training to others. Almost all students' responses about library training were positive. Representative student responses were as follow: "Some people have not gotten it in other classes and it is nice to have the option to have it here," "Most kids don't understand how to navigate through the databases, it helps to give you good references," "It is important to distinguish scholarly from popular sources when doing research," "It can help students to know how and where to start research, usually the hardest part is just finding the material you need," "It helps me to look at certain web sites or better web sites than what I would have chosen." Most students felt that the library training was "helpful" and "informative". Only two students did not recommended library training because they didn't use it. Most students (13 students out of 19 students responded) suggested not making any changes to library training in this course.

In addition, surveys showed that students' descriptions of the 'Scientific Process' become more detailed and students developed an understanding of the format for a scientific article. Before the course: most students suggested starting scientific research by stating a hypothesis and then conducting the experiment. After the course, students found literature review a very important part of scientific research. Almost all students felt that they had learned a lot in this course.

At the end of the two quarter labs (year 2006), student's papers showed great research ideas, increased understanding and knowledge of the subject matter, and incorporation of relevant literature information and citations. When student's papers, completed in year 2006, were compared to the papers completed in year 2004 there was a significant difference in quality of references cited. Students who received library training (year 2005/ 2006) used only peer-reviewed references with at least three scientific articles cited in their papers.

When students did not received library training (year 2004), 60 % of them did not used the peer-reviewed scientific articles at all. Most of the cited sources were just internet websites.

Conclusion

Our study showed that library training changed students' scientific writing in chemistry mostly by increasing quality of cited references. However, the major advantage of incorporating library training to our project is that information literacy was successfully included in a sophomore chemistry lab curriculum without jeopardizing other lab required materials. There are a number of other benefits from our project such as recognizing the role of library search in writing projects and developing an extensive channel of communication between librarian and faculty. It was observed that almost all students' responses about library training were positive and most of the students recommended library training to others. Overall, incorporating library training into the organic chemistry writing project provided a strong foundation to better prepare the students for lifelong learning.

We agree with Cunningham and Lanning (2002) that *"*the one-shot, library instruction session is not enough,…information literacy needs to be integrated into the curriculum" (p. 347). Furthermore, it has been previously highlighted that: "The role of the academic library is to support the University's programs, to work with the faculty, and to instruct/guide students in using the collections in order to conduct research and succeed in class." (p. 340, Bielema et al., 2007).

The way to increase information literacy skills among undergraduate students

Information literacy skills can be introduced using a number of different methods and with different levels of students. Prior to the 2005-2006 academic year, the Clermont College Library had one full-time librarian who was the Library Director. Due to the varying demands on her time, information literacy/library training focused on incoming students. Therefore, library skills were presented primarily in the English Composition II classes when the research paper was

assigned, in the Psychology 101 classes for the journal article review assignment, and in program specific Introductory/Freshmen Year Experience oriented classes.

With the hiring of the Visiting Librarian position in the 2005-2006 academic year the information literacy and library trainings were both expanded into new areas and could provide a more specific and more topically focused instruction. Examples of the areas of expansion included: Business classes such as Business Ethics and Economics, Education classes, and Nursing classes at both the Freshman (Introductory) and Junior (Research) levels.

For all levels of courses, students retain and are more likely to reuse the information literacy skills when provided with specific projects in which use of these skills are necessary. The integration of projects that require information literacy skills within a course curriculum is an effective method for students to retain these skills. (Barefoot, 2006) Projects that offer experiential learning opportunities to prepare the student for professional work help to reinforce these skills. (Southard, 1988)

An orientation to the library and the resources which the library has available provides the students with a starting point for those who have not had such an orientation, and a review, and sometimes additional information, for those who have had an orientation. Again, a hands-on opportunity helps to reinforce these skills.

Some students, particularly freshman, are afraid of the library (Barefoot, 2006) so a chance to learn who the librarian is and a welcoming encouragement by the librarian makes the librarian more approachable to the student and helps to break any unkind stereotypes the student may have regarding librarians. This ability to be approachable, particularly when questions and problems occur, then reflects not only on the librarian, but will infer itself on other library staff, the library, and its resources.

Finally, the library should have a web site that allows for the student to quickly and easily have access to both the resources and contact information for the library. As more and more students become multimedia and Internet oriented, this is no longer a bonus, but an expectation. (Carr, 2006; Brown, 2006; Farris-Berg, 2005)

References

Bangert-Drowns, R L, Hurley, M M, Wilkinson, B (2004). The Effect of School-Based Writing-to-Learn Interventions on Academic Achievement: A Meta-Analysis. *Review of Educational Research. 74,* 29-58.

Barefoot, B (2006). Bridging the Chasm: First-Year Students and the Library. *The Chronicle of Higher Education. 52(20),* B16.

Bazerman, C (1998). *Shaping Written Knowledge: The Genre and Activity of the Experimental Article in Science*. Madison, WI: University of Wisconsin Press.

Bielema, C, Crocker, D, Miller, J, Reynolds-Moehrle, J, Shaw, H (2007). Faculty and Library Collaborations: A Case Study and Proposal for Online Learning Environments. *Research Strategies. 20*, 334-345.

Birks, J, Hunt, F (2003). *Hands-On Information Literacy Activities*. New York, NY: Neal-Schuman Publishers, Inc.

Brown, J (2006). New Learning Environments for the 21st Century: Exploring the edge. *Change. 38(5)*, 18-24.

Burton, V T, Chadwick, S A (2000). Investigating the Practices of Student Researchers: Patterns of Use and Criteria for Use of Internet and Library Sources. *Computer and Composition. 17,* 309-328.

Calderhead, V (2000). Reflections on Information Confusion in Chemistry Information Learning: The Meaning of the Shift from Library Instruction to Information Literacy. *Research Strategies. 16*, 285-299.

Carr, R (2006). What Users Want: An Academic 'Hybrid' Library Perspective. *Ariadne. 46,* Retrieved February, 2006, from http://www.ariadne.ac.uk/issue46/carr.

Cunningham, T H, Lanning, S (2002). New frontier trail guides: faculty-librarian collaboration on information literacy. *Reference Services Review. 30*, 343-348.

Elmborg J (2003). Information Literacy and Writing Across the Curriculum: Sharing the Vision. *Reference Services Review. 31*, 68-80.

Farber, E (1999). Faculty-Librarian Cooperation: A Personal Retrospective. *Reference Services Review. 27*, 229-234.

Farris-Berg, K (2005). Listening to Student Voices –On Technology: Today's tech-savvy students are stuck in text-dominated schools. *education|evolving.* Saint Paul, MN.

Goodman, W D, Bean, J C (1993). *Journal of Chemical Education. 60*, 483-484.

Korobili, S, Tilikidou, I, Delistavrou, A (2006). Factors that Influence the Use of Library Resources by Faculty Members. *Library Review. 55*, 91-105.

Nugent, C, Myers, R (2000). Learning by doing: the freshman-year curriculum and library instruction. *Research Strategies. 17*, 147-155.

Shibley, I A, Milakofsky, L M, Nicotera, C (2001). *Journal of Chemical Education. 78*, 50-53.

Southard, S (1988). Experiential Learning Prepares Students to Assume Professional Roles. *Professional Communication, IEEE Transactions on. 31(4),* 157-159.

Tilstra, L (2001). Using Journal Articles to Teach Writing Skills for Laboratory Reports in General Chemistry. *Journal of Chemical Education. 78*, 762-764.

Widanski, B B, Courtright-Nash, D (2006). Peer Review of Chemistry Journal Articles: Collaboration across Disciplines. *Journal of Chemical Education. 83*, 1788-1792.

Biographical Information

Bozena Barbara Widanski is an associate professor of chemistry at the University of Cincinnati - Clermont. She joined the UC – Clermont faculty in September 1999, teaching mostly organic chemistry and laboratory classes. Her interests are in the enhancement of learning in chemistry. Widanski may be contacted at bozena.widanski@uc.edu.

Diana S. Riemenschneider, MLIS was the Visiting Librarian at the University of Cincinnati – Clermont College from 2005 – 2007. Having previously served as Director of MIS Services for a non-profit organization, she is currently applying to PhD programs in Business. Riemenschneider may be contacted at riemends@yahoo.com.

Teaching Students: For A Semester Or For A Lifetime?

Jeffrey A. Wheeler
Kent State University—Ashtabula

Introduction

I have often wondered if I am really instilling knowledge into my students. I can see what grades they have at the end of a semester, but does that really tell the story? Are they understanding the concepts? Can they apply these concepts in the various settings they will encounter in the workforce and life in general? The following review of the academic process will include: (a) How students learn, (b) Why they learn, and (c) How we can teach students to make learning a useful habit for life.

How Do Students Learn?

A review of the literature reveals many theories on learning. I will first explore the more general aspects of learning, secondly look at how we learn more complex ideas, and finally I will expound on learning at the individual level.

The Behaviorist-Associationist approach asserts that people learn initially by association [1,2]. When the repetition of a given stimulus is associated with a predictable response, learning has taken place. Therefore, learning can be viewed as the building of habits of associations. Repetition of small logically organized bits of information followed by positive reinforcement promotes learning. Positive reinforcements can include the satisfaction of giving correct answers, receiving good grades when tested, or verbal praise by teachers or fellow students.

In contrast, Cognitive approaches to learning have been used to explain how students learn in institutional settings where complex knowledge is being processed [1,2]. Students develop a framework of memorized basic ideas and definitions. As new and more complex ideas are presented, students are asked to reason and problem-solve which requires them to accommodate the new information into their

existing frameworks. The building of new meaning across different contexts allows the student to develop critical thinking skills and become adaptable to new situations. This is a valuable asset for higher learning as well as employability.

Because each student has individual frameworks of knowledge both before they enter college and before they enter each classroom (students take differing courses and in differing orders), students will learn the same information in different ways. Four main processes of learning are as follows [2]*:*

- Concrete experience: learning through direct involvement in a new experience.
- Reflective observation: learning through watching others or through thinking about our own experiences or the experiences of others.
- Abstract conceptualization: learning by creating concepts and theories to describe and explain our observations.
- Active experimentation: learning by using the theories and concepts we have derived to solve problems and make decisions.

Most people apply these processes in cyclical fashion as they learn; however, each student's learning experiences is different as individuals engage in some activities more than others. College students all want to get good grades and they all want to graduate. So why would some participate in required activities less so than others? The students' level of comfort with the activity and, therefore, their motivation to participate is as varied as their backgrounds and personalities.

Why do students learn?

Students enter college to get a good job, to secure their future, to impress their parents or peers, or for altruistic reasons. They are excited to begin this new journey: their new path for intellectual growth. These are all good motivators initially but as time passes and the goal is not as imminent as it seemed at the beginning, the student's initial motivating factors wane. Then the college experience may become a chore rather than an adventure. One role for teachers is to

be ready to replace students' initial motivators with a new excitement for learning: an excitement that will maintain its energy as the student continues to learn and apply concepts throughout their life.

Incentive such as praise and concrete rewards are extrinsic motivators for learning and work best when repeatedly reinforced. However, the short-term nature of these motivators do not produce long-term learning habits and actually reduce prolonged interest in a topic. In addition, praise given too enthusiastically may undercut a student's value perception of the subject and the learning experience as a whole. The challenge is to transition the students' motivation intrinsically to a more self-directed incentive for learning a subject. "A student who is intrinsically motivated undertakes an activity for its own sake, for the enjoyment it provides, the learning it permits, or the feelings of accomplishment it evokes" (Mark Lepper, 1988)*[3]*.

Intrinsic motivation can be developed by: (a) Challenge, (b) Competition, and (c) Cooperation.

Challenge

Good elements of challenge require that set goals are personally meaningful, and attainment of goals is reachable but is dependent on the student's level of participation. It is also important to give intermittent feedback during the process in order to guide the student toward success and for the student to gain a degree of esteem for this accomplishment.

Competition

Competition occurs naturally to some students and, therefore, holds more importance for such students than for others. Artificially-induced competition can be a beneficial motivator as long as the competitive loss is less than the winners' gain. For example, an enjoyable team competition is a greater motivator for learning if the outcome of the competition is an enhancement of team cooperation rather than a grade dependent on the win/loss. A poor competitive scenario may result in a reduction of cooperation of the students, a reduced urge to be helpful to other students, poor self esteem, and, therefore, a diminished interest in the course and eventually in the

learning process.

Cooperation

As with competition, cooperation comes more naturally to some students and, likewise, carries more importance. The satisfaction of helping others attain their goals is a useful life skill and can be developed by artificially imposing cooperative assignments on students. Helping others to learn motivates each student to learn the subject matter at an enhanced level of understanding in order to be able to impart that knowledge. The development of interpersonal skills required or obtained as a result of the cooperative exercise can have intrinsic value for the student. Skills such as confidence, integration, patience, listening, encouragement, effective communication, etc, have real-life value in employment as well as personal endeavors.

How do we teach?

The variable nature of students requires that we vary our teaching methods and activities to ensure that all students have an opportunity to access their individual cognitive frameworks, integrate new knowledge, and expand their critical thinking skills. In this fashion, the student has the prospect of gaining the extrinsic, positive reinforcement of an acceptable grade for the course as well as the increased intrinsic motivation of adaptability for future undertakings.

Content Design Model of knowledge structure outlines knowledge attainment as a tiered layering of concepts: (a) core concepts and principles, (b) application of core concepts, and (c) problem analysis and solution [1].

Core concepts and principles

For each field of knowledge there is a set of core concepts that needs to be learned. The learning process at this point includes memorization of key concepts and definitions, constant review of these new ideas and active discussions of their relevance to the present.

Students should be challenged to prepare for classes by reading course materials prior to class, completing chapter questions, and sharing ideas with classmates to be discussed in class. These activities

need to be supported by extrinsic motivators such as grades for completed chapter questions, points for class attendance, and praise for a student's participation in class or when classmates are found to be discussing subject matter outside of class.

Class presentation can include overview of material but should also enlist the participation of students early on in order to engage them actively in the learning process and begin to develop intrinsic motivators such as cooperation and natural competition. The teacher's enthusiasm for the course material should be evident in their class presentation and create excitement among the students.

Application of core concepts

Once the student has a grasp of the core concepts, he/she can then begin to apply these principles to real-life settings. The students will need extra direction from the teacher at this point as external motivators begin to wane. Student confidence can be enhanced by the encouragement of increased class participation along with the teacher's open dialog with the students. The teacher can share his own experiences about learning these principles and how he puts these concepts into context. In addition, inviting the class to participate openly in an analysis of current events in respect to core concepts assists concept learning. This approach entices the students to integrate the subject matter into their own experiences so that they can more fully assimilate the concept. For example, the student learns the concept that basic advertising tactics are to persuade the consumer to buy that particular product. This takes on more meaning for the blond -haired student in the class that realizes that she buys shampoo 'for blondes', even if it is more expensive than other shampoos, because the advertising was aimed at her demographic. Similarly, the same concept becomes meaningful to the single, male student who wears a popular cologne because the commercial shows women falling at the wearers feet.

Tests at this stage should include some application problems at base level to begin to challenge the students' absorption. Group assignments are good for application of concepts at this stage and will help create excitement as the group shares ways of processing

concepts with each other. The internal motivation created by the shared accomplishments of the groups will create an enthusiasm for learning more advanced concepts.

Problem analysis and solution

This stage tests the student's active learning of the combined concepts at an advanced level and application of these concepts on their own. Class structure should include impromptu questioning of the students knowledge using more complex scenarios, open ended questioning of the student's knowledge, 'what if' questions, etc., to challenge the student to think critically and deeply about the subject matter.

The hope at this stage is that the students are showing the adaptability to think critically on their own and bring in outside information to support their conclusions. The intrinsic reward for being able to think through problems and find solutions motivates the student to continue to learn more about the subject for the joy it brings.

Term papers are an effective learning tool at this point as the student becomes energized by the complexity of the subject and the integration of the knowledge into their expanded cognitive frameworks. Artificially induced competition in group settings would challenge the students and continue to foster cooperation. These are skills that the student can use throughout their academic experience and continue to rely on indefinitely.

Conclusion

Today's students are varied in age, backgrounds, abilities, financial means, time constraints, family dynamics, and motivations. And because students learn differently, they process information in ways that are unique to their experiences and preferences. Straight lecturing does not reach each student. For that matter, it does not meet the needs of any two students equally. However, it would be very inefficient to teach each student according to his/her needs. Conversely, traditional teaching methods focus on a general approach to maximize the classroom time available within a semester or quarter, and do not address the variance of the student body.

Business students are particularly vulnerable to the consequences of traditional teaching, as the early semester's concepts are building blocks for the more complex theories in junior and senior classes. The initial motivators for the subject matter lose power if the student cannot assimilate the information within his/her own framework of reference. Meaningful reference is necessary to the intrinsic motivation/ initiative for independent learning.

One of the accreditation standards outlined by the Association of Collegiate Business Schools and Programs is to build curriculum that assists in the development of student capacity to problem solve, take initiative, and improve deficiencies prior to taking more than twenty-five percent of their credits in business programs *[4].* The rationale for such standards is that there is such diversity in academic abilities of students entering community colleges. Therefore, while the impetus for learning must come primarily from the student, it would benefit the teachers to assist their students to develop the skills needed to make learning a habit for life rather than a means to a grade.

End notes

1. Boettcher, J.V.,& Conrad, R. 1999. *Faculty Guide For Moving Teaching And Learning To The Web.* Mission Viejo, CA: League for Innovation in the Community College.
2. *New Faculty Transition Program Handbook.* Retrieved April 12, 2007 from http://www.ferris.edu/htmls/academics/center/teaching_and_learning_tips/NFTP%20Book/indexNFTPHandbook.htm.
3. Student Motivation To Learn. Retrieved April 12, 2007 from http://www.kidsource.com/kidsource/content2/Student?Motivation.html
4. Association of Collegiate Business Schools and Programs, 2007. *Self Study Guidelines: Integration of ACBSP Associate Degree Standards with Baldrige Criteria.* Overland Park, Kansas.

References

Association of Collegiate Business Schools and Programs, 2007. Self Study Guidelines: Integration of ACBSP Associate Degree Standards with Baldrige Criteria. Overland Park, Kansas.

Boettcher, J.V.,& Conrad, R. 1999. Faculty Guide For Moving Teaching And Learning To The Web. Mission Viejo, CA: League for Innovation in the Community College.

Chickering, A. W., & Gamson, Z. F. 2002-2007. Seven Principles For Good Practice in Undergraduate Education. Charlotte, NC: Faculty Center For Teaching and e-Learning UNC- Charlotte.

Ferguson, C. Using The Revised Taxonomy to Plan and Deliver Team-Taught, Integrated, Thematic Units. Theory Into Practice, Volume 41, Number 4, Autumn 2002: College of Education, The Ohio State University.

Fink, L. D. Fink's Five Principles of Good Course Design. Retrieved April 5, 2007 from http://honolulu.hawaii.edu/internet/committees/FacDevCom/guidebk/teachtip/finks5.htm.

General Principles of Motivation. Retrieved April 12, 2007 from http://honolulu.hawaii.edu/internet/committees/FacDevCom/guidebk/teachtip/motivate.htm.

Intrinsic Motivation. Retrieved April 12, 2007 from http://education.calumet.purdue.edu/voccell/edpsybook/Edpsy5/Edpsy5_intrinsic.htm.

Johnson, D. W., Johnson, R. T. & Smith, K. A. 1998 Active Learning: Cooperation in the College Classroom. Retrieved April 5, 2007 from http://wtscenarios.com/TRScontent/hmco/s100012content2_5/e2.r.1a.html.

Miles, C.L. & Wilson, C. Learning Outcomes for the Twenty-First Century: Cultivating Student Success for College and the Knowledge Economy. New Directions For Community Colleges, Number 126, Summer 2004: Wiley Periodicals, Inc..

Murray, B. Teaching Students How To Learn. Monitor on Psychology, Volume 31, Number 6, June 2000.

Nellis, P. & Hosman, D. If Learning Doesn't Happen, Can We Still Call It Teaching? Teaching in College: Community College Edition. Valencia Community College.

Nellis, P. Characteristics of Community College Student. Retrieved April 5, 2007 from http://wtscenarios.com/TRScontent/hmco/s100012content2_5/el.r.4.char.html.

New Faculty Transition Program Handbook. Retrieved April 12, 2007 from http://www.farris.edu/htmls/academics/center/teaching_and_learning_tips/NFTP%20Book/indexNFTPHandbook.htm.

Reynolds, J. & Morra, T. Learning About Learning at the Community College. Inquiry, Volume 6, Number 2, Fall 2001, 39-46: Virginia Community College System.

Reynolds, J. & Werner, S. A Transition for Community Colleges: Teaching Institutions to Learning Institutions. Inquiry, Volume 3, Number 1, Fall 1998, 9-18: Virginia Community College System.

Reis, R. The Seven Habits of Highly Successful Professors. Retrieved April 5, 2007 from http://ctl.standford.edu/Tomprof/postings/457.html.

Student Motivation To Learn. Retrieved April 12, 2007 from http://www.kidsource.com/kidsource/content2/Student_Motivatation.html

Biographical Information

Jeffrey A. Wheeler is an assistant professor of Business Management Technology at Kent State University, Ashtabula. He holds a B.A. and an M.A. in Economics from Kent State University. He primarily teaches courses in Business Management Technology and Economics. Prior to being hired as a full-time professor at Kent State University Ashtabula he worked as an adjunct for (15) years in the Kent State system at various regional campuses; and for (4) years at Pennsylvania State University Shenango Campus. He can be reached at jawheele@kent.edu.

"The Effect of Grading Homework on Student Performance in College Chemistry Classes"

Linda P. Cornell
and
Victor U. Odafe
Bowling Green State University—Firelands

Introduction

Should homework be collected and graded weekly? Does this improve student learning? Is this time well spent for both the student and teacher? As the solo chemistry professor at a branch campus of a large university, the answers to these questions could have significant impact on workload and student learning. In my chemistry classes, I used assigned homework problems as a classroom teaching tool for skill development and review but did not grade the assignments. Several students in my non-major chemistry course indicated that it would be helpful to collect the elective homework assignments to motivate them to actually do the problems on a regular basis. I took this suggestion to heart; since when does a student request homework?!

In the research literature, others have investigated the effectiveness of homework on student learning for a variety of subjects and age levels with mixed results. Ott (1950) found elementary level homework ineffective while Brookhart (1997) found that completing homework had a positive effect on science achievement in 10th grade science classes. Other research has shown improvement in performance with homework in college level biology and algebra classes (Lefeort, et al, 2003, Pachal, et al, 1984 and Cooper, 1989).

As a result of my students' suggestions, I initiated this study to quantitatively determine if collecting and grading weekly homework assignments does indeed improve student performance on exams in college level Elementary Chemistry classes. In this study it is hypothesized that student performance will improve when homework assignments are collected and graded. The rationale is that more

students will do the practice problems and thus their understanding and skill level will improve. This will be reflected in an increase in midterm and final exam scores.

Methodology

The study was conducted in Elementary Chemistry classes over five semesters. Elementary Chemistry is a one semester course for majors in areas such as allied health, nursing and education. A co-requisite laboratory is required. Fundamental chemical concepts and development of analytical skills using simple algebra are emphasized. The class demographics include high school, traditional and non-traditional students.

In this study, the exam grades for two sections of Elementary Chemistry (n=46) where homework was collected and graded on a weekly basis are compared to three sections (n=66) where homework was assigned but NOT collected nor graded. All classes were taught by the same professor (Cornell). Thus, the teaching style is presumed to be similar in all sections. In all five sections, the same textbook was used and the same homework problems were assigned. The homework assignments consisted of 30 to 50 textbook questions from each chapter using a variety of question formats (multiple choice, short answer, matching). The textbook assignments were supplemented with worksheets and in-class problem solving. A "How to Study Chemistry" paper was discussed and the importance of doing problems was regularly reinforced in class.

Student assessment in all five sections of Elementary Chemistry included the best 3 of 4 midterm exams and a comprehensive final exam. The exam content and question format (multiple choice and short answer) were similar in each section. In the three sections with NO graded homework, five quizzes were administered. In the two sections with graded homework, no quizzes were given. Each graded homework assignment was worth 10 points: 7 points for completeness (attempting all problems) and 3 points for accurately answering two of the problems. The students did not know which problems were graded for accuracy to encourage them to try all the problems.

The effect of grading homework on student performance is assessed using a variety of analytical techniques. Correlation of student performance with homework grade or quiz grade is determined using least squares linear regression analysis. The mean and percent frequency of midterm exam and final exam scores are compared for sections with and without graded homework. An anonymous student survey was administered in the two sections with graded homework to learn about the students' approach to their homework and their perception of its value.

Results and Discussion

Least squares linear regression reveals a mild positive correlation of students' average midterm exam grades with respect to their homework grade (slope = 0.3692 and $R^2 = 0.2695$) as shown in Figure 1. A similar trend (Figure 2) is exhibited in for the final exam grade (slope = 0.4598 and $R^2 = 0.3405$). The positive correlation between exam grades and homework may indicate that practice problems enhance learning. The correlation is only moderate and there is scatter in the linear regression fit ($R^2 < 0.50$) possibly related to individual student variability and how students make use of homework in their learning process. (Did students re-work homework? Did they work with another student or copy answers?) Also, the homework grading scheme assigns only 30% to student accuracy and 70% to effort.

In the chemistry sections where homework was assigned but not graded, linear regression analysis of exam grades and final exam grades shows a positive but even weaker correlation to quiz grades. As seen in Figures 3 and 4, the slopes and R^2 values are less than those for the correlation with graded homework. Graded homework assignments seem to have a slightly stronger impact on midterm exam and final exam grades than do quiz grades. This may reflect increased performance on exams due to a larger number of students actually doing practice problems because they are graded. However, it may be caused by lower quiz scores due to absences, test anxiety, or other confounding factors.

It is expected that the frequency of A's and B's would increase

and subsequently the number of D's and F's decrease due to grading homework. Indeed, the percent frequency of A's is higher and the percent frequency of D's is lower for the midterm exams and final exam with graded homework, as seen in Figures 5 and 6. However, the results for B and F grade ranges are less distinctive. For sections with No Graded Homework, the frequency of B's is higher for the midterm exam grades and but lower for the final exam grades when compared to sections with homework. The percent frequency of F's with NO graded homework is higher for the midterm exams and lower for the final exam.

The mean midterm exam score for the sections with graded homework is 1.6 percentage points higher than for the sections with no graded homework (80.1 % ± SD:11.7% vs. 78.5% ± SD : 10.3%) The mean final exam score for sections with graded homework is 1.5 percentage points higher than the mean for sections with no homework (76.2%± SD: 12.9% vs. 74.7% ± SD: 10.9%). To determine if the difference in the means is statistically significant, a Student t Test (Johnson, 1976) was applied to a random sample (size = 40) from each group. Alpha was set to 0.05. The results (Table 2 and 3) indicate the differences in the means for the midterm exam scores (t=-0.548, df=78, P=0.292, t_{crit}=1.665) and final exam scores (t=-0.175, df=78, P=0.431, t_{crit}=1.665) are not statistically significant.

To learn about students' approach to their homework assignments in their learning process, a student homework survey (Table 1) was administered to the graded homework sections during the last three weeks of class. 40 of 44 students completed the survey. Seventy five percent (75%) of the students did all the assignments and 25% did most of the graded homework assignments. Most (73%) students worked alone or with a classmate on only a few assignments. Tutoring services were used by only 30% of the students on less than half the assignments; 70% did not use any tutoring services. Most students did not re-work their homework problems: 60% re-worked a only a few assignments and 27.5 % did not re-work any assignments. Only 12.5% of the students re-worked half or most of their homework problems. Most students (70%) did not copy homework assignments while 30% copied a few assignments. A majority of the students

(95%) viewed homework as helpful to learning chemistry. Students' anonymous written comments on the homework survey were consistent with this view: "Yes, it's a pain! Yes, I really despised doing it! BUT- it absolutely helped with my learning process and for that reason I'm relieved that it was assigned and not elective."

Conclusions

Although grading homework appears to slightly increase exam performance, the observed increase in the mean exam scores is statistically insignificant, perhaps, due to low sample size and student variability or because many students in the ungraded homework sections were doing the elective homework thus minimizing the effect. The number of students completing the same assignments in the ungraded sections was not measured.

Exam performance exhibits a moderate positive correlation with homework grades. This trend is also exhibited for sections in which quizzes were administered but homework was not graded. This surprising result has been previously observed (Smith, 2007). It was found that the type of assignment is important and that in-class group assignments and laboratory exercises had very little correlation with exam scores. Online quiz scores, however, did have a strong correlation with exam scores. The weak correlation between exam performance and homework grades may be influenced by other factors such as test anxiety and students not reworking the problems. Student use of assessment feedback has been found to correlate with higher test scores (Smith, 2007).

However, grading homework seems to motivate students to do the assignments; all of students surveyed did most or all the assignments and viewed the assignments as helpful to their learning process. College algebra students have also expressed increased satisfaction when they were required to turn in their homework (Weems, 1998). Thus, grading homework is beneficial to students even though the quantitative improvement in their exam performance was statistically minimal. Incorporating on-line homework systems which provide feedback and opportunities to rework problems with efficient grading may be a viable option for solo chemistry teachers.

References

Brookhart, S. 2001. Effects of the classroom assessment environment on mathematics and science achievement. *The Journal of Educational Research*, 90(6): 323-329.

Cooper, H., Lindsay, JJ, and Nye, B. 1998. Relationships among attitudes about homework, amount of homework assigned and completed, and student achievement. *Journal of Educational Psychology*, 90(1):70-83.

Johnson, Robert. 1976. *Elementary Statistics, 2nd Ed.*, North Scituate, Massachusetts: Duxbury Press.

Lefeort,H. & Eiger, S.M. 2003. Preparatory versus practice homework. *Journal of College Science Teaching*, 33 (1):16-18.

Otto, H. 1950. Elementary education. *Encyclopedia of Educational Research, 2nd ed*., New York: Free Press.

Paschal, R.A., Weinstein, T., and Walberg, H.J. 1984. The effects of homework on learning: A quantiative synthesis. *Journal of Educational Research*, 78(2): 97-104.

Smith, G. 2007. How does student performance on formative assessments relate to learning assessed by exams?. *Journal of College Science Teaching*, July/August: 28-34.

Weems, G. 1998. The impact of homework collection on performance in intermediate algebra." *Research and Teaching in Developmental Education*. 15(1): 21-25.

Biographical Information

Linda P. Cornell is an Assistant Professor of Chemistry at BGSU – Firelands with a two pronged career in chemical/ environmental engineering and education. She has taught in the areas of general science, chemistry, physics, environmental science and chemical engineering at high school and college levels and developed science workshops for teachers and Volunteer Stream Monitoring programs and watershed / conservation programs for the general pubic. Her areas of research include: thermodynamics, kinetics and mass transfer, supercritical fluids, separation of macromolecules, stream habitat and land use assessment, water quality and watershed research and research to improve effective learning. She is investigating patterns of dissolved oxygen, productivity and respiration in Old Woman Creek Estuary. She has published in: The Ohio Journal of Science Program Abstracts, NASA Technical Proceedings, and Air Pollution Control Association Transactions: Environmental Impact of Natural Emissions and presented professional papers at national and regional conferences. Linda can be reached at lcornel@bgsu.edu, or BGSU Firelands, 1 University Dr., Huron, OH, 44839.

Victor Odafe is an Associate Professor of Mathematics at Bowling Green State University Firelands. His research interests include problem solving, assessment, and cooperative learning in mathematics. He has published in numerous professional journals and has presented professional papers at international, national, and regional conferences. He enjoys listening to classical music during his spare times, which are usually very few. Victor can be reached at vodafe@bgsu.edu, or BGSU Firelands, 1 University Dr., Huron, OH, 44839.

Learner-Centered Teaching: From Crash and Burn to Something Learned

Carman Wakefield, Ed.D.
University of Cincinnati—Raymond Walters

Abstract

Have you ever given a test that almost EVERYONE failed? I did… and it turned into possibly one of the best teaching and learning experiences my students and I have ever had. Failure in the classroom is inevitable and it happens to everyone. It can be a good experience if you use it to your advantage. I gave a midterm in a beginning education course and the highest grade was a 74%. I was confused. The exam was based on the readings from the book and accompanying in-class exercises. I did not want to fail most of the students. I knew that some of them were very good students. I did not know if the test was too difficult or if the students did not study. Was it my fault? Was it their fault?

Since I was a part of a learning community that was reading Maryellen Weimer's book, *Learner-Centered Teaching*, I asked for the group's advice. With their suggestions in mind, I finally decided to talk to the student as a group and ask them what happened. Getting impromptu answers from students that had just failed their midterm was a terrifying thought, but if I wanted to find out what happened I needed to ask them. I used the next class session for a discussion about what happened and what we were going to do about it. I will describe how the results of this event turned the classroom from teacher-centered to learner-centered and from a failure to a success within the week. I will also provide you with ways to begin to transition your classroom as well.

Introduction

Learner-centered education has roots in K-12 education in the 1990's, where the term "student-centered" was more commonly used. Parker Palmer's *The Courage to Teach* eloquently addresses

the paradox of teacher-centered versus learner-centered education practices. If we separate teaching from learning, the result is "teachers who talk but do not listen and students who listen but do not talk". The shift toward learner-centered teaching is a change in emphasis that causes faculty to rethink how we teach and assess our teaching toward the goal of realistic appraisal of student learning. The current "learner-centered" teaching model concerns itself with five main areas: the balance of power in the classroom; the function of content; the role of the teacher; the responsibility of learning; and evaluation and purpose (Weimer, 2002). The distinction between learner-centered and teacher-centered instruction is that the emphasis is shifted from what the teacher does to what the students are doing. The responsibility for learning is placed in the hands of the students while the teacher's role is transformed into that of a guide and facilitator. This change is not achieved instantaneously for either party and for a teacher to begin to make this transition they must ask themselves some key questions:

1. Do students learn because of us or in spite of us?
2. What are my motives behind the methods that I use in the classroom?
3. How do I learn to step out of the spotlight?
4. How do I learn to become a guide or facilitator of learning?
5. What responsibilities can we give over to the students and what must we keep to remain in control?
6. What can be cut from our course content?

Once a teacher begins to ask themselves these questions, the transformation from teacher-centered to leaner-centered teaching can begin.

Background

I was teaching two sections of a beginning education course. Schooling and Teaching in American Society is a course that gives a basic overview of the history of education, some theory, and contemporary issues. As in my other courses, I made the students responsible for the readings, which consisted of two chapters per week. We would not reread the book in class. The students would (hopefully) come to class prepared so that we could focus on concepts from the

chapters using lecture and in-class activities. I used group exercises, videos, and discussion to cover the topics. I created the midterm exam based on the readings and accompanying in-class exercises. After scoring the midterm, even the best students did poorly. The highest grade was a 74% and I was taken by complete surprise. I thought that I was clear about what the exam would cover and took questions straight from the book. Was I going to fail all of these students because they did poorly on a midterm? Was it somehow my fault because I had not prepared them sufficiently to take the exam? Or did they just not read the book or study the material?

What to Do?

Since I had been a part of a learning community that was reading Maryellen Weimer's book *Learner-Centered Teaching*, I asked for the group's advice. With their suggestions in mind, I finally decided to talk to the student as a group during the next class session and ask them what had happened. I told them that as a group they did not fare so well on the test and I wanted to discuss it before revealing their exam scores. I began to ask them what they thought about the test, what they thought about the course, and then finally, asked for their suggestions for changes that could be made to improve both the testing and the course for the future. This was a risky proposition and I was admittedly nervous to hear their responses. I really had no idea what they might say.

The Test

The following are the questions that I asked the students about the test.

- What made this test so hard?
- How did you study?
- How could you have better prepared?
- How could I have better prepared you?
- Will you remember anything off of the test later?

The following are the student responses I received from the students. The responses are not verbatim; I took notes but did not

record the discussion.

- It wasn't based on what they had done in class
- The questions didn't seem to coincide with the bolded terms in the book
- They didn't know what to study
- They couldn't remember everything from every chapter
- It was so overwhelming
- The questions were very specific when the course had been more general
- It was really hard
- It covered a lot of material – too much material
- They didn't know which parts of the chapters were important
- They could get the answers narrowed down to two, but then it depended on which chapter they remembered as to which answer they picked

The students' answers did not take me by surprise, but the some of their suggestions did. The following is a compilation of the students' suggestions on testing in the course.

- Give quizzes each week over one or two chapters
- Provide a study guide
- Take 20 minutes of each class period to review the most important points
- Give more direction for note taking in class
- Give take home tests so they have to search for things in the book – it helps them
- Give essay tests

Course Design

Next, I asked the students questions about the course in general. The following are the questions that I asked them regarding this course.

- What did they expect the course to do for them?
- What did they want to learn?
- How did they learn best?
- Were the speakers helpful?

- What kinds of things could we do in class that could increase what they take away from the course?
- What things did they think were important?

The following are the student responses to my questions concerning the course.

- There was so much material it was hard to cover everything.
- They thought they were going to practice teaching in the course.
- They liked having the speakers – the speakers told them important things.
- They think that they learned the most about the teaching effectiveness chapter because of the assignment that accompanied the movie *Stand and Deliver*.
- We did not talk much about the book in class.
- The portfolio assignment seemed worthwhile. They liked having a product from the course.

The suggestions that the students presented to me were golden. I was actually very surprised by what they said that they wanted from the course and also how they wanted to achieve it.

- Assign a topic to them to teach to the class…"a ridiculously good idea"
- Give more questions to groups
- Make some portfolio materials due sooner in the quarter so that they don't procrastinate. Give them a few points for the assignments.
- Break the course up over two quarters so there is more time. They'll learn more.
- Do not take the course to full lecture format. They like the format, the exercises, and discussion. They even like the book.
- They would like to go more in depth on some of the topics.

So What Did I Do With This Information?

So now that I had heard their responses and ideas, what were we going to do in the short term? Again, I didn't feel like their

grades in the course should be severely affected by this midterm, so continuing to withhold their grades, we came up with some short term solutions to the dilemma together.

The midterm was worth 25% of their grade. We decided that we would take 15% of the midterm percentage and put it towards the portfolio project that was due at the end of quarter. I was not actually changing the grade of their test; I was just going to give them another shot at some of the percentage points. Once that was decided, we also agreed that they could have an opportunity to complete an extra credit assignment if they chose to do so. Again, this was not altering their midterm grade, but giving them a chance to work harder and receive a better grade.

The Extra Credit Assignment

For the extra credit assignment, I decided to give them something that would benefit both of us. I gave them the opportunity to perform a legitimate teachers' task that could have real world implications. I asked them to redesign the course for the next quarter. I told them that they could use the syllabus or whatever format they would like to use to redesign the course. I prefaced this by telling them that they had heard suggestions from the class discussion, they had heard how their peers thought they learned the best, and they had now taken the course and were familiar with the material. They were free to do as much or as little as they chose to do and they would receive extra credit points based on their efforts. This was a win-win situation for both teacher and students. This could produce ideas about the structure and content of the course from a perspective I no longer had – the student's. The assignment could give them an experience from a perspective they rarely considered – the professor's.

The Resulting Changes in the Course

Because of this experience, I have made substantial changes to the course over time and have seen many of those changes positively affect student learning. Many of the resulting changes are listed below.

Peer Teaching – The students are assigned a topic that is to be covered

in the book and are to teach it to their fellow students. I encourage them to think of what teaching methods hold their attention and help them increase information retention and then to employ measures to achieve that goal.

Grading Exercises – The students are presented with one of the essay questions from an assignment they have turned in, along with two different answers to that question. They are instructed to read the question and then score the two answers provided on a 1-10 scale. Once they are finished, I record all of their scores for the two different answers. We enter a discussion about why they gave an answer a high or low score. This gives them the opportunity not only to look at the questions and answers from a teacher's perspective, but also to hear other students' reasoning behind why an answer is considered weak or strong. At the end, I point out their various arguments for the answer scoring. I ask them to think about this discussion when answering an essay question. What were the positive points to an answer? What were the negatives? How can they make sure they address questions so that their answers would be considered strong ones? The original assignment is then returned to them with their scores.

Portfolio Assignments – a number of portfolio sections are due throughout the quarter. The students are given a few points for turning the assignments in, and more importantly, feedback to improve their assignment for inclusion in the final portfolio.

Reduced Chapters –I reduced the number of chapters that the exams covered and also the number of chapters covered during the quarter. So many times professors feel that they have to get through the entire book in a quarter. The fact is, many times we can not cover all of the information sufficiently in the amount of time we have with the students. Instead of covering what is reasonable and what the students need to remember, we do an "information dump" trying to profess everything we know in one quarter. In learner-centered teaching, content is not to be "covered"—it is a vehicle to develop learning skills and strategies both general and specific to the content.

Midterm Discussion Reflection Paper – I ask the students to write a reflection paper concerning the discussion that we had at mid term about their test and the course. I am interested in finding out what they thought about it individually and if they learned anything about themselves or about teaching once they had that experience. This also introduces them to reflective writing.

Group Exams – Once the students have turned in their last exam, I assign groups and give them the exam again and allow them to take the multiple choice portion of the exam once more. The second time, they are allowed to use the book, notes, whatever resources they need to answer the questions correctly. This group discussion and search for the correct answers helps solidify their knowledge on the included subjects. Not only do they learn from searching for the answers, they learn from each other about how another may read and interpret a question, and why one person may believe an answer is correct or incorrect. They have a chance to build confidence by defending their answers.

End of Class Refresher – At the end of most class sessions, I do one of two things: I either ask the students to take one minute and write down what they learned during that class period, or; I ask the question out loud so that students can continue to answer until we have exhausted the topics of that day. This helps them go over the topics covered in the class one more time before leaving the environment and heading into a new one.

Suggestions for Learner-Centered Teaching

So how can you begin to use a learner-centered teaching approach in your courses? One can begin by asking the six key questions that learner-centered teachers do concerning content. Write down the answers to those questions and then reflect on them. Do the things you do in class make sense and provide the best learning experience for your students?

There are many ways to begin to transfer control and responsibility of the learning experience from you to your students.

You can give students options for formatting their exams or assignments and then vote on the outcome. Another option is to give the students a number of assignments to choose from to reach X number of points. This can sometimes create a considerable amount of extra work to grade student assignments, so a variation on that is to give them a choice of one out of two assignments due on the same date. The student is able to choose which assignment they prefer and gives them some control over their learning. You can allow groups to come up with their own group rules before beginning a task. Another exercise that I use in one of my courses is letting the students decide the grade percentages for the exams and assignments for the course.

Conclusion

Learner-centered teaching is a model that promotes the use of content as a vehicle to develop learning skills and strategies both general and specific to the content. It promotes self-awareness, autonomy, and responsibility in students. It helps students understand how they learn and develops confidence in their abilities as learners. Taking the learner-centered approach to teaching can many times take a good learning experience and turn it into an even greater one for everyone involved.

References

Bain, K. (2004). *What the best college teachers do.* Cambridge, MA: Harvard University Press.

Doyle, T. (2007). Learner-centered teaching overview. Retrieved on August 9, 2007, from Ferris State University Center for Teaching, Learning & Faculty Development: http://www.ferris.edu/htmls/academics/center/teaching_and_learning_Tips/Learner-Centered%20Teaching/LCOverview.htm.

Palmer, P. J. (1998). *The courage to teach.* San Francisco, CA: Jossey Bass.

Weimer, M. (2002). *Learner-centered teaching*. San Francisco, CA: Jossey Bass.

Biographical Information

Dr. Carman Wakefield is an Assistant Professor of Education at Raymond Walters College. Dr. Wakefield earned her Ed.D in Curriculum and Instruction at the University of Cincinnati in 1999, her M.Ed. in Counseling and Student Personnel from the University of Southern Mississippi in 1993, and her B.A. in Psychology from Miami University in 1989. She has taught education and electronic media courses as well as numerous technology workshops for faculty, staff and students. Dr. Wakefield currently serves as the education program coordinator for Raymond Walters College. Her primary research interests are learner-centered teaching and distance learning. She may be reached at carman.wakefield@uc.edu.

Carman Wakefield, Ed. D.
Raymond Walters College
9555 Plainfield Road
Cincinnati, OH 45236

Is there any correlation in an inquiry class between students' perceived topic difficulty and their performance?

Gordon J. Aubrecht, II
and
Carol Bowman
Ohio State University—Marion

Abstract:

We report on the investigation of multiple sets of data from a physics by inquiry electric circuits course on students' ranking of topic difficulty and their grades as a measure of performance. Students ranked the difficulty of the preceding class almost every class day and they ranked the difficulty of various course sections on a section diagnostic (one diagnostic per section). This work shows how collection of classroom data about student learning can be used to identify problems and remedy them.

I. Introduction

Physics by Inquiry (PbI) is a course for prospective teachers taught with the expectation of student mastery of the subject through hands-on experiences and reasoning on the basis of that experience when students are presented with new situations. Students are guided through experiments related to the targeted phenomena and asked to construct models that are descriptive and explanatory. Students work in groups, discuss results together and work through to an understanding of the observation (a form of peer review), and are checkpointed by instructors at several key points during a section. At checkpoints, students are asked to justify their models to the instructors on the basis of their class experiences; this expectation also holds for answers on homework and exams.

There have been many descriptions of Ohio State University's Physics by Inquiry classes [Aubrecht et al. 2006, Kim and Bao 2005, Kim et al. 2004, Kim et al. 2006, Lin et al. 2006], which use

University of Washington physics education research-based materials. There are three different PbI classes offered—on properties of matter, on electric circuits, and on optics and astronomy by sight. The focus of this paper is the physics by inquiry electric circuits class [McDermott, 1995]. Our present study is part of our ongoing formative evaluation of PbI.

For the reader to understand the context of this work, we review briefly the ideas introduced and studied in the electric circuits PbI course. In course material, the idea of flow is constructed and its continuity is suggested. Series and parallel circuits are explored. An operational definition for resistance in terms of lengths of nichrome wire is used to determine the resistance of resistors in series and parallel resistors. Current is measured and Kirchhoff's current rule is made plausible. Voltage is measured and Kirchhoff's potential rule is made plausible. A transition to the canonical definition of resistance as the slope of the V-i curve is explored. Actual batteries are distinguished from "ideal" batteries. Finally, issues of energy use are explored.

These explorations are organized into sections that build on one another. Before students work on any section, they fill out a diagnostic sheet (Figure 1 shows an example, the diagnostic sheet for Section 7, the first section on voltage) on the left-hand side of the line. After finishing the section, they are expected to rework the diagnostic on the basis of what they have learned within that section. Students are also asked to explain what they've learned in the section and to rate the section's difficulty (as they see it) the first time they turn the diagnostic in.

In addition, there is a question of the day at the beginning of each class. The students are also asked to rank the difficulty—in this case, it is of the preceding day's classwork. Figure 2 shows an example of this instrument.

Our personal experience from teaching this class has long been that voltage (voltage is the term used in the PbI class, and we shall use it here) is the most confusing topic faced by these PbI electric circuits students. Also, Kim, Bao, and Acar [Kim et al. 2006] earlier found that PbI student stress levels peak at various points, and are especially high

in the voltage section.

There seem to be several reasons for this difficulty. Students learn about current, ammeters, and Kirchhoff's current rule before they study voltage. Potential difference is sufficiently different from current that carefully-honed student ideas about current interfere with student's ability to address voltage—despite careful attempts to demonstrate the difference between current and voltage as well as the difference between the respective meters and how they are used. Students at first apply the idea of flow, developed in the model of current, to voltage. For many students, voltages across parallel branches should be added together as currents are, and these ideas persist despite the measurements made by these same students that show voltages across parallel branches are the same.

PbI instructors found this confusion in checkpoints and also on earlier versions of relevant diagnostics (diagnostics and questions of the day are rewritten often). The PbI instructors have attempted to remedy difficulties with voltage by several avenues of approach. A module that introduces ammeters and voltmeters nearly simultaneously has been written in the thought that the sequencing leads to student confusion.

Another problem was identified from earlier diagnostics—students were confused when there was more than one current loop, a difficulty instructors (and the book's authors) did not anticipate. The correct ideas were in the written material, but there were no specific explorations of multiple current loops. A different module was consequently written to address some student difficulties associated with multiple loops.

While we were convinced by the checkpoint student responses, the exams, and the diagnostics that the voltage sections were the most difficult, we decided to see if we could determine (indirectly) what students think about the relative difficulty of the thirteen or fourteen sections (twelve of which are from the book) addressed during the course. The following sections discuss the diagnostic rankings and the question-of-the-day rankings.

The "difficulty rankings" from the diagnostics, other characteristics of the diagnostics, and "difficulty rankings" from the

questions of the day constitute our dataset. We compiled our data from the four sections of the Spring 2006 (three sections in Columbus and the Marion section) and the Marion section of the Spring 2007 PbI electric circuits classes.

In our opinion, both the additional modules we wrote to address the student difficulties we identified in the electric circuits class have met with mixed success. We will continue to use all the evidence at our disposal from our classes, and perhaps devise new ones, to make changes in the classes in order to enhance the understanding of physical phenomena by students taking our PbI courses. The difficulty rankings constitute another means of formative evaluation that allows us as instructors to identify student problems and make such changes for future students.

II. Using diagnostic rankings to ascertain difficulty

As indicated above, before PbI students begin work on a section, they fill out a diagnostic sheet that asks questions pertinent to the section content (in a space on the left half of the page). After finishing a section, students rework the diagnostic (in the remaining space on the right half of the page). They get a small number of points for each accepted diagnostic (but no points at all if the diagnostic is not accepted). For a diagnostic to be accepted, students must display their mastery of the ideas by explaining clearly their answers to the questions. We keep track of how many submissions were required before students have their reworked diagnostic accepted.

Table 1. Student ranking of difficulty by section and total ranking (scale: 0, least to 6,most).

Section Number	1	2	3	4	5	6	7	8	8a	9	10	11
Marion 2006	3.00	2.73	3.86	3.50	3.53	4.07	4.09	4.33	4.22	4.67	5.00	0.00
Columbus 9:30	3.48	3.17	3.59	3.83	3.71	4.12	4.18	5.09	4.14	4.23	5.08	4.33
Columbus 1:30	3.15	3.37	3.84	4.27	3.80	4.78	3.86	3.83	4.73	4.05	4.20	
Columbus 5:30	3.55	3.18	4.58	4.71	4.00	4.88	5.13	5.44	4.71	4.40	4.20	
Marion 2007	2.57	3.08	3.73	4.30	4.00	3.73	4.38	4.71	5.67	4.60	4.60	
Total Ranking	3.22	3.17	3.93	4.13	3.78	4.30	4.33	4.77	4.50	4.27	4.69	3.88

Some diagnostics also are harder than others as rated by students. There were N = 113 students in four sections of PbI in Spring, 2006 and N = 14 in Marion in Spring, 2007. Table 1 shows the difficulty rankings for each section given on diagnostics that were accepted. Sections 8 (voltage), 8a (voltage), and 10 (Ohm's Law) rank highest in difficulty as perceived by students. Sections 7 and 9, both on voltage topics, also rank as harder sections, along with Section 6 (parallel and series resistors).

Still another way to determine how difficult a section is involves determining which sections the fewest students completed. We were able to look at that aspect here. Table 2 shows the results for the total number of diagnostics completed (some classes were not able to get as far as others, but no student in any class turned in the diagnostic for Section 12; some students did complete the section at the end of the course). Apparently as seen from the data in this table, Secs. 8, 8a, and 11 are more challenging to students than other sections.

Table 2. Number of diagnostics accepted by section.

Section Number	1	2	3	4	5	6	7	8	8a	9	10	11
Marion 2006	17	15	14	13	15	15	8	9	9	10	6	1
Columbus 9:30	36	38	37	35	35	28	22	11	15	29	25	8
Columbus 1:30	33	33	33	29	28	12	16	9	11	25	21	1
Columbus 5:30	26	26	26	24	24	17	17	10	8	16	13	0
Marion 2007	14	12	12	10	11	10	8	3	1	4	4	0
Total Accepted	126	124	122	111	113	82	71	42	44	84	69	10

A similar pattern is seen when we examine the number of groups in which all students in a group completed the diagnostics in the section, as seen in Table 3. The dip in completions for Sections 8 and 8a is even more pronounced as presented in this table than in Table 2.

Table 3. Number of groups in which all group members completed diagnostics, by section.

Section Number	1	2	3	4	5	6	7	8	8a	9	10	11
Marion 2006	6	5	5	4	5	5	3	2	1	1	1	1
Columbus 9:30	8	10	9	7	7	4	1	0	2	4	3	1
Columbus 1:30	9	9	9	5	3	0	1	0	0	4	4	0
Columbus 5:30	7	7	7	5	4	1	1	1	0	2	2	0
Marion 2007	4	2	3	2	1	1	0	0	0	0	0	0
Total	34	33	33	23	20	11	6	3	3	11	10	2

We also kept track of how many submissions it took a student to get a diagnostic accepted. It is likely that these data are skewed for internal course reasons. While we do urge students to keep up with submitting diagnostics, there is a tendency for students to put off submitting the diagnostics until later in the course, especially for the later sections, those near the end of the course. By then it may be too late for the student to make revisions and get the credit. The proportion of accepted diagnostics therefore falls steeply toward the last few sections covered in the class.

More tries before acceptance likely indicates a section offering greater difficulty on average to students. Table 4 presents the number of nonaccepted diagnostics by section. It is clear that sections 8 and 8a (on voltage) were less likely to be completed than adjacent sections, even with end-of-course falloff apparent here, with the same general trend for both years in Tables 2 through 4 of a drop in completions toward quarter's end.

Table 4. Number of diagnostics not accepted by section.

	Students	1	2	3	4	5	6	7	8	8a	9	10	11
Marion 2006	16	0	1	2	3	1	1	8	7	7	6	10	15
Columbus 9:30	38	2	0	1	3	3	10	16	27	23	9	13	30
Columbus 1:30	33	0	0	0	4	5	21	17	24	22	8	12	32
Columbus 5:30	26	0	0	0	2	2	9	9	16	18	10	13	0
Marion 2007	14	0	2	2	4	3	4	6	11	13	10	10	0
Total	127	3	5	8	20	19	51	63	93	83	52	68	88

Table 5. Average number of tries before acceptance.

Section Number	1	2	3	4	5	6	7	8	8a	9	10	11
Marion 2006	2.4	2.7	2.9	2.3	1.8	2.7	2.8	2.5	2.0	1.2	1.2	1.0
Columbus 9:30	1.3	1.2	1.2	1.2	1.1	4.0	2.1	2.7	1.9	1.0	1.0	1.0
Columbus 1:30	1.4	1.2	1.1	1.0	1.1	3.1	2.1	2.3	2.3	1.0	1.0	
Columbus 5:30	1.1	1.2	1.4	1.1	1.2	4.3	3.0	2.3	2.4	1.0	1.3	
Marion 2007	2.6	2.3	2.0	1.7	1.6	2.1	1.8	2.4	2.0	1.6	1.6	
Total	1.6	1.5	1.5	1.3	1.2	3.4	2.4	2.5	2.1	1.1	1.1	1.0

Still another piece of data is the number of tries before acceptance, which is presented in Table 5. The number of tries is also more difficult to compare because different instructors evaluated different groups of diagnostics (except for Marion, where Aubrecht evaluated all diagnostics). By this criterion, Sections 6, 7, 8, and 8a were the most difficult. Diagnostics 6, 7, 8, and 8a *in all classes* were all evaluated by the same instructor (Aubrecht) and are consistent. Aubrecht was apparently more demanding in evaluating the diagnostics than the other instructors.

The average number of tries in the four sections 6, 7, 8, and 8a was 2.70, while in Marion for all the other sections the average number of tries was 2.11, and in Columbus the average number of tries was 1.15. However, comparison shows that these sections (6: parallel and series resistances; 7, voltmeters; 8, Kirchhoff's potential rule; 8a, multiple loops), were clearly more difficult for students independent of the evaluator.

III. Using questions of the day to track difficulty

Certain class days appear to be more difficult for many students, but there is also a difference among students. Are the differences significant? Evidence needs to be gathered to determine that.

At the beginning of each class (except for those days on

which there are midterms), a short question relating to the preceding class material is administered (Fig. 2). Students are asked to rank the preceding day's material in difficulty (from 0 to 6, just as on the diagnostics). The first midterm occurred when most groups were working through Section 4 and the new meters section (Spring Quarter, 2007 only) and the second midterm occurred when most groups were working through Sections 8 and 8a. Hence, the rankings will undercount the possible difficulty students see in these particular sections. Also, a total of four days' copies of questions of the day (and associated student difficulty rankings) were misplaced for the Columbus sections. Despite this, a total of 187 of the group rankings were usable from the five class sections represented here, using the protocol described in the next paragraph.

We had to keep track of each group's progress in order to craft an appropriate question of the day for the next day's class. It is necessary to make certain that the question could be answered by the group farthest behind (each PbI group proceeds at its own pace). Therefore, we are able to bracket the sections covered in a day compared to each group's question of the day difficulty ranking (except for the missing days' rankings due to the midterms). Knowing the number of experiments in each section allows us to weight the rankings according to the numbers of experiments in each of the sections covered the preceding day. This is clearly not the most definitive estimate of time spent and difficulty encountered by the group, but it the best we can obtain without recording every word and gesture of every group.

Different groups had different sets of difficulty rankings for each day—one group's "4" ranking is not necessarily the same as another's; indeed, it is almost almost certainly different from another's. We addressed this procedural difficulty by comparing the group's difficulty ranking for a class to the average class difficulty as reported by the group. We adopted a reported difference of 0.5 for a given day above the group's mean difficulty to represent what was really among the most difficult days for that group. These days' difficulty rankings were analyzed and constituted the set of 187 measurements mentioned above.

Figure 3 shows these rankings. Clearly Section 7 is ranked the most challenging, but recall that some sections' rankings, namely, Sections 4, meters, 8 and 8a, were generally missed due to midterm days with no rankings of the preceding day's difficulty (the meters section was used only in 2007). This graph supports a contention that Sections 7, 8, and 8a were seen as especially challenging, in agreement with other evidence presented here.

IV. Grade Correlation

Figure 4 shows the combined averaged data on student rankings from diagnostics in all sections of PbI electric circuits. Figure 5 shows the combined averaged data on student rankings from questions of the day. When we saw the first graph, we speculated that this was some sort of glitch in the data. However, when the (independent) question of the day data also shows the exact same structure, we think that there may be some validity to the picture this brings to mind.

Note from both figures that averaged student rankings of difficulty slowly rise as grade decreases from A to C+, but are considerably lower for students with other C and D grades (there is just one E). Perhaps the better students recognized more clearly that they were having difficulties, as the rated difficulty of the sections goes up as grades go from A to C+. Poorer students (C, C-, D+, D) may not have recognized that they were having difficulty. Because there was just one E, this dot represents a single student's average difficulty rankings instead of being an average over multiple students and should be interpreted with care.

V. Conclusions

Because the Physics by Inquiry text is based on research, it does an outstanding job of dealing with many student difficulties encountered in the topics covered. Nevertheless, we found students still had considerable difficulty with certain concepts involving voltage, more measured difficulty than encountered in other sections, including sections covered after voltage was.

Parts of the material related to voltage clearly caused problems for student understanding of that concept. Section 8a, for example, was written to deal with difficulties we found students had with voltage in multiple loops. We are currently using another revision (Meters) that attempts to help students deal with these concepts, but, as mentioned above, this has shown mixed success.

The aim of this data collection is to find ways to improve this course based on data rather than vague ideas of student difficulties in a course. This study has shown that indirect formative evaluation such as demonstrated here may be useful in supporting student understanding through course revision. The particulars given here are certainly specific to the PbI electric circuits course, but we show here that formative evaluations lead to data, and data lead instructors to better understanding of student difficulties, which can further lead these instructors to make changes that improve the course for students by dealing with the difficulties identified. We expect that most instructors will make such changes when presented with specific data. This work shows that multiple data sources can be constructed and used for such a purpose.

References

Aubrecht, G. J., Lin, Y., Demaree, D., Brookes, D., and Zou, X., 2006, "Student perceptions of physics by inquiry at Ohio State," Proceedings of the 2005 Physics Education Research Conference, AIP, Melville, NY, 113-116.

Kim, Y. and Bao, L., 2005, "Students' Recognition of cognitive conflict and anxiety in PbI classes," "Students' cognitive conflicts and conceptual change in PbI classes," papers presented at the AAPT meeting, Summer 2005.

Kim, Y., Bao, L., and Acer, O., 2006, "Students' Cognitive Conflict and Conceptual Change in a Physics by Inquiry Class,"

Proceedings of the 2005 Physics Education Research Conference, AIP, Melville, NY, 117-120.

Kim, Y., Bao, L., and Bocaneala, F., 2004, "Developing instruments for evaluating anxiety caused by cognitive conflict," paper presented at the AAPT meeting, Summer 2004.

Lin, Y., Demaree, D., Zou, X., and Aubrecht, G. J., 2006, "Student assessment of laboratory in introductory physics courses: A Q-sort approach," Proceedings of the 2005 Physics Education Research Conference, AIP, Melville, NY, 101-104.

McDermott, L. C., 1995, Physics by Inquiry, vol. 2, Wiley, New York.

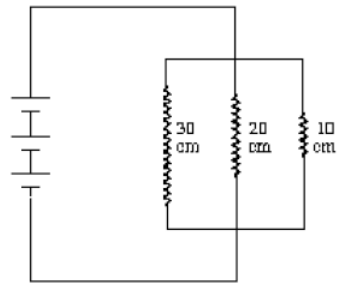
Biographical Information

Gordon J. Aubrecht, II is professor of physics at OSU Marion. He graduated from Rutgers University summa cum laude and earned his graduate degree at Princeton University. His original research interest was theoretical particle physics, but he is currently studying how students understand atoms, nuclei, and the interaction of light and matter as well as how useful and effective physics by inquiry is. He was awarded the Distinguished Service Citation of the American Association of Physics Teachers in 1994, was elected a Fellow of the American Physical Society in 2000, and was presented with the John B. Hart Award for distinguished service from the Southern Ohio Section of the American Association of Physics Teachers in 2002. He received the AURCO Distinguished Service Award in 2004. Also in 2004, Aubrecht received the Howard Maxwell Award for DIstinguished Service from the Ohio Section of the American Physical Society and the Louis Nemzer Award from the Ohio State Chapter of the American Association of University Professors for his defense of academic freedom. He is a past president of AURCO.

Physics 107
Marion Campus
Spring 2007
Diagnostic for Electric Circuits Section 7

Name: _____ Table:_____ Rework (circle) 1 2 3 4 5 6 7

Date first done __/__/____ Date first turned in __/__/____ Date Accepted __/__/____

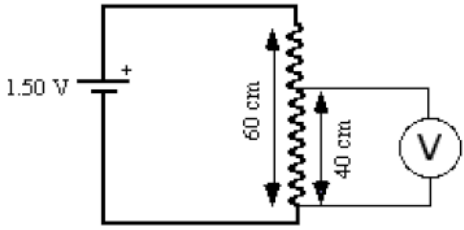


1. The ideal batteries are each 1.5 V across their terminals. Predict the voltages across the batteries and the branches in the circuit given above. Explain your reasoning.

2. A #13 bulb is connected in series with the three resistors in parallel as given above. When measured with a voltmeter, the bulb has a voltage of 2.75 V across it. What are the voltages across the wires now? How does the current through the bulb compare to that through the network of the three resistors? Explain your reasoning.

The diagnostic is continued on the back of this page.

a.



3. The circuit below consists of a 60.0 cm piece of nichrome wire in series with a 1.50 V battery. If a voltmeter is connected across 40.0 cm of this wire, as shown, what will the voltmeter read? Explain your reasoning.

4. How difficult/frustrating was working on Section 7? (circle number)
(not at all) 0 1 2 3 4 5 6 (very)

5. (On first rework) What have you learned between the time you first took this diagnostic and the time you reworked it? How did you learn it?

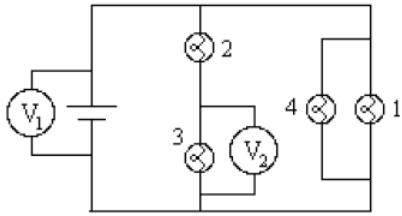
b.

Figure 1 a. Diagnostic for PbI Section 7, front. Section 7 is the first section on voltage. b. Diagnostic for PbI Section 7, back. Students may submit diagnostics multiple times until their ideas are expressed sufficiently clearly to get the credit for completion.

Physics 107, Spring Quarter 2006
Question of the Day 13, 11 May 2006

circle: 9:30 1:30 5:30

Name _____ Table Number _____



The circuit consists of a battery and four different (not identical) bulbs. V_1 reads 3.00 V and V_2 reads 0.90 V. (If you cannot identify the exact voltage below, give your best estimate.)
a. What is the voltage is across bulb 1? Explain your reasoning.

b. What is the voltage is across bulb 4? Explain your reasoning.

c. What is the voltage is across bulb 2? Explain your reasoning.

How difficult/frustrating was the last class? (circle number)
(not at all) 0 1 2 3 4 5 6 (very)

Figure 2. Example of a question of the day for a voltage topic.

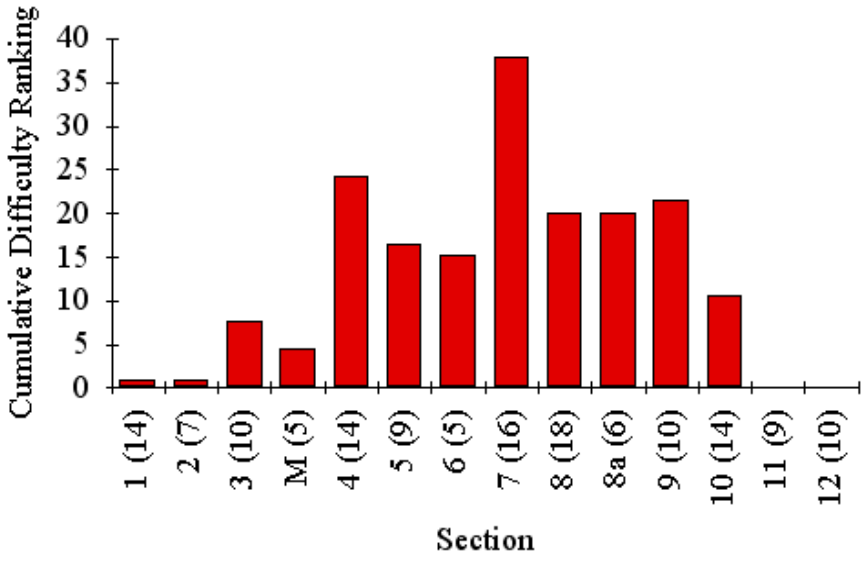


Figure 3. Student group section difficulty rankings from questions of the day. The section and its associated number of experiments is shown along the abscissa.

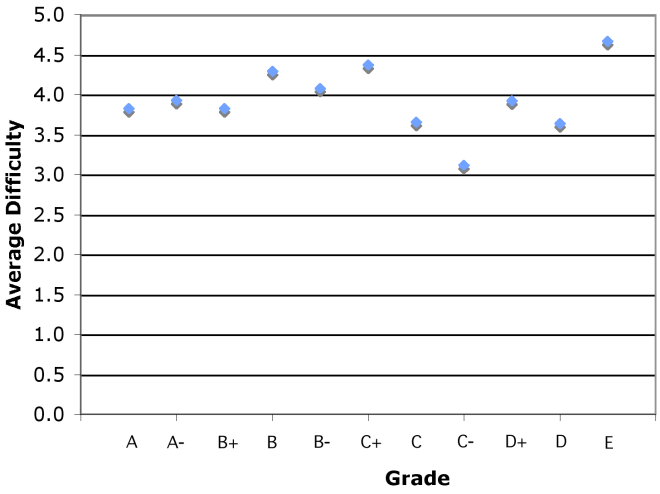


Figure 4. The grade distribution and the average diagnostic ratings by grade.

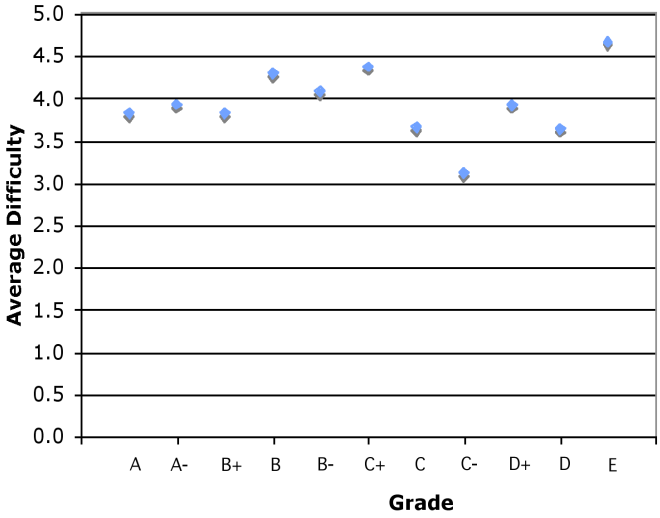


Figure 5. The grade distribution and the average question of the day ratings by grade.

Comparison of student perceptions of three different physics by inquiry classes

Gordon J. Aubrecht, II
Ohio State University—Marion

Abstract:

The setting of Physics by Inquiry (PbI) classes is the laboratory. Students do experiments as suggested by the text as well as doing their own experiments to test predictions they have made about nature's behavior. This is guided inquiry, and students assessments of PbI classes reflect important aspects of inquiry, while not supporting others. Evaluation of laboratory classes is often disorganized and not useful. Formative evaluation can be accomplished utilizing a form of Q-sort assessment that eschews affective information. The assessment forces students to categorize the extent to which they think twenty-five descriptive statements characterize their laboratory class experience. They sort the statements from most to least characteristic of the course into bins of successive size 2, 6, 9, 6, 2 (forcing a "normal" distribution). We report here on results from different versions of Physics by Inquiry courses (properties of matter, electric circuits, and astronomy by sight and optics) using the Laboratory Program Variables Inventory (LPVI), a Q-sort instrument. We also find significant differences among different classes and between students and instructors.

I. Introduction

Physics by inquiry is a course for prospective teachers taught with the expectation of student mastery of the subject through hands-on experiences and reasoning on the basis of that experience in new situations.

The Q-sort mechanism, devised by physicist and psychologist William Stephenson in 1935 [Stephenson, 1935], consists in organizing characteristic statements or pictures into a ranking scheme. The items sample the concourse of items that constitute a

full description of the thing being studied. The methodology may be used with a small number of people or a larger sample. Because the concourse is meant to be descriptive, the number of items ranked can be larger or smaller; the larger the sample of items, the more exact the resulting description. This methodology involves subjectivity, because each person ranks the items from that individual's perspective (that is, the statements are seen by that particular person as descriptive).

In this work, I use statement rankings. Statements used in Q methodology may be either subjective or objective, affective or dispassionate, depending on the object of study. The methodology has been used in advertising and political campaigns as well as in many social science contexts. The method has been less used in the "hard sciences."

I and my students were interested in being able to characterize differences among laboratory courses. My personal experience had been that evaluations of laboratories were anecdotal and superficial; this was not suitable for our purposes. We wanted something more substantial and representative. We might have hired an evaluator to sit in on the laboratory course and report what occurred, or videotaped the whole class and analyzed the resulting data to get a picture of the laboratory course. This was not possible in our context; we lacked both the money and the time to follow this path. As we discovered [Aubrecht et al. 2006, Lin et al. 2006], a relatively small Q-sort instrument can get first-hand data from large numbers of students about the class in a short time.

An additional benefit is that this Q-sort can be used as a formative evaluation for the course (although because we give it at the end of the class, it is formative in the sense that future classes—not the current class—will benefit). The consonance between instructor goals and lab achievement in meeting these goals can be determined by comparing statements instructors consider desirable and undesirable characteristics with student rankings. The choices of the student compared to those of the instructor can suggest ways to change the class so that students could converge to the instructor's choices.

In the following, we describe the method we used and illustrate it through the analysis of one class. We then show how the three

Physics by Inquiry (PbI) classes differ in student choices of the most and least characteristic features of the course.

II. Method

The work of Abraham [Abraham, 1987] in chemistry laboratories led us to the current version of what we call the Laboratory Program Variables Inventory (LPVI). The LPVI contains 25 statements characteristic of most hands-on lab environments; the statements describe common lab activities. The statements used in this work are objective and dispassionate. They can distinguish traditional "cookbook" laboratories from more inquiry-oriented laboratories. The statements used in the LPVI are presented in Table 1.

As written, the LPVI measures what individual students think are the most and least characteristic features of the laboratory classroom activities, not as in the student course evaluation what students most like or most dislike about the course. Because they are statements of fact, students seem to take them at face value, as interviews indicate.

Table 1. The Laboratory Program Variables Inventory statements used in this work

1. Students follow the step-by-step instructions in the laboratory manual.
2. Questions in the laboratory manual require the interpretation of data.
3. The instructor is concerned with the correctness of the data.
4. Students are allowed to go beyond regular laboratory exercises and do experiments on their own.
5. Laboratory activities are used to develop concepts.
6. The instructor lectures to small groups or the whole class.
7. Students are asked to design their own experiments.
8. During laboratory students record information requested by the instructor or the laboratory manual.
9. Laboratory sessions raise new problems or result in data that cannot be immediately explained.
10. The instructor or laboratory manual identifies the problem to investigated.

11. Laboratory activities require students to solve problems.
12. The laboratory manual requires that specific questions be answered.
13. The instructor or laboratory manual requires that students explain why certain things happen.
14. Laboratory is used to investigate a problem that comes up in class.
15. Laboratory experiments develop skill in the techniques or procedures of physics.
16. Questions in the laboratory manual require that students use evidence to back up their conclusions
17. Students discuss their data and conclusions with each other.
18. The instructor or laboratory manual asks students to state alternative explanations of observed phenomenon.
19. During laboratory students record the information they feel is important.
20. Students propose their own explanations for observed phenomenon.
21. Students identify problems to be investigated.
22. During laboratory students check the correctness of their work with the instructor.
23. In discussion with the instructor, assumptions are challenged and conclusions must be justified.
24. Students usually know the general outcome of an experiment before doing the experiment.
25. The instructor gives information to individuals in small groups.

We have taken LPVI data for all three versions of our PbI class over several years. They are known as 106 (properties of matter), 107 (electric circuits), and 108 (optics and astronomy by sight).

Students were instructed to sort the 25 statements of the modified LPVI into five groups. Group I is considered most descriptive of the course; Group V least descriptive. Students are forced to rank the statements into groups of size 2, 6, 9, 6, 2, forming a quasi-normal distribution. The distribution is shown in Fig. 1. This forcing of the distribution is characteristic of all Q methodology. By mandating that only a few statements be included in each category, the Q-sort forces

students to rank the statements relative to one another. In contrast, for example, multiple Likert-scale rankings lead to the observer's lack of ability to assess the relative strength of student perceptions, whatever they may be.

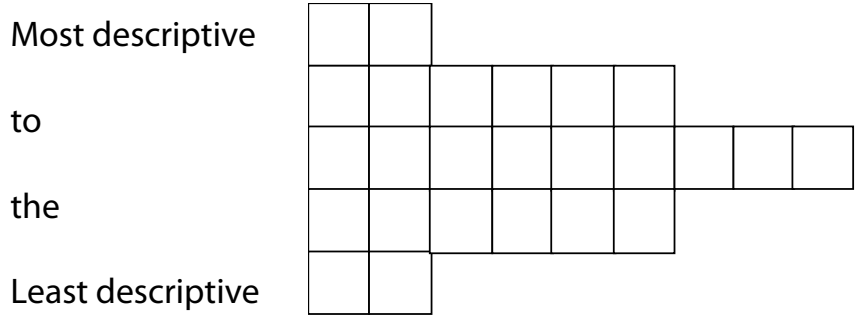


Figure 1 The distribution students use to write statement numbers in the LPVI.

The sorting process is less difficult if the students group statements into three roughly equal-sized groups first, then moving statements from one pile to another until the statements are sorted to their satisfaction, but we do not think that instructing them do this is warranted. The intent is to hasten the sorting process and guarantee that the relative most and least descriptive statements are chosen, though I have observed students carefully ordering each statement, and undoubtedly this would happen for some students in any case no matter what the instructions.

In order to examine the details more thoroughly, construct a matrix of values consisting of the twenty-five statements and five categories. The number of students who chose statement 1 as one of the statements in the most characteristic group are identified as a group I "score" for statement 1 (1-I), call it M_{1I}. Likewise, the number of students who chose statement 1 as second most characteristic are identified as a group II "score" for statement 1 (M_{1II}), and so on.

The matrix elements are normalized by dividing the number

in the matrix by the number of participants. If people chose the twenty-five statements at random, they would produce a normalized distribution of 0.08, 0.24, 0.36, 0.24, and 0.08, respectively, for the groups I through V. In order to determine whether the real matrix differs from the random choices, we subtract the "normal" random choices from our matrix. This gives us a matrix M such that the sum of the matrix elements m_{ij} ($\sum_{i=1, ..., 5, j=1, ..., 25} m_{ij}$) is equal to zero.

For each statement, an "average score" can be defined by weighting each number in groups I, II, III, IV, and V for statement J by the numbers 2, 1, 0, -1, and -2, respectively, and dividing by the total number of participants, N (defining m as M/N, that produces an average score of $2m_{JI} + m_{JII} - m_{JIV} - 2m_{JV}$). It is also possible to form an unweighted "matrix score" for statement J by forming $m_{JI} + m_{JII} - m_{JIV} - m_{JV}$. Both are similar parameters that tell us how the statement ranks in terms of being most and least characteristic. In principle, the average score can take values between -2 and 2, the matrix score between -1 and 1. In practice, they do not usually come near these limiting values.

While the average and matrix scores can be calculated, it is not clear that they are significant. A χ^2 analysis on the matrix is performed that allows us to see which statements are significantly different from randomly chosen values. Items are considered significant if confidence level > 95%, or, in other words, if $P(\chi^2) < 0.05$ that the result could occur randomly. Each class constitutes a sample, while the collection of classes constitutes a very large sample. The larger the sample, the more likely that there is significance, the smaller the sample, the less likely there is significance.

While the students should group the statement numbers, the relative position of the statements has some restricted meaning. An average position, assuming all statements are chosen at random, is 12.5 ± the error (this depends on the number of students N in the sample; the relative error should be proportional to $N^{-1/2}$). If everyone agrees on the most and least characteristics of the class, the statements will be in the average position order 1, 2, ..., 24, 25. To the extent that the average statement number differs from the average value of 12.5, there is information in that position.

III. Analysis of results from one section of the electric circuits PbI class

The Spring, 2005 electric circuits class in Marion had 12 students. Table 2 indicates the most characteristic and least characteristic statements chosen by Physics 107 (circuits) students. At a glance, one can see some sense of student agreement (especially note statements 23 in I and 6 in V).

Table 2. Student choices from Marion Spring, 2005 electric circuits class, N = 12.

Student	I	I	II	II	II	II	II	II	III	III	III	III	III	III	III	III	III	IV	IV	IV	IV	IV	IV	V	V
1	5	17	13	23	11	10	8	18	14	21	16	25	12	3	20	22	15	7	1	9	24	4	19	2	6
2	5	19	17	22	13	1	20	25	8	15	12	4	24	21	16	3	11	14	10	9	18	2	23	6	7
3	5	23	1	17	10	22	12	16	20	13	19	11	24	2	3	8	14	25	21	4	18	9	15	6	7
4	13	23	16	8	22	17	3	12	14	10	11	25	1	19	20	5	15	21	2	24	4	9	18	6	7
5	13	23	17	15	16	5	4	8	1	14	7	20	2	22	12	10	21	19	18	25	3	24	11	9	6
6	13	23	17	16	20	2	22	4	18	12	21	9	3	5	11	8	15	10	14	25	19	24	1	7	6
7	15	16	1	22	18	23	13	17	11	7	2	20	12	9	8	5	10	14	19	3	4	21	25	24	6
8	16	23	2	12	1	17	5	22	20	9	13	19	15	24	18	11	8	4	25	6	10	14	21	3	7
9	17	19	1	8	7	9	25	5	2	24	22	13	16	23	11	15	18	3	20	21	12	10	14	6	4
10	18	9	4	8	23	16	22	15	2	20	24	3	13	25	1	19	10	12	5	17	14	11	21	6	7
11	18	15	10	14	1	20	23	22	11	13	21	9	12	16	25	17	5	3	2	8	19	7	24	4	6
12	23	17	19	20	18	16	5	11	12	15	8	25	2	22	10	1	13	21	9	3	24	4	14	6	7

Following the manipulations discussed in Sec. II, we find m_{1I}, etc., to be -0.080, 0.260, -0.027, -0.073, and -0.080, respectively. For statement 1, the average score is therefore $2m_{1I} + m_{1II} - m_{1IV} - 2m_{1V}$ = 2(-0.080) + (0.260) - (-0.073) - 2(-0.080) = 0.333. The matrix score is $m_{1I} + m_{1II} - m_{1IV} - m_{1V}$ = (-0.080) + (0.260) - (-0.073) - (-0.080), which is also 0.333. Each of the entries is treated similarly, which then gives us the two scores for each statement.

To see how to determine average position, consider statement 6. Eleven of the twelve students chose this statement in category V, six of them placing it in the twenty-fourth place and five in the twenty-fifth place. The remaining student chose statement 6 to be in category IV at position 20. Again, while we acknowledge that it is the group,

not the absolute position, that counts, we can find the average position from (1 x 20 + 6 x 24 + 5 x 25)/12 = 289/12 = 24.08.

In Table 3 are listed the five highest and lowest scores chosen by the 2005 Marion Physics 107 (batteries and bulbs) students, as well as the smallest and greatest average positions. All the statements in this table are significant at the 95% confidence level or above. (only statements 1, 2, and 3 do not meet this criterion at all; and only statements 4, 5, 9, and 10 are below 99%).

Table 3. Highest and lowest five average scores, matrix scores, and average positions for the Marion Spring, 2005 electric circuits class.

Statement	Average Score		Statement	Matrix Score		Statement	Average Position
23	1.25		17, 23	0.75		23	5.83
17	1.00		16, 22	0.67		17	6.17
16	0.83		5, 13	0.50		16	7.33
5	0.75					13	7.58
13	0.75					22	8.67
4	-0.58		14	-0.50		4	16.92
21	-0.58		21	-0.58		21	17.17
24	-0.67		24	-0.58		24	17.83
7	-1.25		7	-0.67		7	20.00
6	-1.92		6	-1.00		6	24.08

Note the overlap between categories for this class. All rank statement 23 first, and statement 17 first or second (see Table 1 for the statements). Statement 16 is second or third; statement 13 is third, fourth, or fifth. Statements 5 and 22 appear in two out of three most characteristic lists. All rank statement 6 last, statement 7 next to last, statement 24 third from last, and statement 21 fourth from last. (The "missing" statements are at most two places away.)

This class sees some things an instructor would want seen—no lectures are being given, conclusions need to be justified, students work together to construct understanding, students need to appeal to evidence to explain their results, and students don't know what the

experiments will show. A professor teaching an inquiry class would be gratified that students recognized these characteristics.

The students also say things such a professor might not want to see—they report that have no freedom to identify problems and come up with their own experiments. (This last perception is common in all the Q-sorts, and mysterious to me. Students are actually doing this sort of exercise throughout the class, but somehow they do not seem to recognize it. This may occur because the problems are small and the experiments straightforward.)

Here is where the formative value of the Q-sort is seen. I have tried to make changes that help students recognize that the groups do do experiments on their own, for example, by asking them in their journal to identify some experiment they'd conducted as a group that was not in the book, and the students most often are able to identify something the group had done—but this perception that they play absolutely no role in directing themselves seems stubbornly resistant to any changes I have devised thus far.

IV. Do all three PbI classes' students see the courses (all taught the same way) as acting identically?

In any given year, all three classes are taught by the same set of professors, instructors, and teaching assistants at OSU. The text materials are all written by the same set of researchers [McDermott 1995a, 1995b]. The salient question one may ask is posed as the heading of this section: How much commonality is there among the various PbI classes? It is also interesting to ask how much variability there is among sections of the same PbI class (Physics 106, 107, or 108).

The answer to the first of these questions also sheds light on the second question.

Data have been gathered on student rankings in three OSU PbI classes—on properties of matter [McDermott 1995a], on electric circuits [McDermott 1995b], and on optics and astronomy by sight [McDermott 1995a, 1995b]—since Autumn Quarter, 2004. These data as compiled through Spring Quarter, 2007 are reported on here. The most descriptive and least descriptive statements as ranked by

students in the three different versions of the inquiry class have been determined as indicated in Sec. III above. The sample consists of responses of 174 properties of matter (Physics 106) students, 239 electric circuits (Physics 107) students, and 53 optics and astronomy (Physics 108) students (this last class has fewer students than the other two, and I somehow misplaced a large number of responses). In addition, 18 PbI instructors filled out the LPVI during this time period.

With these large numbers of students, nearly all statements are significant at the 99.99% level using chi-square. Only statements 3 and 8 do not meet this criterion for properties of matter, and they are both comfortably above the 95% confidence level; statements 2,3,4, 8, and 15 in electric circuits, while are not at the 99.99% level, are all well above the 95% confidence level; and only statements 2 and 3 in optics and astronomy in our sample are not significant at the 95% level (1, 5, 8 through 11, 15, and 20 are all above 95%, though below 99.99%). For the instructors, statements 3 and 4 are not significantly different from chance, but all others are significant above the 99.9% confidence level.

As indicated in Sec. II, there are three methods for determining the most descriptive and least descriptive statements: average score, matrix score, and average position. The results for these multisection, multiyear, dual campus classes is given in Tables 4, 5, and 6.

Table 4. Average scores and positions from properties of matter (N = 174)

Statement	Matrix Score	Statement	Average Score	Statement	Average Position
13	0.52	13	0.70	13	8.49
23	0.46	23	0.63	23	8.99
17	0.43	17	0.61	1	9.07
5	0.41	1, 5	0.55	17	9.17
1	0.38	22	0.47	5	9.22
21	-0.35	14	-0.53	14	16.8
14, 24	-0.46	24	-0.57	24	17.1
4	-0.52	4	-0.72	4	17.6
7	-0.60	7	-0.83	7	18.4
6	-0.79	6	-1.41	6	21.3

Table 5. Average scores and positions from electric circuits (N = 237)

Statement	Matrix Score	Statement	Average Score	Statement	Average Position
17	0.46	17	0.66	17	8.68
13	0.44	23	0.63	13	9.05
23	0.41	13	0.61	23	9.10
16, 22	0.36	1, 16	0.48	1	9.76
5	0.35	22	0.47	16, 22, 5	10.1
14	-0.33	21	-0.42	14	15.9
21	-0.35	14	-0.46	21	16.0
7	-0.56	7	-0.76	7	18.0
24	-0.61	24	-0.78	24	18.4
6	-0.89	6	-1.69	6	22.8

Table 6. Average scores and positions from optics and astronomy (N = 53)

Statement	Matrix Score	Statement	Average Score	Statement	Average Position
17	0.70	17	1.08	17	6.26
23	0.68	23	0.92	13	7.38
13	0.66	13	0.87	23	7.51
16	0.55	16	0.68	16	8.40
22	0.45	22	0.64	1, 22	9.55, 9.58
4	-0.40	4	-0.42	21	16.3
14, 21	-0.43	14, 21	-0.47	14	16.5
7	-0.53	24	-0.64	24	17.9
24	-0.55	7	-0.81	7	17.9
6	-0.87	6	-1.70	6	22.9

Ties are reported as shown. In the case of Physics 108, the position difference between statements 1 and 22 was judged to be insignificant so both were listed in fifth most characteristic position. It may be noted that the smallest average position difference between statements shown and not shown is 1.16, 0.81, 0.45, and 1.06 for the respective most descriptive statements and 0.80, 0.89, 0.53, and 1.22 for the respective least descriptive statements. For average and matrix

scores, the difference between listed and unlisted statement scores is approximately 0.1 to 0.2.

Each method gives very similar most and least descriptive statements from all three classes. Statements 23, 13, and 17 appear among the most characteristic statements, as for the Marion class (Table 3). Statements 6, 7, 21, and 24 appear among the least characteristic statements, again as in Marion. Statement 14, which appeared in just one entry in Table 3 appears more frequently in Tables 4, 5, and 6. Statement 1—students saying that they follow instructions step by step—was not chosen by Marion students, but appears as most to be among the most characteristic, but was chosen among the most characteristic in many table entries in the above three tables. It is found in many cases that the order of the statements is different, among themselves and between them and Marion's choices.

It is also to be noted that the least characteristic average positions are closer to 25 than the most characteristic average positions are to 1 as may be seen by examination of all the Tables 3 through 6. Interestingly, the highest "most characteristic" position (farthest toward the middle) for the Marion class matches the smallest "most characteristic" position (closest to the end) for all Physics 106 and 107 students. The Physics 108 students' choices most closely resemble Marion students' choices. However, most of the Physics 108 student results reported come from classes on both Marion and Columbus taught by the author (as was the Marion Physics 107 class reported on). It is possible to speculate that there is something in the way I teach compared to colleagues that makes this difference occur.

V. Attempting to report these comparisons on a similar scale

To decide how to categorize these responses, we have simply averaged the ranks of the three reported parameters and reported this composite ranking in Table 7. While this does not have a definite meaning, it allows comparisons to be made relatively easily.

Table 7. Comparison of groups (+: characteristic; -: uncharacteristic).Statement numbers in brackets are averages that fall beyond fifth place; these are included because at least one ranking below fifth place occurred.

	PM	EC	OA	Marion (EC)
statement	N = 174	N = 237	N = 53	N = 12
1	4+	[6+]	[6+]	[8+]
4	3-	5-	[6-]	5-
5	5+	[7+]	[7+]	5+
6	**1-**	**1-**	**1-**	**1-**
7	2-	3-	3-	2-
13	1+	2+	3+	4+
14	5-	5-	5-	[6-]
16	[7+]	4+	4+	3+
17	3+	1+	1+	2+
21	[6-]	4-	5-	4-
22	[6+]	5+	5+	5+
23	2+	3+	2+	1+
24	4-	2-	2-	3-

Table 7 shows a great deal of agreement among the groups. Statement 17 ("Students discuss their data and conclusions with each other."), statement 23 ("In discussion with the instructor, assumptions are challenged and conclusions must be justified."), and statement 13 ("The instructor or laboratory manual requires that students explain why certain things happen.") are perceived as strongly characteristic and statement 6 ("The instructor lectures to the whole class."), statement 24 ("Students usually know the general outcome of an experiment before doing the experiment."), and statement 7 ("Students are asked to design their own experiments.") are perceived as strongly uncharacteristic. There is somewhat less importance attributed to statement 21 ("Students identify problems to be investigated.") on the uncharacteristic side.

Statements 1 ("Students follow the step-by-step instructions in the laboratory manual."), 4 ("Students are allowed to go beyond regular laboratory exercises and do experiments on their own."), 5 ("Laboratory activities are used to develop concepts."), 6 ("Questions

in the laboratory manual require that students use evidence to back up their conclusions."), 14 ("Laboratory is used to investigate a problem that comes up in class."), 21 ('Students identify problems to be investigated.") and 22 ("During laboratory students check the correctness of their work with the instructor.") are interesting because of the differences between the groups. Electric circuit students, and optics and astronomy students believe that evidence is important, but properties of matter students perceive it as less important than other aspects of the course. Electric circuit students and optics and astronomy students choose checking with the instructor as important aspects of the course. Also, as noted, Marion students did not have statement 1 among their top most characteristic descriptions (it is shown as averaging eighth, far beyond the results from the entire class).

A summary of the summaries (averaging the reported ranks from Table 7) gives statements the order 17 (1.75), 23 (2), 13 (2.5), 16 (4.5), 14 and 22 (5.25), and 1 and 5 (6) for the most characteristic and statements 6 (1), 7 (2.5), 24 (2.75), and 4 and 21 (4.75) for the least characteristic statements. This gives a preliminary estimate of the "strength" of the identified characteristics: 6 (1), 17 (1.75), 23 (2), 7 and 13 (2.5), 24 (2.75) as pretty highly agreed to. Statements 16 (4.5), 4 and 21 (4.75), 14 and 22 (5.25), and 1 and 5 (6) are considerably less strongly held among students.

VI. Conclusions

There are many statements that are seen as strongly characteristic and strongly uncharacteristic that would please teachers who use inquiry in their classes. Lectures don't happen. Conclusions are analyzed, justified, and explained by students. However, such teachers would probably want students to know they were able to do their own experiments extending what they are investigating. Ironically, in our PbI courses, this sort of experimentation does happen, but students apparently do not register it when it occurs.

Because inquiry in PbI classes is guided, it is not surprising that students recognize that they are being led (by the teachers and the book) to the problems that are being investigated. The canonical

understanding of nature is being sought, so students in PbI are led to that canonical explanation and alternate explanations, though essential to experimental science research, are not encouraged.

The LVPI is a valuable tool for use because it provides instructors information about how students perceive what actually happened in a course without the need for lengthy classroom observations.

This work supports the usefulness of Q methodology for assessing laboratory courses and shows that it can be used to provide instructors with formative assessment of their classes.

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References

Abraham, M. R., 1982, "A descriptive instrument for use in investigating science laboratories," *J. Res. Sci. Teach.* **19**, 155-165.

Aubrecht, G. J., Lin, Y., Demaree, D., Brookes, D., and Zou, X., 2006, "Student perceptions of Physics by Inquiry at Ohio State," *Proceedings of the 2005 Physics Education Research Conference*, AIP, Melville, NY, 113.

Lin, Y. , Demaree, D., Zou, X., and Aubrecht, G. J., 2006, "Student assessment of laboratory in introductory physics courses: A Q-sort Approach," *Proceedings of the 2005 Physics Education Research Conference*, AIP, Melville, NY, 101.

McDermott, L. C., 1995a, *Physics by Inquiry*, vol. 1, Wiley, New York.
McDermott, L. C., 1995b, *Physics by Inquiry*, vol. 2, Wiley, New York.

Stephenson, W., 1935, "Technique of factor analysis," *Nature* 136, 297–299.

Biographical Information

Gordon J. Aubrecht, II is professor of physics at OSU Marion. He graduated from Rutgers University summa cum laude and earned his graduate degree at Princeton University. His original research interest was theoretical particle physics, but he is currently studying how students understand atoms, nuclei, and the interaction of light and matter as well as how useful and effective physics by inquiry is. He was awarded the Distinguished Service Citation of the American Association of Physics Teachers in 1994, was elected a Fellow of the American Physical Society in 2000, and was presented with the John B. Hart Award for distinguished service from the Southern Ohio Section of the American Association of Physics Teachers in 2002. He received the AURCO Distinguished Service Award in 2004. Also in 2004, Aubrecht received the Howard Maxwell Award for Distinguished Service from the Ohio Section of the American Physical Society and the Louis Nemzer Award from the Ohio State Chapter of the American Association of University Professors for his defense of academic freedom. He is a past president of AURCO.

Salaries on Ohio Regional Campuses

Joseph Cavanaugh
Wright State University—Lake
and
Gordon J. Aubrecht, II
Ohio State University—Marion

Both authors have studied aspects on Regional Campus salaries for some years. We try in this paper to discern patterns in salaries among campuses based on several metrics. We report on our results,

I. Faculty Compensation

Most faculty are concerned with their compensation. They look at their own accomplishments and those of their peers, and form an idea of whether they are being treated fairly. "Fair" is a relative term, and each person may interpret things differently. Some general things may be said. One of us (GJA) has been keeping track of salaries on Regional Campuses for many years (since about 1980 for The Ohio State University's (OSU's) Regional Campuses, based on official OSU salary data as published, and since 1997 for all Regionals in Ohio, based on the American Association of University Professors (AAUP) yearly survey published in Academe.

These data show interesting and potentially useful things. We may compare Regional Campus salaries at each level to their corresponding main campuses. Tables 1, 2, and 3 show the situation: salary changes for professors, associate professors, and assistant professors. It may be seen that changes in salaries on Regional Campuses of the same university do not appear to be correlated. Further, in real terms only Ohio University main campus experienced buying power contraction (in professors' and associate professors' salaries). However, the buying power of faculty on many Regional Campuses eroded significantly over the period shown, especially for the full professors. The buying power of some associate professors at some Regional Campuses—especially those of Kent and Ohio—was

reduced sharply. At Akron, Bowling Green, Kent, Ohio, and Wright Regional Campuses, assistant professors were impacted in terms of reduced buying power.

As always, it is important to keep in mind that these represent averages, and faculty are promoted out of the lower two ranks into the rank of professor. There are also retirements, expected to be predominantly from professor and associate professor ranks, so the number of faculty in each pool changes with time

This decade we study here was not a good time to be working at Akron, Bowling Green, Kent, Ohio, or Wright Regional Campuses. On the other hand, this decade appears to have been a relatively good time to be working at Ohio State's Regional Campuses. The problem with this is that Ohio State generally ranked near the bottom in salary rank by rank at the start of the study period and was playing a game of catch-up at all academic levels. This is illustrated in Table 4. The numbers here also show the buying power erosion, though more subtly. Note that the ratio of faculty salaries on the Regional Campuses are decreasing as a proportion of the respective salary on the corresponding main campus: Regional Campus professors have decreased from 88% of main campus salary to 77%; Regional Campus associate professors decreased from 94% of main campus salary to 88%; and Regional Campus assistant professors decreased from 89% of main to 85% overall during the period studied.

Table 1. Professors' salary increases on Regional Campuses compared to the salary increases on their the corresponding main campus (percentages).

campus	1997 to 2001 increase	2001 to 2006 increase	1997 to 2006 increase	1997 to 2001 increase	1997 to 2006 increase
				corrected for inflation	corrected for inflation
Akron, Wayne	2.9%	9.1%	12.2%	-6.4%	-10.2%
BGSU, Firelands	16.6%	3.1%	20.2%	6.1%	-3.8%

Cincinnati, Clermont	9.3%	17.8%	28.8%	-0.5%	3.1%
Cincinnati, Raymond Walters	6.0%	18.4%	25.5%	-3.6%	0.5%
Kent, Ashtabula	23.7%	-30.0%	-13.4%	12.5%	-30.7%
Kent, East Liverpool					
Kent, Geauga					
Kent, Salem	1.1%	-15.2%	-14.3%	-8.0%	-31.4%
Kent, Stark	2.6%	12.4%	15.3%	-6.7%	-7.7%
Kent, Trumbull	17.1%	9.1%	27.8%	6.5%	2.3%
Kent, Tuscarawas	25.5%	-29.1%	-11.0%	14.2%	-28.7%
Miami, Hamilton	31.3%	6.0%	39.1%	19.4%	11.4%
Miami, Middletown	14.9%	4.8%	20.5%	4.5%	-3.5%
Ohio, Chillicothe	-0.1%	30.7%	30.6%	-9.1%	4.6%
Ohio, Eastern	10.0%	-14.0%	-5.4%	0.0%	-24.2%
Ohio, Lancaster	-15.2%	29.5%	9.8%	-22.9%	-12.1%
Ohio, Southern					
Ohio, Zanesville	-10.3%	13.7%	1.9%	-18.4%	-18.4%
OSU, Lima	14.0%	21.4%	38.4%	3.7%	10.8%
OSU, Mansfield	7.9%	15.8%	24.9%	-1.9%	0.0%
OSU, Marion	13.2%	20.8%	36.7%	2.9%	9.4%
OSU, Newark	10.4%	22.3%	34.9%	0.4%	8.0%

Wright, Lake		33.5%			
Average	9.9%	5.3%	15.7%	-0.1%	-7.3%
Akron, Main	11.4%	18.3%	31.7%	1.3%	5.5%
BGSU, Main	13.2%	18.8%	34.5%	3.0%	7.7%
Cincinnati, Main	10.1%	17.6%	29.5%	0.1%	3.7%
Kent, Main	17.8%	10.6%	30.4%	7.2%	4.4%
Miami, Main	16.7%	16.6%	36.0%	6.1%	8.9%
Ohio, Main	7.4%	15.3%	23.8%	-2.3%	-0.9%
OSU, Main	14.5%	25.1%	43.2%	4.2%	14.7%
Wright, Main	8.3%	22.3%	32.4%	-1.5%	6.0%
Average	12.4%	18.1%	32.8%	2.3%	6.3%

Table 2. Associate professors' salary increases on Regional Campuses compared to the salary increases on their corresponding main campus (percentages).

campus	1997 to 2001 increase	2001 to 2006 increase	1997 to 2006 increase	1997 to 2001 increase	1997 to 2006 increase
				corrected for inflation	corrected for inflation
Akron, Wayne	4.9%	9.3%	14.7%	-4.5%	-8.2%
BGSU, Firelands	2.1%	15.3%	17.7%	-7.1%	-5.8%
Cincinnati, Clermont	6.1%	23.2%	30.8%	-3.4%	4.8%
Cincinnati, Raymond Walters	6.9%	16.5%	24.5%	-2.8%	-0.3%

Kent, Ashtabula	-20.1%	-2.9%	-22.4%	-27.3%	-37.9%
Kent, East Liverpool	7.8%	-3.1%	4.5%	-2.0%	-16.3%
Kent, Geauga	18.2%	7.2%	26.7%	7.5%	1.5%
Kent, Salem	21.0%	-8.5%	10.8%	10.1%	-11.3%
Kent, Stark	16.9%	2.8%	20.2%	6.4%	-3.8%
Kent, Trumbull	15.3%	4.5%	20.5%	4.9%	-3.6%
Kent, Tuscarawas	16.8%	8.8%	27.1%	6.3%	1.7%
Miami, Hamilton	18.9%	15.9%	37.8%	8.2%	10.3%
Miami, Middletown	7.5%	16.2%	25.0%	-2.2%	0.1%
Ohio, Chillicothe	9.2%	13.9%	24.4%	-0.7%	-0.4%
Ohio, Eastern	-12.0%	-2.0%	-13.8%	-19.9%	-31.0%
Ohio, Lancaster	6.0%	16.2%	23.1%	-3.6%	-1.4%
Ohio, Southern		24.5%			
Ohio, Zanesville	3.6%	5.1%	8.9%	-5.7%	-12.8%
OSU, Lima	10.1%	14.1%	25.6%	0.2%	0.6%
OSU, Mansfield	14.3%	17.4%	34.1%	4.0%	7.4%
OSU, Marion	17.4%	28.6%	51.0%	6.8%	20.9%
OSU, Newark	13.1%	15.6%	30.7%	2.9%	4.6%
Wright, Lake	9.5%	22.5%	34.2%	-0.4%	7.4%
Average	7.7%	13.3%	22.0%	-2.1%	-2.3%

Akron, Main	10.5%	12.7%	24.5%	0.5%	-0.3%
BGSU, Main	14.3%	13.4%	29.5%	3.9%	3.7%
Cincinnati, Main	10.2%	15.3%	27.0%	0.2%	1.7%
Kent, Main	16.9%	9.1%	27.5%	6.4%	2.1%
Miami, Main	14.6%	16.6%	33.6%	4.2%	7.0%
Ohio, Main	9.2%	13.4%	23.9%	-0.6%	-0.8%
OSU, Main	12.8%	21.2%	36.7%	2.6%	9.4%
Wright, Main	9.3%	18.4%	29.4%	-0.5%	3.6%
Average	12.2%	15.0%	29.1%	2.1%	3.3%

Table 3. Assistant professors' salary increases on Regional Campuses compared to their salary increases on their corresponding main campus (percentages).

campus	1997 to 2001 increase	2001 to 2006 increase	1997 to 2006 increase	1997 to 2001 increase	1997 to 2006 increase
				corrected for inflation	corrected for inflation
Akron, Wayne	6.7%	11.3%	18.8%	-2.9%	-4.9%
BGSU, Firelands	19.3%	-5.3%	12.9%	8.5%	-9.6%
Cincinnati, Clermont	1.5%	32.8%	34.8%	-7.6%	7.9%
Cincinnati, Raymond Walters	10.2%	19.8%	32.0%	0.2%	5.7%
Kent, Ashtabula	24.7%	-17.6%	2.7%	13.4%	-17.7%

Kent, East Liverpool	24.1%	-7.8%	14.4%	12.9%	-8.4%
Kent, Geauga	22.2%	25.0%	52.9%	11.2%	22.4%
Kent, Salem	27.5%	-14.4%	9.1%	16.0%	-12.6%
Kent, Stark	24.4%	3.6%	28.8%	13.1%	3.2%
Kent, Trumbull	24.2%	11.5%	38.6%	13.0%	10.9%
Kent, Tuscarawas	6.0%	18.4%	25.5%	-3.6%	0.5%
Miami, Hamilton	7.4%	3.4%	11.1%	-2.3%	-11.1%
Miami, Middletown	11.4%	6.8%	19.0%	1.4%	-4.7%
Ohio, Chillicothe	10.3%	20.7%	33.1%	0.3%	6.6%
Ohio, Eastern	6.9%	15.1%	23.1%	-2.7%	-1.5%
Ohio, Lancaster	11.7%	16.3%	29.9%	1.6%	4.0%
Ohio, Southern		6.6%			
Ohio, Zanesville	5.1%	9.2%	14.8%	-4.4%	-8.1%
OSU, Lima	11.8%	20.2%	34.4%	1.7%	7.6%
OSU, Mansfield	12.8%	16.5%	31.4%	2.6%	5.2%
OSU, Marion	20.0%	17.9%	41.4%	9.1%	13.2%
OSU, Newark	10.9%	27.2%	41.0%	0.9%	12.9%
Wright, Lake	11.5%	6.3%	18.6%	1.5%	-5.1%
Average	13.7%	11.1%	26.3%	3.4%	1.1%
Akron, Main	12.1%	13.6%	27.4%	2.0%	2.0%
BGSU, Main	12.2%	16.1%	30.3%	2.0%	4.3%

Cincinnati, Main	11.5%	17.0%	30.5%	1.4%	4.5%
Kent, Main	16.1%	15.8%	34.5%	5.6%	7.7%
Miami, Main	12.1%	18.0%	32.2%	1.9%	5.9%
Ohio, Main	10.3%	13.9%	25.6%	0.4%	0.6%
OSU, Main	16.5%	25.7%	46.4%	5.9%	17.2%
Wright, Main	13.2%	19.9%	35.8%	3.0%	8.7%
Average	13.0%	17.7%	33.0%	2.8%	6.5%

Table 4. Actual salaries on Regional Campuses and main campus 1997-98, 2000-01, and 2006-07 (thousands of dollars). Data from Refs. 1 and 2.

	1997	2001	2006	1997	2001	2006	1997	2001	2006
	-98	-02	-07	-98	-02	-07	-98	-02	-07
	Professor			Associate Professor			Assistant Professor		
Akron, Wayne	60.7	62.5	68.2	51.5	54.0	59.0	37.8	40.4	45.0
BGSU, Firelands	57.4	67.0	69.0	54.5	55.6	64.1	40.8	48.6	46.0
Cincinnati, Clermont	54.6	59.8	70.4	42.6	45.2	55.7	33.3	33.9	45.0
Cincinnati, Raymond Walters	58.0	61.5	72.8	45.9	49.1	57.2	34.7	38.2	45.8
Kent, Ashtabula	67.9	84.0	58.8	64.2	51.3	49.8	40.9	50.9	42.0
Kent, East Liverpool			61.0	50.8	54.7	53.1	35.0	43.4	40.0
Kent, Geauga			68.4	46.8	55.3	59.3	36.4	44.5	55.7
Kent, Salem	74.1	74.9	63.5	46.3	56.0	51.2	39.3	50.1	42.9

Kent, Stark	62.5	64.1	72.1	51.1	59.8	61.4	38.2	47.5	49.2
Kent, Trumbull	63.4	74.2	81.0	52.8	60.9	63.7	36.6	45.4	50.7
Kent, Tuscarawas	85.2	106.9	75.8	52.1	60.9	66.2	39.9	42.3	50.1
Miami, Hamilton	67.7	88.9	94.2	51.6	61.3	71.1	41.7	44.7	46.3
Miami, Middletown	66.0	75.8	79.5	52.2	56.1	65.3	42.5	47.3	50.6
Ohio, Chillicothe	55.8	55.7	72.9	46.7	51.0	58.0	38.8	42.8	51.6
Ohio, Eastern	62.2	68.4	58.8	59.0	51.9	50.9	43.8	46.8	53.9
Ohio, Lancaster	62.5	53.0	68.7	50.5	53.5	62.2	39.1	43.6	50.7
Ohio, Southern			87.3		47.3	58.9		44.6	47.5
Ohio, Zanesville	71.1	63.7	72.5	52.0	53.9	56.6	40.0	42.0	45.9
OSU, Lima	60.5	69.0	83.8	50.1	55.2	62.9	37.5	42.0	50.4
OSU, Mansfield	60.5	65.2	75.5	47.1	53.8	63.2	40.2	45.3	52.8
OSU, Marion	63.2	71.5	86.4	43.9	51.6	66.3	36.4	43.7	51.5
OSU, Newark	65.2	71.9	87.9	47.6	53.9	62.2	38.8	43.1	54.8
Wright, Lake		55.0	73.4	47.9	52.5	64.3	42.5	47.4	50.4
averages	64.1	69.7	74.0	50.3	54.1	60.1	38.8	44.3	48.6
average/ average of mains	88%	86%	77%	94%	90%	88%	89%	90%	85%
Main Campuses	1997	2001	2006	1997	2001	2006	1997	2001	2006
	-98	-02	-07	-98	-02	-07	-98	-02	-07
	Professor			Associate Professor			Assistant Professor		

Akron	65.8	73.3	86.7	51.3	56.7	63.9	42.2	47.3	53.7
Bowling Green State	67.5	76.4	90.8	52.6	60.1	68.1	42.7	47.9	55.6
Cincinnati	74.4	81.9	96.3	55.0	60.6	69.9	44.3	49.4	57.8
Kent State	71.2	83.9	92.8	52.6	61.5	67.1	41.6	48.3	55.9
Miami	71.3	83.2	97.0	53.5	61.3	71.5	42.3	47.4	55.9
Ohio	74.3	79.8	92.0	55.3	60.4	68.5	44.5	49.1	55.9
Ohio State	81.8	93.7	117.2	56.3	63.5	76.9	47.4	55.2	69.4
Wright State	73.2	79.3	97.0	53.5	58.5	69.2	43.1	48.8	58.5
average	72.4	81.4	96.2	53.8	60.3	69.4	43.5	49.2	57.9

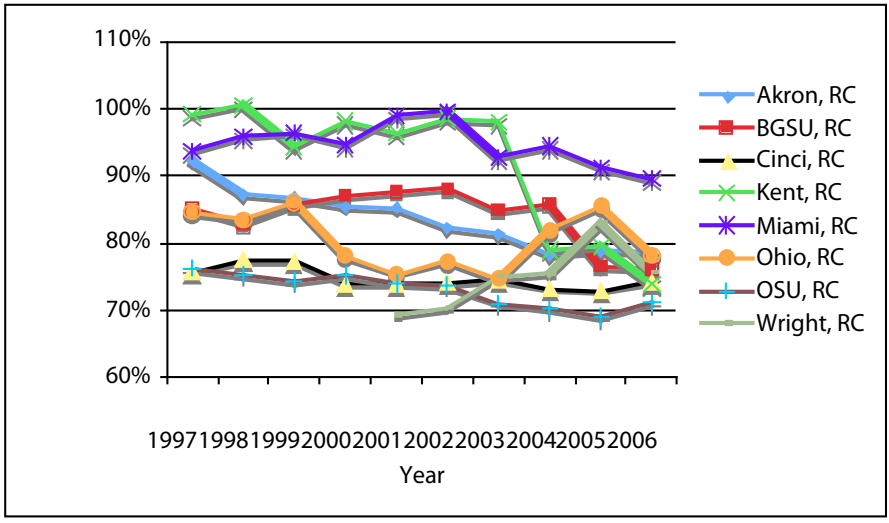
Table 5 shows a different aspect of these data. This table provides the average differences between the Regional Campuses and the main campuses for Regional Campuses in Ohio for all full time faculty. As shown in Table 4, the faculty compensation at Ohio Regional Campuses has declined from 2006 to 2007. The average Main Campus salary was $18,600 higher than their corresponding branch campus in 2006. Since this amount increased to $19,600 in 2007, Regional Campus faculty received $1,000 less compared to Main Campus faculty from 2006 to 2007. During this same time period the number of faculty at Main Campuses increased relative to their Regional Campuses, the number of undergraduates enrolled at the Main Campuses was smaller compared to their Regional Campuses, and the tuition at the Main Campuses was higher relative to their Regional Campuses.

Table 5. Comparison of Regional Campus and Main Campus means.

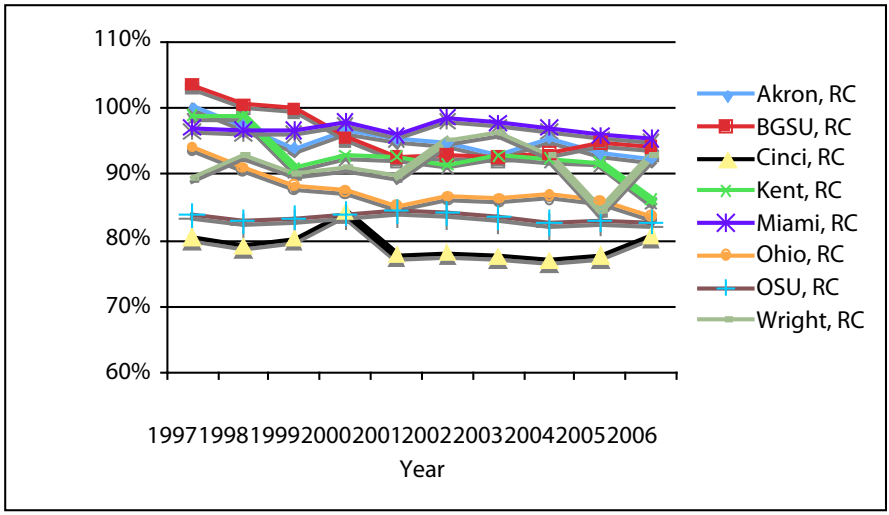
	Av. ’06	Av. ’07
Total Faculty Compensation (thousands of dollars)	$18.6	$19.6
Number difference in male faculty	635	643

Number difference in female faculty	322	330
Number difference in total faculty	957	973
Undergraduates enrolled (difference)	19,165	19,053
Difference in undergraduates' state tuition	$4,311	$4,994

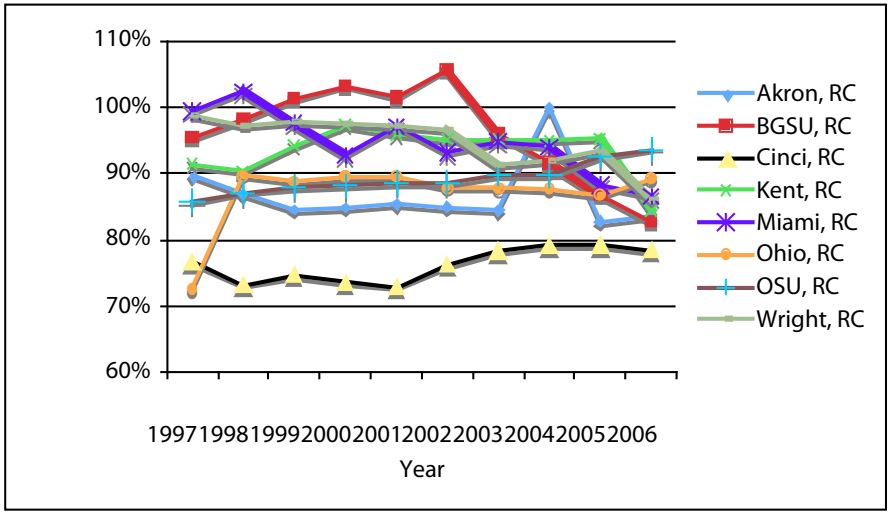
The salary difference increase is seen in this comparison as well. Not shown on this table, but more visible in Table 4, the salaries on Ohio's Regional Campuses vary greatly at each level—assistant professor, associate professor, and professor



a)



b)



c)

Figure 1. a) Professor salary comparison by campus. b) Associate professor salary comparison by campus. c) Assistant professor salary comparison by campus. Note the suppressed zero on the graphs' scales.

Additionally, the trajectory of salaries varies greatly from campus to campus. This is illustrated in Figures 1. Figure 2 shows the average salary at rank from 1997-98 to 2006-07.

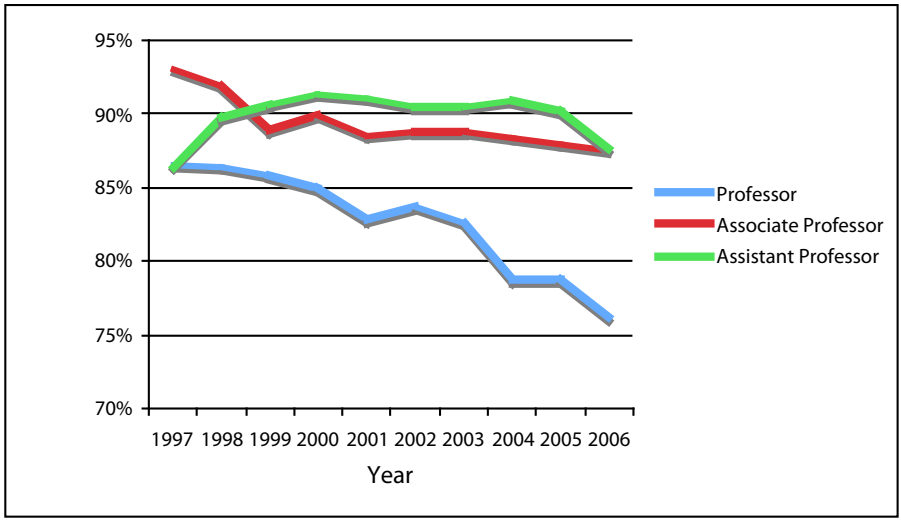


Figure 2. Average regional Campus salaries by rank, 1997-98 to 2006-07. Note the suppressed zero on the graph's scale.

There appears to be no fixed ratio between average main campus salaries by rank and the corresponding Regional Campus salaries. This is even true when there are several Regional Campuses connected to a single main campus.

II. Differences' cause

We wondered what could be responsible for the differences between ranks of Regional to Main Campus faculty salary.. There are many possible reasons for the differences shown (and within multiple Regional Campuses, the differences are not negligible). Two hypotheses present themselves.

(1) Perhaps there are long-serving assistant or associate professors on some campuses that inflate the ratio at those ranks, but this cannot occur at professor levels. Professor salaries on the Regional Campuses run between 63% and 95% of main campuses, with an average around 76%. For associate professors, the range is

between 74% and 116%, with an average of about 88%. For assistant professors, the range is between 72% and 100%, with an average of 84%.

Ratios of salaries to main campus salaries are higher at the lower ranks. Without additional data on length of service for all ranks at all Regionals, we cannot say that the above hypothesis is ruled out. However, at Ohio State University there are known to be just two tenured assistant professors now on the Regionals. There are, of course, quite a few associate professors who were never promoted to professor, as on all Ohio Regionals—indeed, as on all campuses.

The corresponding ratios for Ohio State are 71%, 90%, and 78% for professors, associate professors, and assistant professors, respectively. This lends support to the hypothesis, but indicates that professors are generally more poorly paid than at other ranks.

(2) Perhaps the campuses with highest "output," as measured in some numerical way, have the highest average salaries. As there is no set of available data known to them, the authors attempted to obtain these data themselves. Joe and Gordon went about data collection differently.[3,4] Joe asked about individual faculty publications. Gordon asked the various campuses about number of years in higher education for each faculty member and the corresponding numbers of publications for the current year for a whole campus.

Several individual faculty members responded to Joe and Gordon. (N = 66 out of a total of 670, just under 10%). Just one campus (his own) responded to Gordon.

Table 6. All respondents replies to survey categorized.

	Number	Books	Books	Refereed	Refereed	Years in	2006-07		
Campus	of faculty	Authored	Edited	Articles	Conf. Proc.	Higher Ed	rank in salary ($)		
							P	AP	aP
Ohio, Chillicothe	1	0	0	0	0	25	11	17	6
Ohio, Southern	2	0	0	0	5	21	3	16	15
Ohio, Zanesville	1	0	0	3	0	9	13	19	18

OSU, Lima	5	0	0	10	8	33	5	10	11
OSU, Marion	4	15	3	93	27	101	4	3	7
OSU, Newark	4	0	1	5	8	23	2	11	3
Wright, Lake	11	3	3	9	18	105	10	6	12

Tables 6, 7, and 8 show the individual campuses' rankings by total, per respondent, and overall as gleaned from the response. It must be emphasized that these data are preliminary and incomplete! We think that some respondents replied for the past year and others for their entire careers. Nevertheless, these represent a beginning for more reasonable data collecting, something made more urgent by certain proposals to make all Regional Campuses community colleges (we believe there are substantial differences in the education students receive on a campus where research is part of the professoriate's job description).

Table 7. Per respondent replies to survey categorized.

	Number	Books	Books	Refereed	Refereed	Years in	2006-07		
Campus	of faculty	Authored	Edited	Articles	Conf. Proc.	Higher Ed	rank in salary ($)		
							P	AP	aP
Ohio, Chillicothe	1	0	0	0	0	25	11	17	6
Ohio, Southern	2	0	0	0	2.5	10.5	3	16	15
Ohio, Zanesville	1	0	0	3	0	9	13	19	18
OSU, Lima	5	0	0	2	1.6	6.6	5	10	11
OSU, Marion	4	3.75	0.75	23.25	6.75	25.25	4	3	7
OSU, Newark	4	0	0.25	1.25	2	5.75	2	11	3
Wright, Lake	11	0.27	0.27	0.82	1.64	9.55	10	6	12

Table 8 shows the overall response (this includes results in which the person's Regional Campus was unidentified). Obviously, there appears to be no correlation in our limited survey of Regional Campuses, as recorded by our (self-selected) volunteers, between scholarly activity and average campus salaries.

Table 8. Overall responses to survey.

	Number of faculty	Books Authored	Books Edited	Refereed Articles	Refereed Conf Proceedings	Years in Higher Ed
Akron	0					
BGSU	0					
Cincinnati	0					
Kent	4	1	0	21	9	45
Miami	20	4	8	36	67	320
Ohio	10	2	1	7	21	129
OSU	19	16	13	115	54	257
Wright	11	3	3	9	18	105

There is no apparent explanation for the lack of correlation of "output" with salary levels. Because respondents are self-selected, we cannot determine at this time whether the lack of correlation is real or not.

A further problem is that the surveys as generated did not ask all the pertinent questions. For example, performance artists, practicing fine artists, and creative writers are among the Regional Campus faculty, but the survey did not ask questions that would allow these faculty members' scholarly contributions to be categorized or counted. We expect to redo the survey in the coming year with improved questions so that differences among the regional Campuses can be identified.

III. Conclusion

This study demonstrated that there are significant differences in salaries of Regional Campus faculty compared to their corresponding Main Campuses. This is found to also be true across the various faculty ranks. Further, the data provide evidence that the differences between faculty pay is not correlated to the particular campus.

Although a preliminary survey could not rule out faculty "output" as the reason behind the salary differences, this survey was in many ways flawed. Attempting to measure "output" is a difficult task. The authors plan on conducting a more thorough survey of Regional faculty to both provide evidence of the quantity and quality of research conducted by Regional Campus faculty and to attempt to find explanations of the salary differences.

References/Data Sources

1. March-April 2006 ed. of Academe: Bulletin of the American Association of University Professors and previous years ed. plus AAUP figures (unreleased) for 2006-2007

2. Ohio Board of Regents Webpage, the National Center for Education Statistics

3. Regional Campus Webpages
4. Email Survey to Regional Campus Faculty via Deans

Email Request:
Dear Dean ____,
Gordon Aubrecht (OSU-Marion) and I (Joe Cavanaugh WSU-Lake) are performing an investigation concerning the productivity of branch campus faculty. We are asking your help in obtaining answers to the following five questions from each of your full-time faculty members:

How many years have you worked full-time in higher education?

How many books have you authored or coauthored in the past year?
How many books have you edited in the past year?

How many articles in refereed journals have you had published over the past year?

How many conference proceedings have you been included in over the past year?

Use either academic or calendar year whichever is easier.

Please forward this email to the full-time faculty at your campus and encourage them to participate in this important research by sending their answers to joseph.cavanaugh@wright.edu

5. Aubrecht survey as answered by OSU Marion (Refereed articles are listed as National/International refereed journal articles plus "regional/ state" refereed journal articles, such as appear in the refereed section of AURCO Journal)

	Number of faculty	Books Authored	Books Edited	Refereed Articles	Refereed Conf Proceedings	Book Chapters
2006	21	1	2	22 + 1	8	1
2005	29	4	1	18 + 3	5	5

E. "Ted" Bunn Student Excellence Award Winners 2006 - 2007

Vision Therapy

Angela York
Wright State University—Lake

Abstract

Vision is crucial to the learning process because the eyes are necessary tools for reading and writing. Vision is a skill that is often confused with sight. Sight is the ability to see clearly, whereas vision is a combination of learned skills. Poor sight can be treated with corrective lenses, whereas vision is improved through trial and error or through special training known as vision therapy. Vision therapy generally breaks vision into seven areas for treatment, including directional-bilaterality (reversals); visual figure ground; visual memory; visual motor integration; saccades; motor speed and precision; and pursuits. Each of these areas is strengthened through a variety of creative vision-enhancing techniques. Students who undergo vision therapy generally see improvements in their schoolwork as well as in their athletic abilities. Overall, improved vision systems advance the productivity of each individual.

Vision Therapy

Vision is an essential part of learning. The eyes are tools that the body uses to help gather information from a page or from the environment. It is estimated that a child collects about 80% of all information through the eyes (Hidden Disability, 1994). A child's perception, understanding, and memory greatly depend on the effectiveness of the visual system. (Classroom, 2000) Vision is much more than seeing clearly. Vision is a "complex combination of learned skills." (Attention Deficits, 2003) Sight, on the other hand, is the ability of the eyes to present a clear image. Sight can be fixed with corrective lenses. (Bright Child, 2000) Special training, known as vision therapy, can improve vision.

Vision Therapy is an "individualized process of training procedures designed to help a child acquire or sharpen skills that

are necessary for reading." (Reading and Vision, 1997) Reading requires several different vision skills in order to produce a clear and understood message. A person must be able to aim the eyes accurately and also adjust for various distances. The eyes must work together by sending information to the brain, where it is converted into one single, understood image. The eyes must also be able to bring in information through the center of vision and their periphery. Finally, the eyes and brain work together to understand what is being seen. (Reading and Vision, 1997) If some of the above skills are not mastered, a person will suffer from vision-related problems.

Individuals with poor visions systems tend to have a number of different symptoms. Physical clues include the reddening of the whites of the eyes or the eyelids. Also, the eyes tend to water often and the eyelids can become encrusted. Sties may be common occurrences for some with poor vision systems. Headaches and nausea after reading are also indicators of vision problems. (P.A.V.E. Website) Teachers can help diagnose vision problems by being aware of certain behaviors that are linked to poor vision, including head movement instead of eye movement, the loss of place, finger use, skipping words, re-reading lines, skipping lines, and the confusion of similar words while reading. (Classroom, 2000) Clues to vision related problems could also be observed when students write. Students with inefficient vision systems tend to write uphill or downhill. Some tilt the head and may even cover one eye while performing a task. Many struggle while copying information from the board. (Classroom, 2000) Students with vision related learning problems are often labeled as lazy, dyslexic, slow learners, or as having a behavior problem like Attention Deficit Disorder. (Hidden Disability, 1994)

It is unfortunate that sight is the only aspect of vision that is routinely tested in schools and eye doctors' offices. A special optometrist, known as a behavior optometrist, can check the learned vision skills. (Classroom, 2000) A behavior optometrist may encourage a person to begin vision therapy in an effort to strengthen vision skills. Many vision programs, like the one at Russia Local School, are divided into seven basic areas including: directional-bilaterality (reversals); visual figure ground; visual memory; visual

motor integration; saccades; motor speed and precision; and pursuits. (D. Timmerman, personal communication, October 10, 2005)

Directionality-bilaterality or reversals is the learned ability to feel and recognize different directions. Many people who have problems with reversals confuse similar letters like "b," "d," and "p" or similar words like "was" and "saw." Another common trait among those with directionality-bilaterality is the confusion of space concepts like left and right, near and far, clockwise and counterclockwise, and finally up and down. Individuals with reversals can teach themselves these relationships through a variety of activities including Tired Simon Says, ball play, arrow board, and "road map." Tired Simon Says is a game that encourages the use of both the left and right sides of the body. The child holds a heavy object with the dominant hand to make that arm tired, which helps to differentiate between the two sides of the body. Then a therapist calls instructions to the child. For example, "Use your tired right hand to touch your left knee." Another activity is ball play where a therapist tosses a ball to a child and requires him/her to hit the ball with a designated hand or foot. An arrow board is a chart that is composed of arrows pointing in all directions- up, down, left, and right. The children are encouraged to call out and move one arm in the same way directed by the arrows. Finally, the "road map" is basically a mat that has sixteen dots planted in a grid format. The child is given a "map" of directions he/she must read aloud while physically moving across the map. These activities are designed to help improve the directionality-bilaterality system. (D. Timmerman, personal communication, October 10, 2005)

The ability to discriminate an object from a background or in different positions is referred to as visual figure ground or spatial ordering. Those individuals who struggle with reading a map or are confused when too many objects are presented at a single time may suffer from inadequate visual figure ground systems. To improve this system, many coloring book activities are encouraged including hidden pictures, dot-to-dots, and mazes. Geoboards are also used to improve spatial ordering. Shapes can be superimposed upon one another and then the child can reproduce the image on another geoboard. Michigan Tracking is an activity where a child is presented with a paragraph or

a jumble of letters. The child then must search for a series of letters within the paragraph in a specific order. The child underlines the sentences as he/she goes until he/she finds the desired letter and then circles it. This trains the eye to search and isolate an important letter on a confusing background. The goal of these activities is to encourage the eyes to search and sort through extra material for a desired bit of information. (D. Timmerman, personal communication, October 10, 2005)

Visual memory is the ability to retain information gathered through the eyes. Many times those with insufficient visual memory systems are purely auditory learners. To enhance visual memory, children are flashed cards with images on them. The child is then responsible for relaying all the information he/she can remember about the objects' attributes. Another exercise involves the students using a pegboard to reproduce from memory a shape that was presented to him/her. Finally, the board game, Memory, is also a great way to enhance visual memory. These activities force the eyes and the brain to work together thus improving visual memory. (D. Timmerman, personal communication, October 10, 2005)

The ability to see and produce the outline of a two-dimensional or three-dimensional object and resize it proportionally is referred to as visual motor integration. Those who lack skills in visual motor integration generally have problems forming letters and tend to misread similar words like "these" for "those." Skills involved with visual motor integration can be sharpened through board games (like Operation), puzzles, and card games. Sequencing beads also help train the eye to see the shapes of the various three-dimensional and two-dimensional objects. Students are asked to string beads in a series according to a card that shows beads in a particular sequence. Another activity involving visual motor integration is the Marsden ball. In this activity, the therapist holds a string that suspends a Wiffle ball. The child holds a rod with both hands so there are several inches between the grips and several inches at end of the stick. The student then has to follow the directions of the therapist as to where to hit the ball on the stick-left of his/her hands, right of his/her hands, or in between his/her hands. This forces the child to really see the ball and also focus his/her

energy toward improving the visual and motor skills needed to tap the ball. This exercise can also be used for reversals. Almost any activity using both vision and a motor skill will help improve this system. (D. Timmerman, personal communication, October 10, 2005)

Saccades may be the most important skill for reading. (D. Timmerman, personal communication, October 10, 2005) This is the ability a person has in controlling smooth and efficient movements of the eye including starting and stopping actions. This fluid and consistent movement is the path our eyes take while reading left to right on a page. The stops are indicated by the completion of sentences and paragraphs. Most people who struggle with saccades tend to skip lines and move their head rather than their eyes while reading. Coloring book activities like mazes, dot-to-dots, and hidden pictures help train the eyes to move effortlessly. Michigan tracking is also used to help teach the eye to move left to right with ease. Most times before a therapist administers any form of improvement activity, the student completes an eye warm up. This is a procedure that requires the vision therapist to first hold the thumbs four to five inches apart. The child then moves the eyes from thumb to thumb in a repetition of twenty. The task is completed again after the therapist separates her thumbs by another four to six inches to further challenge the student's visual system. These activities are designed to encourage the left to right pattern related to reading. (D. Timmerman, personal communication, October 10, 2005)

Motor speed and precision is the ability to coordinate the eyes with other motion of the body. Here both the eyes and the rest of the body are required to work together. Many times those with poor motor speed and precision skills struggle with printing on a line or coloring neatly within a restricted area. These people also tend to do poorly in sports due to their inability to have both their eyes and other body parts to work together. Catching a ball is a challenging task. This vision skill can be improved through encouraging students to color. Therapists generally have students evaluate their own work, looking for where he/she escaped the line. After the student completes the picture, he/she is required to cut it out. Scissor cutting also improves motor speed and precision. Much like visual motor integration, motor

speed and precision has the eyes working in conjunction with the rest of the body. However, motor speed and precision also focuses on the quickness and accuracy of the task. (D. Timmerman, personal communication, October 10, 2005)

Finally, pursuit is the ability to follow movement with the eyes. Individuals who struggle with this area struggle to follow moving objects. These people find ball sports to be exceptionally challenging. Once again, mazes help improve the visual system. Children are asked to complete each maze in three ways; first with the eyes, next with the finger, and finally with a pencil. On each occasion the student is timed. This visual skill can also be strengthened through following a moving object with the eyes. An excellent example is to place a dot or sticker on a record player. Finally, this visual skill can be strengthened through a game of catch where the student must watch the ball at all times. A productive visual system is able to follow the motion of various objects. (D. Timmerman, personal communication, October 10, 2005)

An efficient visual system is vital to educational and life success. Better vision creates more productive and confident students. (D. Timmerman, personal communication, October 10, 2005). The eyes are responsible for collecting an abundance of information. It is believed that one out of six children is two or more reading grade levels behind. Many of these students are suffering from poorly developed vision systems. 80% of the children labeled as "slow readers" have difficulty in control and coordination of the eyes. It is comforting that with proper attention, 90% of those slow readers can be cured. (Bright Child, 2000) As teachers, we need to take an active part in assisting students with vision needs through referrals and by making vision therapy part of our daily routines in the classroom.

References

Attention Deficits: A Developmental Approach. (2003). [Brochure]. St. Louis, Missouri: Santa Ana, California: Optometric Extension

Program.

The Hidden Disability. (1994). [Brochure]. San Diego, California: Parents Active for Vision Education.

A Look at Reading and Vision. (1997). [Brochure]. St. Louis, Missouri: American Optometric Association.

P.A.V.E. Homepage. October 1, 2005. http://pavevision.org.

Vision in the Classroom. (2000). [Brochure]. Santa Ana, California: Optometric Extension Program.

When A Bright Child Has Trouble Reading: Learning Problems. (2000). [Brochure]. St. Louis, Missouri:

Santa Ana, California: Optometric Extension Program.

E. "Ted" Bunn Student Excellence Award Winners 2007 - 2008

Civil War

Jacob Smith
Bowling Green State University—Firelands

Abstract

During the Civil War a small island in Sandusky Bay by the name of Johnson's Island was the home of the Union's prisoner of war camp for Confederate officers. The story of this camp, its officers, guards and of course the prisoners have been long forgotten by many of people within the local area. This paper tells the history of that island during the Civil War and goes into some small detail about the present day condition of the island, and cemetery which is the final resting place for over 200 Confederate soldiers.

Civil War

On April 12, 1861, the forces of the Confederate States of America, CSA, attacked and captured the United States of America's, USA, garrison of troops at Fort Sumter, South Carolina. It would not be long until both sides would be calling on thousands to fight for their country, one side to secure freedom for all men and the other side to preserve the independence of their new country. Even at this early stage in the war, both sides had begun to realize that there would be a need for places to house Prisoners of War.

During the Civil War, some prisoner of war camps were infamous for their poor treatment of captured soldiers. A good example of this claim would be the Confederate run prisoner of war camp at Andersonville. The Union run prisoner of war camp on Johnson's Island, on the other hand, was well ran, and had many different activities available for the prisoner to be active in. These activities ranged from baseball games to the productions of plays. However, as the war progressed into its third and fourth year, some of the "easy living" that the Confederates enjoyed on Johnston's Island started to disappear. The Union started to enforce stricter rules on all Confederate prisoners as a response to the mistreatment that Union

soldiers were receiving in the south. On the whole, men were never starved to death or abused here even when the times became tough for the prisoners being held there, they were still treated with dignity and respect. To this day, there are still Confederate prisoners of war being held on the island; two hundred and six to be exact. These prisoners' stories and many other historical accounts that happened on this island during the Civil War must be told. However, to tell this story of the prisoners' and guards daily life, we must go back to a time and a place that is both very similar and different to the one we find ourselves in today We must go back to late October 1861.

The Civil War story of Johnson's Island began in late October 1861. It was at this time that the newly appointed Commissary General of Prisoners LTC William Hoffman chose a place for his new prison. That place was on a small island in Sandusky Bay. It was then that LTC Hoffman, with approval from Secretary of War Stanton, signed a lease with Mr. L.B. Johnson's for use of his island for $500 a year. It was soon after that agreement that construction of the buildings and fortifications on the island were started. The work of building the new camp was contracted out to local builders in Sandusky with the estimated cost for the total construction camp being within $30,000. *1*

With the island's lease officially signed in November and the construction of the camp well under way, it was time for LTC Hoffman to raise a force of soldiers that would run the prison's day-to-day operations. On January 1, 1862, the government took an ad out in the Sandusky Register to encourage local young men to enlist in the Union army as guards at the new POW (Prisoner of war) prison being built on Johnson's Island. *2* This group of men who responded to this ad would become known as the "Hoffman Battalion" and would perform their duty with honor over the next four years of the war. The immediate item of business that had to be taken care of was the selection of a commanding officer. The person who would be the first to fill that job was William Seward Pierson. Pierson was a former Mayor of Sandusky; however, he lacked any type of military expertise. This is how the first commandant of the prison on Johnson's Island would be described by LTC Hoffman:

He had many fitting qualities- he was very gentlemanly

and courteous in his deportment, very industrious, attentive and most anxious that every thing should be done in a proper manner, but needed mainly confidence in himself and decision of character, growing in part out of his want of experience in military matters. *3*

Though LTC Hoffman was not at first fully impressed with Major Pierson's qualifications, he did give Pierson credit for making the camp function in a good working manner and for the most part was happy with the way in which he used his command. The proof of this was being that Hoffman waited until January 1864 to select a more able replacement to Major Pierson. *4*

On the 9th of April 1862, a train pulled into Sandusky; on board was the first group of Confederate prisoners headed for newly opened prison on Johnson's Island. *5* Most of the prisoners on board the train were officers coming from Camp Chase in Columbus; it appeared that Johnson's Island would be a Confederate officer prisoner camp. A few days later on the 13th of April Secretary of War Stanton officially made Johnson's Island a Confederate officer prisoner of war camp. However, there were times during the war when some enlisted men and other civilians loyal to the Rebel cause were sent to Johnson's Island as well. *6*

From April 10, 1862, to January 18, 1864, would be considered at least by the inmates the "good" times at Johnson's Island. In fact, one prisoner wrote a letter to the Confederate Secretary of War about the conditions at the camp; in that letter he describes their treatment as "Kind and Humane". *7* This statement was fairly accurate. During the command of Major Pierson, the climate in which the prisoners lived on Johnson's Island was very pleasurable. The prisoners enjoyed all kinds of recreations. For example, the prisoners acted in plays, made a number of crafts, and played a number of baseball games in the summer months. Life for the prisoners was going quite well under Major Pierson. The prisoners, in addition to enjoying all of the activities that were going on, also had almost unlimited use of the camp Sutler, a type of little store on the island for the prisoners to buy goods and services. *8*

The "good" life that the prisoners "enjoyed" started to change on the 10th of October 1863. It was on this day that the acting Medical

Inspector for prisoners of war, A.M. Clark, made an inspection of Johnson's Island. His findings changed the way in which the island would be run. His findings were that the prison was extremely filthy. He found there were two major reasons for the poor condition of the camp. One was that the camp had poor drainage due to the natural way the island was formed. The second was that the building in which the prisoners stayed were not well maintained by the Confederate officers that inhabited them. These circumstances created major hygiene problems that Major Pierson attempted to correct by issuing what came to be called by the prisoners "Pierson's Ten Commandments". These "Commandments" were basically just a list of rules that Major Pierson created for the prisoners to follow to help make the camp run more efficiently after the failed inspections. Other follow up inspections were made to determine if the problem had been corrected. However, during the course of these follow up inspections the camp showed very little in the way of improvement. The inspectors who inspected the camp had the same "complaint of laxity" *9*when dealing with the style in which Major Pierson ran his POW camp. The failing of these inspections would force Colonel Hoffman to replace Pierson in January of 1864, with General Terry. Once Terry was in command of the island, he started to demand more discipline of the Confederate Prisoners. He also revoked almost all of the civilian passes to the island. However his term as the Commandant of Johnson's Island was short lived. His replacement took command on May 8, 1864. His name was COL. Charles W. Hill, and things were about change once again for the prisoners on Johnson's Island and not for the better. *10*

It was now the summer of 1864, and General U.S. Grant was in command of all Union armies; the Civil War was less than a year from its conclusion at Appomattox in April of 1865. At Johnson's Island, the heat of the summer sun was not the only thing bothering the prisoners held there. COL. Hill wasted no time in making changes. His first act was to dismiss the present sutler on the island on the basis that he was selling the prisoners alcohol. Colonel Hill replaced him with Mr. Johnson's, the owner of the island. Mr. Johnson's then forced the prisoners to buy lithographs of the island at a price of Three dollars a piece or he would not be willing to sell them any other goods. *11*

Things continued to worsen for the prisoners as 1864 dragged on. In the spring, the Union Army cut all the Confederate prisoners' rations by 20% in retaliation for the extremely poor treatment that the Confederates were giving their Union prisoners held in the South. In addition to this cut, the Union also decided to cut all rations of tea, sugar, and coffee, to all healthy prisoners. These cuts in the prisoner's rations were deep and resulted in prisoners losing large amounts of weight. In fact, there are some stories of the prisoners being forced by hunger to catch and eat rats; however, other stories stated prisoners went after the rats more for sport than necessity. *12*

The war in the summer, fall, and winter of 1864, was, for the South, going very badly and this fact was reflected in the prison population growing very rapidly at Johnson's Island. For example, the prisoner population in April was 2,088, by the end of July the camp had upwards of 2,441 prisoners that were being held on Johnson's Island, and on the last day of 1864, the prison on Johnson's Island reported a population of over 3,200. *13* This led to massive overcrowding in the prison and caused the limited number of resources afforded to the prisoners to be stretched even farther. The "good times" were now forever gone. The items that most occupied the prisoner's minds were now those two beautiful words of freedom, and escape.

With the living conditions at Johnson's Island only getting worse by the day, many prisoners turned their efforts to thoughts of escape. Some were successful; however, most failed in their attempts to escape the island. There is though, a story of a man that made four gallant attempts to get back to Dixie Land. His name was Lieutenant Charles Pierce. Lieutenant Pierce was a man from Virginia or Louisiana, and, for whatever reason, by November 1863, he had decided that Johnson's Island was not the place he wanted to be. There are other stories of both failed and successful escapes from the island but none with such great entertainment value. *14 & 15*

Lieutenant Piece's first attempt was to escape the camp by tunneling out of it. He started his tunnel in block 8 originally but decided not to complete this tunnel due to the distance from block 8 to the outer fence. So like any good officer, he elected to attack the problem from a different direction. That direction was to start a

new tunnel from block 1 Lieutenant Pierce and his men got the job done only to be caught by a guard when they attempted to use it. *16* His second attempt was to steal a merchants' coat and hat and try to sneak off the island that way; however, the results were the same. A guard found the merchant asleep and missing his coat and hat and immediately raised the alarm Lieutenant Pierce was once again returned to the prison. *17*

On his third attempt, Lieutenant Pierce decided to go low tech. For this attempt, he and a group of five men scaled the walls of the prison. Lieutenant Pierce and three of the five men made it over the walls. From there the plan was for the men to run across the lake which was frozen over by this time to "Freedom". The four men made it across the frozen lake only to have their grand plans thwarted by a local farmer who heard the gunfire on the island and captured them. They were then returned to Johnson's Island and the farmer collected a hundred dollar reward. *18*

After trying to tunnel, sneak, and climb out of the camp one would think that Lieutenant Pierce would have had enough. However, Lieutenant Pierce had one more attempt left to be tried. For this attempt, Lieutenant Pierce decided that he would have to join the Union army, or at least look like he had. So he started to collect old Union clothes that he saw lying around. He then realized that no soldier would be complete without a rifle, so he then made a replica rifle out of a can, some wood, and part of a kettle. The day came, and he was ready. He took his counterfeit rifle and fell in with Union troops who were making ready to leave the island. The reason for his failure in this attempt was that he failed inspection as a Union soldier. The counterfeit rifle and uniform were taken off of him, and he was sent back to his block with no formal punishment. *19*

The Confederates earlier in the war started to devise a plot to free the prisoners on Johnson's Island so that they could regain some of their officer core. However, once the Union permanently stationed the gunboat USS Michigan off the coast of Sandusky, the Confederates quickly realized that any plan to free the prisoners from the Island would have to include a plan to neutralize the USS Michigan.

On April 27th, 1864 President Jefferson Davis wrote a letter

to Mr. Jacob Thompson who was a Confederate Commissioner. President Davis ordered Mr. Thompson to take measures to free the prisoners being held on Johnson's island. Therefore, Mr. Thompson and an associate made their way to Canada, arriving in Montreal on May 29th. They immediately started laying out a plan of action and collecting information about the Union Strength in Sandusky and the surrounding bay area. On July 14th, Mr. Thompson put a CSA Naval Captain, Charles H. Cole, in charge of the execution of the plan to free the prisoners on the island and to collect information on the US side of the lake. This was a job he excelled at. Cole spent the better part of August and September making friends in Sandusky. It was during this time that he became an acquaintance of the USS Michigan's commanding officer Captain Carter. Cole described Captain Carter as "an unpolished man". *20* Cole also thought that Captain Carter was a man who felt passed over by the Union Navy during the war but still would not turn traitor to the Union. It therefore became clear to Cole that the USS Michigan would have to be taken by force. *21*

On the September 19th, 1864, approximately 40 men boarded the Philo Parsons which was an island transport ship at Detroit. The ship set sail around 8:00 am. At the next port of call, another 20 plus men got on the Philo Parsons with a large black box. The crewmembers of the Philo Parsons' did not know it yet but the black box that was brought on with these men contained the weapons that would be used by the Confederates to seize control of their ship later on in the day. The ship continued on after making a few normal stops at some of the other islands in Lake Erie. Shortly after passing the ship Island Queen, the stage was set and the men sprang into action. Within a short time the Philo Parsons was under the control of the Rebel pirates. It was at this time however, that the ship's new owners found out that the Philo Parsons was low on wood and would therefore not have enough fuel to complete the task of freeing their comrades from their island prison. The pirates, led by a Confederate naval officer by the name of John Y. Beall were forced to turn around and head to Middle Bass Island to take on more wood for fuel. They arrived at the island around 8:00 pm. While the Philo Parsons was in the process of loading wood, another problem appeared. That problem was the Island

Queen. The Island Queen pulled up along side of the Philo Parsons forcing the Confederate pirates to think fast. The Confederates pirates quickly boarded the Island Queen and took control of her before her Captain could react. Now the real trouble began. The Confederates had two ships, complete with crews and passengers. Then matters became even more complicated; the Island Queen was carrying a number of Union Soldiers, unarmed because they were on a type of leave, from the Ohio Volunteer Infantry. They were going to Toledo to be discharged from service. It was then decided that the best course of action was to allow all of the civilians and soldiers to go free on Middle Bass Island as long as they promised not to tell anyone anything for twenty four hours. *22*

From there, the Confederates and the crews of both ships left Middle Bass Island with the Philo Parsons towing the Island Queen. Once they had gotten off shore a good distance, they unsuccessfully attempted to sink the Island Queen by opening a valve in the boat and allowing the water to flood in. Then the Philo Parsons continued underway to complete her Rebel mission. However, the pirates knew to look for some type of signal coming from Sandusky, but that signal never came and the great plan to free the prisoners' died at that moment. The pirates quickly turned their ship around and headed back up into the waters of the Detroit River where they had started their grand adventure the morning before. The pirates disembarked from the Philo Parsons at Sandwich, Ontario, at around 8:00 am on the morning of the 20th of September. Never again would the Confederates try to free the prisoners from Johnson's Island. *23*

At this stage in the war, the North was starting to tighten the noose around the neck of the Rebel South, and on April 9, 1865, General Grant and General Lee met at Appomattox Court house in Virginia to sign the instrument of surrender for Lee's army. The news of Lee's Surrender made it to Sandusky around midnight of that same day. When the news was officially told to the prisoners of Johnson's Island, some cheered and others hissed and booed. However, by the end of April to the early part of May, reality had set in, and most of the prisoners had taken the amnesty oath and were ready to go home. In June of 1865, well over 2,600 former Confederate soldiers were set

free from Johnson's Island, and by September the camp had transferred the last seven of its prisoners to a camp in New York. *24*

As with any prisoner of war camp, there are men who die. When a prisoner died on Johnson's Island the Union simply buried these bodies in a small piece of land and gave them wooden head markers to identify each of the bodies. This was the condition of the cemetery from the Civil War until 1890 when the then old rotting wood was replaced with marble from Georgia. Two hundred six marble headstones were installed on the island and with few exceptions that is the way the cemetery has stayed to this day. Then in 1910, the United Daughters of the Confederacy erected a monument to the men buried on Johnson's island. *25* The monument depicts a Confederate soldier looking north. It is now the first thing that can be seen as one walks into the graveyard. It appears to almost be standing guard looking, waiting, for someone to come.

Johnson's island today is a large housing development that covers almost the entire island. With each new house, the area around cemetery that holds the remains of the last two hundred and six prisoners gets smaller and smaller. It is as if the history of the island is being plowed under to allow yet another person to have a lake front house. However, there are people today, working to help save the history of the Island. One of these people is David Bush. Bush is conducting archeological digs on the island to help uncover some of the lost history of day-to-day activities the prisoners engaged in during the Civil War. He is focusing his time on the "sinks." These sinks were where prisoners would go to the relive themselves, but more importantly to an archeologist such as Bush the sinks were a prime location for the prisoners to dump their contraband. *26* This contraband that has been left behind allows us to better understand what life was like on Johnson's island for these prisoners during the Civil War.

In Ohio, the preservation of history is something Ohioans have taken very seriously for quite along time. Ohio's interest in the story of Johnson's' Island should be no different. With its rich Civil War history, Johnson's' Island is truly a site that must be persevered if only for its historic intrinsic value. Failure to protect this site, by allowing bulldozers to plow this history into the ground, will rob

future generations of a chance to engage a true piece of the Civil War. However, if "small" historical sites such as this are just written off, the question must be asked what could be next; a condo development at Monticello, or perhaps a golf course at Gettysburg? While it is true that most American's would be horrified at the thought of desecrating these important historical sites, a small out of the way Civil War cemetery in northern Ohio can seem to be more of an impediment to progress than a solemn reminder of the past.

All history, whether good or bad, allows humanity the opportunity to take a step back and better gauge where they are going, by seeing the direction the past was headed when our present, was their future. Thus, by ignoring even this small piece history such as the cemetery on Johnson's Island, we begin the process of robbing ourselves of the ability to take that step back and see where our present path will lead our children in their future.

Take Me Home To The South

Take me home to the place where the little ones sleep,
My father lies buried close by;
On the graves of the loved ones I long to weep
And among them to rest when I die;
I think with regret of the dear home I left,
Of the warm hearts that sheltered me there,
And the little ones of whom I'm bereft;
Oh ! I sigh for the old place again

Take me home to the place where I first saw the light
To the sweet, sunny South, take me home,
Where the mocking bird sang me to sleep every night,
Oh why was I tempted to roam?...

Johnson's Island Ohio G.W.T. 27

Notes

1. Phillip R Shriver, and Donald J. Breen. Ohio's Military Prisons in the Civil War: Columbus: Ohio State University Press for The Ohio Historical Society, (1964). 29-30
2. 2.Charles E. Frohman, Rebels on Lake Eire: Columbus: The Ohio Historical Society, (1965). 6
3. Frohman, Rebels on Lake Eire, 6.
4. Frohman, Rebels on Lake Eire, 7.
5. Rebel Fire / Yankee Ice. DVD. Dir. Thomas R. Koba. (Koba & Company, 1995.)
6. Shriver, & Breen, Ohio's Military Prisons 31-32.
7. Shriver, & Breen, Ohio's Military Prisons 33.
8. Shriver, & Breen, Ohio's Military Prisons 35-37.
9. Shriver, & Breen, Ohio's Military Prisons 37.
10. Shriver, & Breen, Ohio's Military Prisons 37-38.
11. Shriver, & Breen, Ohio's Military Prisons 39.
12. Shriver, & Breen, Ohio's Military Prisons 39.
13. Shriver, & Breen, Ohio's Military Prisons 39.
14. Frohman, Rebels on Lake Eire, 50.
15. Shriver & Breen Ohio's Military Prisons 43
16. Frohman, Rebels on Lake Eire, 50.
17. Frohman, Rebels on Lake Eire, 50.
18. Frohman, Rebels on Lake Eire, 50.
19. Frohman, Rebels on Lake Eire, 50-51
20. Frohman, Rebels on Lake Eire, 72
21. Frohman, Rebels on Lake Eire, 72-73
22. Frohman, Rebels on Lake Eire, 75-76
23. Frohman, Rebels on Lake Eire, 79-80
24. Frohman, Rebels on Lake Eire, 67-69
25. Sherri Brake-Recco *The Official Johnson's Island Memorial Project Webpage*. United Daughters of the Confederacy ®.
26. <http://johnsonsislandmemorial.homestead.com/Index.html>.
27. David Bush,. *"Doing Time."* Archaeology 4th ser. 52 (July 1999): http://0-search.epnet.com.maurice.bgsu.edu:80/login.aspx?direct=true&db=aph&an=2007626 Pg46

28. Frohman, Rebels on Lake Eire, 150-151

References

Bush, David *"Doing Time."* Archaeology 4th ser. 52 (July 1999): http://0-search.epnet.com.maurice.bgsu.edu:80/login.aspx?direct=true&db=aph&an=2007626 pg46

Bush, David *Friends and Descendants of Johnson's Island Civil War Prison* <http://www.heidelberg.edu/~dbush/>.

Frohman, Charles E. *Rebels on Lake Eire*. Columbus: The Ohio Historical Society, 1965. *Rebel Fire / Yankee Ice*. DVD. Dir. Thomas R. Koba. (Koba & Company, 1995.)

Sherri Brake-Recco *The Official Johnson's Island Memorial Project Webpage*. United Daughters of the Confederacy ®. <http://johnsonsislandmemorial.homestead.com/Index.html>.

Shriver, Phillip R., and Donald J. Breen. *Ohio's Military Prisons in the Civil War*. Columbus: Ohio State University Press for The Ohio Historical Society, 1964.

Religion's Effects on Psychology

Jennifer Betz
Kent State University—Stark

Abstract

Psychology is the study of mind and behavior. Throughout history, religion has played a major role in the way we think and act. It seems to follow that religion would have an important role in psychology, but with psychology being a science, and religion being more of a philosophy, there has been tension in the relationship between the two. William James first attempted reconciliation between the disciplines in 1902, defining religion as a set of multiple experiences. Most research has sprung off of this original idea, forming such dimensions as intrinsic and extrinsic orientations, and fundamental or liberal convictions.

Psychologists are beginning to officially acknowledge that spiritually sensitive treatments may be necessary in order to fully address a client's needs, but more research is needed in order to gain a better understanding of how religion and psychology interact.

Religion's Effects on Psychology

In its simplest definition, psychology is the study of mind and behavior. This definition so deeply weaves psychology into human experience, that it becomes difficult to separate the two, or even define their relationships. Our understanding of different elements of psychology can affect our worldview. For example, the goal of most cognitive therapies is to get the patient to understand certain aspects of psychology—particularly belief systems that may be affecting their mental health and how to change them—in order to improve their general outlook and understanding of difficult events. Conversely, psychology can be greatly affected by worldviews of the majority of people. Theories of psychology have progressed over time to better fit the way cultures progress, and the progression of cultures invites psychologists to constantly create new theories about human behavior

and emotion.

Religion has historically played a very similar role to that of psychology, but with a very conflicting view. While psychology tries to scientifically and empirically enlighten our understanding of human behavior, religion tries to spiritually and philosophically enlighten our understanding of human behavior. Religion's role in this process has been both explanatory and causal in nature. Religious explanations of mental illness generally include abandonment by God, while causes include lack of moral integrity and demonic possession (Dain, 1992; Hartog & Gow, 2005). Cures for mental illnesses and prescriptions to maintain mental health include prayer, worship, and a devout obedience to God (Dain).

Though psychology and religion differ so greatly in the way they explain mental health and illness, there is much to gain from having knowledge of how they affect each other. The World Health Organization (WHO) (1998) has taken the stance that understanding a person's religious or spiritual beliefs will give us a better understanding of one's overall quality of life (1998). The WHO and the American Psychological Association both promote a spiritually sensitive form of counseling (Pargament, 2002). Tepper, Rogers, Coleman, and Malony (2001) found that 80% of their sample of patients diagnosed with a persistent mental illness utilized religious coping techniques in order to deal with stressors and frustrations due to their mental illness. Another study reported that religiosity is correlated with faster remission of depression in older medical patients (Koenig, George, & Peterson, 1998).

Part of the challenge in gaining the necessary understanding of the relationship between these two disciplines, is applying a form of science (psychology) to a form of philosophy (religion). While emotions evoked by spiritual experience can be explained in the same biological terms as typical human emotions, the element of divinity toward which these emotions are directed is not so easily defined. William James was the first psychologist to try to grasp this idea in his book, *The Varieties of Religious Experience* (1902). His attempt to define religious experience and assess the way these experiences affect mental health is testimony to the complexity of such a task. An

entire section of the book discussed the futility of applying a simple definition of religion, noting that it is more a collection of experiences, both institutional and individual, externally and internally expressed and felt, emotional and ritual, rigid and liberal, and with varying degrees of importance. James noted that while we may never be able to really define an individual's understanding of God, we could define and measure their religious experiences.

Defining Religious Experience

Operational definitions of elements of religion for the purpose of study have essentially remained faithful to James's (1902) original conception of what those elements are (e.g. Allport & Ross, 1967; Altemeyer & Hunsberger, 2004; Holland et al., 1998; Tepper, et al., 2001; Tix & Frazier, 2005). Tepper et al. utilized James's idea of religious experience as a ritual, labeling activities like prayer, scripture reading, and meditation, as coping techniques. Tix & Frazier focused on the institutional element, reporting on the psychological effects of membership in differing Christian denominations. Holland et al. (1998) developed a scale to measure the level of importance an individual perceives religion to have in one's life. Altemeyer and Hunsberger worked for more than ten years to develop the Religious Fundamentalism scale. Finally, Allport and Ross developed the first scale useful in measuring a person's level of internal religious experience—now referred to as intrinsic religiosity.

Intrinsic and Extrinsic Religious Orientations

Possibly the most researched element of religious experience is internal and external manifestation (now referred to as intrinsic and extrinsic religiosity) (Allport & Ross, 1967; Masters & Bergin, 1992). This dimension of religiosity is highly useful in gaining an understanding of a person's level of emotional involvement in their religion as well as its importance to them (Masters & Bergin, 1992; Pargament, 2002). Intrinsically religious people tend to live their religion. They feel that it is their religion that guides their decisions in life and directs their behavior. They accept the ultimate control of their higher power, and use this to explain most major life events.

Those who are extrinsically religious tend to use their religion for personal gain. They participate in religious activities because of the social and personal benefits obtained, such as being comforted during difficult times or making friends.

Whether a person lives or uses one's religion plays a major role in the individual's world-view and their personal outlook. Allport and Ross (1967) found that those who are extrinsically religious have a higher level of prejudice than those who are intrinsically religious. And according to Masters and Bergin (1992), those who are intrinsically motivated to follow their spirituality will experience less depression and anxiety, and an enhanced sense of well being and security, as well as better relationships, than those who are extrinsically motivated.

A study by Koenig, George, and Peterson (1998) indicated that in elderly hospital patients who were diagnosed with depression, the time required to recover from depression was greatly reduced in those who were intrinsically religious. Even after an extensive list of confounding factors was controlled for, there was a 70 percent decrease in time to recovery for every 10-point increase on a scale measuring intrinsic religiosity.

Research regarding religion at the institutional level of religious experience generally focuses on the varying world-views that different denominations endorse and how they affect the individual (e.g. Abbotts, Williams, Sweeting, & West, 2004, Tix & Frazier, 2005). Tix and Frazier found that among their sample of those practicing in the Protestant and Catholic sects of the Christian faith, denomination and religious orientation (intrinsic or extrinsic) interact to influence mental health. They concluded that Catholics who were intrinsically spiritual had higher levels of depression and anxiety, as well as hostility, than their intrinsically motivated Protestant counterparts. The Catholic faith encourages believers to approach God in an indirect way, through sacraments and the church. Protestant faiths encourage more of a direct approach, emphasizing the experience of grace and forgiveness by God. These very different ways of viewing ultimate beliefs have an affect on the way intrinsic motivation toward spirituality is experienced.

Some argue that there may be a problem with the results of research regarding correlations between mental health and intrinsic spirituality (Masters & Bergin, 1992). It is obviously more desirable in general, to be intrinsically spiritual, than to be extrinsically spiritual. It is difficult to imagine that an individual would want to admit that one is into religion for the worldly benefits alone. The social desirability of intrinsic religiosity may have an effect on the way subjects answer questions to measure such a dimension. Also, it is more desirable to be mentally healthy and stable than to not. Answers to questions measuring depression and anxiety as well as hostility may reflect this view (Masters & Bergin). Those who are intrinsically motivated may have an even deeper desire to appear in a positive light.

Religious Fundamentalism

Another growing body of research involves a dimension indicating the rigidity or liberality of a person's religious beliefs. A fundamentalist view of spirituality requires strict conformity to rigid rules and guidelines regarding lifestyle and moral code (Altemeyer & Hunsberger, 2004; Pargament, 2002). A Humanitarian view of spirituality has a tendency to be more lenient and compassionate to human nature, accepting more deviation from expectations and standards (Schumaker, 1992).

Several studies have exhibited evidence that fundamentalism fosters characteristics of Right-wing Authoritarianism and hostility toward several out groups including ethnic minorities, while a Humanitarian view fosters a more tolerant outlook toward others (Altemeyer & Hunsberger, 2004; Hunsberger, 1996; Pargament, 2002).

Research in this area has also focused on how Fundamentalism is affected by religious orientation—though the specific approach has varied slightly from that of comparing denominations for intrinsic spirituality, and most of the research involves hostility, aggression, prejudice, and Right-wing Authoritarianism (Altemeyer & Hunsberger, 2004; Hunsberger, 1996; Pargament, 2002). Hunsberger measured the amount of religious activity as well as the level of fundamentalism in individuals practicing Islam, Judaism, Hinduism, and Christianity. He then measured the amount of hostility and prejudice each individual

surveyed held. Hunsberger found that those who practiced any kind of religion in his study were correlated with higher levels of Right-wing Authoritarianism than those who were non-religious. Those who practiced Islam scored highest on the fundamentalism scale as well as the Right-wing Authoritarianism scale. Conversely, those practicing Judaism scored lowest on both scales.

Pargament (2002) argued that fundamentalism also has its benefits. It appears that having a rigid set of rules to live by helps some people feel secure and confident in their life direction. People belonging to fundamentalist groups have a clear-cut set of rules to live by and feel that God sanctions their lives. This may lead to better satisfaction in marriage and a more optimistic outlook in life (Masters & Bergin, 1992). While fundamentalism supports an out-group mentality, those who belong to a faith that is high in this dimension may reap the benefits of a strong sense of community and clear life goals (Pargament, 2002).

Religious Coping

Religious coping refers to the use of a spiritual practice or belief to deal with stressors, frustrations, and difficulties (Reger & Rogers, 2002; Tepper et al., 2001). In order to gain better understanding of the prevalence of religious coping methods among the mentally ill, Tepper et al. surveyed a sample of those enrolled in a Los Angeles County mental health treatment center. They found that 80 percent reported having some type of religious activity or belief that helped them cope with frustrations, stressors, and difficulties due to their mental illness. As many as 61 percent of the participants cited their religious coping technique as encompassing up to half of their coping time. Thirty percent said that religious coping was the most important thing that kept them going, and 48 percent claimed religion became more important when things were harder to deal with or stressors increased.

Tepper et al. found that specific coping strategies such as prayer and scriptural readings were more likely to be used by those who experience more severe symptoms. Those patients typically score higher in areas of hostility and frustration, and have a lower overall

score in scales designed to test a person's general level of functioning. It is questionable which part of the equation comes first. It could be that the desire to practice these specific strategies comes out of more severe symptoms. However, there are certain coping styles that may be problematic, such as inappropriate deferral to God and anger at God (Pargament, Murraky-Swank, & Tarakeshwar, 2005). These specific religious coping strategies could be performed in a way that has a negative effect on the symptoms, making them worse. Interestingly, percentage of coping time used toward religious coping strategies and number of years practicing were positively correlated with less severe symptoms and better overall functioning (Tepper et al.). This may indicate that more practice could lead to better coping.

A later study of the same data collected by Tepper et al., conducted by Reger and Rogers (2002), revealed that those who had received a diagnosis of schizophrenia, schizoaffective disorder, and bi-polar disorder, had used religious coping strategies for a greater number of years than those who had been diagnosed with depression. The subjects diagnosed with the schizophrenia, schizoaffective disorder, and bi-polar disorder perceived religious coping strategies to be more helpful than did those with depression. One interesting interpretation of these findings is that it seems those with more debilitating disorders, who have used religious coping for longer, can experience a higher level of functioning than some who have a less debilitating disorder, yet have not used religious coping for a very large portion of their lives.

There are several difficulties with these findings, however. First, there may be multiple explanations for the better overall functioning and decreased severity of symptoms of the subjects who practiced for longer periods of time and a greater number of years. These subjects may have different traits or familial backgrounds contributing to the management of their disorder and their religious style of coping. They also may be more intrinsically spiritual, considering they spend more time practicing, and have done so for longer. They may also be older and have a greater level of maturity and experience in dealing with their disorder. Religious coping may be very useful in dealing with mental illnesses or even general

stressors, but a better understanding of it is necessary in order to employ it in mental health treatment.

Summary

Following James's (1902) original ideas of defining religion in terms of experiences, many have tried to define what it means to be religious and how that affects us mentally and emotionally (Pargament, 2002; Pargament et al., 2002; Schumaker, 1992). There is strong evidence that religion can have positive as well as negative effects on the psychological well being of those practicing. Intrinsic religiosity is correlated with faster recovery from depression (Koenig et al. 1998), and religious coping techniques are correlated with less severe symptoms in persistent mental illnesses (Tepper et al., 2001). However, when coupled with an indirect form of religion intrinsic religiosity can leave an individual feeling a sense of detachment from one's higher power. When internalized, this feeling is associated with more of a sense of helplessness and aloneness, possibly leading to depression and anxiety (Tix & Frazier, 2005). Extrinsic religiosity is correlated with higher levels of prejudice (Allport & Ross, 1967) as well as more general hostility (Masters & Bergin, 1992).

Fundamentalism has benefits as well as damaging effects. More security and confidence seems to go along with a rigid set of clear guidelines to live by (Pargament et al., 2002). Those who practice a fundamentalist form of religion are more likely to be prejudice and hostile toward other groups (Altemeyer & Hunsberger, 2004). The other groups may indeed experience the brunt of the negative effects of fundamentalism.

Religiosity may also solidify a person into a set of beliefs that are self-defeating. In an editorial by Pargament et al. (2002), Pargament demonstrated inappropriate deference to God by relating a case of one of his patients who was highly religious. She was married to a very controlling husband, who, along with their minister, had her convinced that the devil was "winning her over" (p. 158). She had considered leaving, so her husband instituted more rules for her as sanctioned by their church, in order to help keep her in line. She conformed, due to her strong religious belief that this was the way it

should be.

Conclusion

Psychologists are beginning to recognize that religion plays a major role in the lives of many, including those who are in mental health treatment (Culliford, 2002; Pargament, 2002). The APA and the WHO are calling for an integration of spirituality into therapy services (Pargament et al., 2002). However, there is much work to be done in coming to an understanding of how religion affects psychology.

The research currently known is mostly correlational in nature, so no causal statements can be made about religion's interaction with psychology (Pargament, 2002; Schumaker, 1992). Also, in most studies, samples have not necessarily been representative, consisting mostly of college students or people who were already members of a church (Kehoe, 1998; Pargament; Schumaker). Culliford (2002) noted that most studies focus on those who are in Christian and Jewish faiths—the vast majority being of the traditional Christian faiths—and either from the United States, Europe, or Israel. The fact that most studies focus on the mainstream religions may affect our definition of religion. There may be other religions practiced that introduce dimensions James (1902) or any other psychologist never thought of.

The WHO has proposed a method of looking at religion that focuses more on strongly held personal beliefs than on specific religious followings (1998). This may be a way of being more inclusive in research without complicating matters too much. If we can categorize all strongly held personal beliefs into a set of dimensions, we will be able to broaden our scope of religious definition to encompass those who do not necessarily ascribe to a particular sect of religion, but possess a certain set of standards to live by.

Though James (1902) fairly comprehensively covered the dimensions of religion we currently understand, defining religion and spirituality is a continuous effort. More research is necessary in order to better understand each dimension of religion as well as to discover how mainstream religions may differ from those that are not so common. It would be beneficial to learn if we can generalize

certain dimensions across all systems of belief, for the purpose of measurement and in order to simplify the counselor's job of integrating an individual's beliefs into treatment.

If psychologists are to offer spiritually sensitive services, it is important to define the belief styles and religious characteristics that may be helpful or harmful, and how they interact. This understanding is necessary to help a patient see when coping strategies may be particularly useful, or self-defeating. Finally, in order to be able to effectively utilize spirituality in furthering mental health, it is essential to understand the nuances in interactions between different mental illnesses and different spiritual beliefs/practices. While sorting out the details of this topic may seem like a daunting task, research supports that further knowledge will be worth the effort.

References

Abbotts, J. E., Williams, R. G. A., Sweeting, H. N., & West, P. B. (2004). Is going to church good or bad for you? Denomination, attendance and mental health of children in West Scotland. [Electronic version] *Social Science & Medicine, 58*, 645-656.

Allport, G. W. & Ross, J. M. (1967). Personal religious orientation and prejudice. *Journalof Personality and Social Psychology, 5*, 432-443. Retrieved December 8, 2006, from EBSCOHost databases.

Altemeyer, B.& Hunsberger, B. (2004). A revised Religious Fundamentalism scale: the short and sweet of it. *The International Journal for the Psychology of Religion, 14*, 47-54. Retrieved March 1, 2006, from Lawrence Earlbaum Associates.

Culliford, L. (2002). Spiritual care and psychiatric treatment: An introduction. *Advances in Psychiatric Treatment*, *8*, 249-258. Retrieved October 13, 2006, from Highwire databases.

Dain, N. (1992). Madness and the stigma of sin in American Christianity. In J.F. Schumaker (Ed.), *Stigma and Mental Illness* (pp. 59-84). DC: American Psychiatric Press.

Hartog, K. & Gow, K. M. (2005). Religious attributions pertaining to the causes and cures of mental illness. *Mental Health, Religion & Culture*, *8*, 263-276. Retrieved October 13, 2006, from Taylor & Frances Group databases.

Holland, J. C., Kash, K. M., Passik, S., Gronart, M. K., Sison, A., Lederberg, M., et al. (1998).A brief spiritual beliefs inventory for use in quality of life research in life-threatening Illness. *Psycho-Oncology, 7*, 460-469. Retrieved October 20, from EBSCOHost databases.

Hunsberger, B. (1996). Religious fundamentalism, right-wing authoritarianism, and hostility toward homosexuals in non-Christian religious groups. *The International Journal for the Psychology of Religion, 6*, 39-49. Retrieved March 1, 2006, from Lawrence Earlbaum Associates.

James, W. (1902). *The Varieties of Religious Experience: A Study in Human Nature*. New York: Random House. Retrieved October 16, 2006, from the University of Virginia e-text Library.

Kehoe, N. C. (1999). A therapy group on spiritual issues for patients with chronic mental illness. *Psychiatric Services*, *50*, 1081-1083. Retrieved October 13, 2006, from Highwire databases.

Koenig, H. G., George, L. K., & Peterson, L. B. (1998). Religiosity and remission of depression in medically ill older patients. *American Journal of Psychiatry*, *155*, 536-542. Retrieved October 9, 2006, from Highwire databases.

Masters, K. S. & Bergin, A. E. (1992). Religious orientation and mental health. In J.F. Schumaker (Ed.), *Religion and Mental*

Health (pp. 221-232). New York: Oxford University Press.

Pargament, K.I., (2002). The bitter and the sweet: and evaluation of the costs and the benefits of religiousness. [Electronic version] *Psychological Inquiry, 13*(3), 168-81. Retrieved March 1, 2006, from EBSCOHost databases.

Pargament, K. I., Murray-Swank, N. A., & Tarakeshwar, N. (2005). An empirically-based rationale for a spiritually-integrated psychotherapy. *Mental Health, Religion & Culture*, *8*, 155-165. Retrieved October 13, 2006, from Taylor & Frances Group databases.

Reger, G. & Rogers, S. A. (2002). Diagnostic differences in religious coping among individuals with persistent mental illness. *Journal of Psychology and Christianity*, *21*, 341-348. Retrieved October 14, 2006, from EBSCOHost databases.

Schumaker, J.F. (Ed.). (1992). *Religion and Mental Health.* New York: Oxford University Press.

Tepper, L., Rogers, S. A., Coleman, E. M., & Malony, H. N. (2001). The prevalence of religious coping among persons with persistent mental illness. *Psychiatric Services, 52*, 660-665. Retrieved October 13, 2006, from Highwire databases.

Tix, A. P. & Frazier, P. A. (2005). Mediation and moderation of the relationship between intrinsic religiousness and mental health. *Society for Personality and Social Psychology, Inc. 31*, 295-306. Retrieved November 5, 2006, from EBSCOHost databases.

World Health Organization. (1998). W*HOQOL-SRPB Field-Test Instrument*. Retrieved October 13, 2006, from http://www.who.int/mental_health/media/en/622.pdf.

The Portrait of a Small Ohio Town

Susan Yocum
Wright State University—Lake

Abstract

Spencerville is a small community in Ohio that has several stories as to how it came by its name. The town has gone through several economic cycles: the canal, oil, manufacturing and agriculture. The economy of Spencerville has always impacted the culture of the town. During the canal era, the residence social life revolved around activities centered on the canal. The oil boom brought the Keeth Hotel. Despite the current lack of jobs, people like the community. The community has an excellent school system and most of the local culture revolves around the school. The school tries to impress upon the students the need to volunteer in the community, as many adults already do. The town has completed several building projects such as the new school, library, and water tower that will attract more people to live in Spencerville. The town will continue to exist because people like to live in a close knit community.

The Portrait of a Small Ohio Town

Rascal Flatts captured the essence of Spencerville in one of their chart topping hits, *I Miss Mayberry*. The chorus, "sitting on the porch drinking ice-cold cherry coke, where everything is black and white, people pass by and you call them by their first name," describes the community perfectly. Spencerville is a small, Ohio town that still reflects that down-home community spirit. Spencerville is a community with a rich past, a modern present, and a bright future.

The early history of the community is found mainly in Earnest Robinson's book *The History of Spencerville*. The village was first platted by William Tyler in 1844, although it took twenty-two years for the village to be called Spencerville (Robinson, 1). There are two main stories as to how the village came to be called Spencerville. The community was originally called Spencer; according to a legend, the

post office demanded that the town change its name because there was already a Spencer, Ohio (Robinson, 3). The postal authorities decided to call the new village Acadia (Robinson, 3). The residents of Spencer did not like that idea, and they decided that the post office could be called Acadia but the village would remain Spencer (Robinson, 3). An old account in Spencerville's history said that Squire John Hill suggested adding the "ville" to Spencer at the first village council meeting (Robinson, 5). Another account suggests that A. C. Harter named the community (Robinson, 5). The two previous bits of information have been proven wrong. On September 3, 1866, the Allen County Commissioners changed the community's name to Spencerville, when they approved a petition to make Spencerville a village (Robinson, 5). Spencerville was allowed to become a village partially because of its economy, which started to boom with the opening of the canal.

Spencerville economy was based on three main areas: the Miami-Erie Canal, oil, and agriculture. The Canal brought many new people and allowed for the town to experience an economic boom. The Stave Factory, built in 1874, had a huge impact on the local economy (Robinson, 5). The Factory was built here because the canal provided easy energy and transportation (Robinson, 5). The eastern United States was demanding wood and wood products, which the Stave Factory was able to provide (Robinson, 5). The factory was the cause of extreme growth in the community. The census before the factory was built was 364 and by the 1890 the census had grown to 1266 (Robinson, 5). In 1869, a major developer arrived in Spencerville; Johnzey Keeth, who built a planing mill, a flour mill, which would become part of Spencerville's identity, and the Keeth Hotel (Cochrun, 1). The flour mill's product was so popular that the saying around town was "If you ever eat a sack of flour from Spencerville, you will always come back" (Allen, 627). In 1906, the last items were transported on the canal, and some no doubt thought that would be the end of the village, but then came black gold (Allen County, 626).

Oil provided many opportunities for economic growth in the small village. The community's black gold was discovered around

the time the Keeth hotel was built in 1882 (Kincaid, 1). "The lure of black gold filled every little town to the rafters with the would-be rich" reported *The Lima News* (Kincaid, 1). Spencerville's factories took advantage of the oil and converted the factories from water power to gas power (Allen, 626-627). The oil was transported from Spencerville to Lima through a pipe system (Allen, 626-627). The Spencerville oil wells were part of a much larger field know as the "Lima Oilfield" (Oil, 1). The field was notable because from 1886 to 1900 the field produced the most oil in the world (Oil, 1). The second reason was that the boom led to technological advances in refining "sour crude," which is oil crude that smells like sulfur (Oil, 1). The final reason the oilfield was important is that the rapid expansion of Standard Oil Trust in Ohio contributed significantly to the government declaring the business a monopoly, which led to its breakup (Oil, 1). Along with the oil came danger to the village in the form of nitro glycerin, which was used with TNT to blast away frozen ground (Oil,1). While thankfully the nitro never caused any serious damage to the community, in 1903, a plant that manufactured the explosive did blow up, causing the death of one individual, William Seigle (Cochrun, 1). The oil in this area was eventually used up and the village turned back to its main economic source-agriculture.

Agriculture was always on the backburner of Spencerville's economy but became more important after the oil boom ended (Allen, 626). The village used local farms as a ready food source for the area. When the canal ran, the farmers would trade farm items —fresh butter, milk, and eggs— with the boaters for luxury items, especially silk and ribbon (Allen, 626-627). The village depended on agricultural even more than normal after the oil boom (Allen, 626). The local farmers still grow the same kinds of crops that they did then. The most popularly grown crops were corn, wheat, and beans. Agriculture also managed to almost single-handedly carry the town through the Great Depression in the 1930's and World War II in the 1940's (Wood, 2).

The culture of Spencerville has always been impacted by the economy. As the Allen County Historical Society's book tells readers, when the canal was clean and gorgeous, the community's social life circled around the local waterway. The locals would sail on the canal

boats for pleasure (Allen, 626-627). They would also use the boats as a means of transportation to outings in other communities or to find the perfect picnic spot (Allen, 626-627). In the summer, local kids could be seen swimming or turtle hunting (Allen, 626-627). When the weather turned colder, as is inevitable in Ohio, townspeople loved to ice skate around the canal and no doubt used the bank for sledding adventures (Allen, 626-627). Spencervillians also enjoyed baseball and were part of a village league (Allen, 626-627). When they played local communities such as St. Mary's and Delphos, the entire village would turn out to root for their team and forget life's harsh realities for an hour or two (Allen, 626-627).

The oil industry contributed to the community's culture through the building of the Keeth Hotel. The Keeth Hotel was the newest innovation around (Kincaid, 1). As one local paper printed "When completed, the Keeth was completely modern for the time, with running water supplied by a large attic storage tank" (Kincaid, 1). The Keeth had a basement that was 72 by 108 feet and served as a ballroom for many years (Kincaid, 1). The hotel also held many conventions, which brought many people of importance to the tiny village (Kincaid, 1). The Keeth even hosted the local library and post office for many years (Kincaid, 1). The advantages of the building eventually disappeared and, in 1957, the Keeth Hotel was torn down (Kincaid, 1).

As the years went by, there were many activities to keep the people of Spencerville busy. The town boasted band concerts and traveling medical shows (Allen, 626-627) . However, the biggest events of the year were the Carnival and the local horse races (Allen, 626-627). . For the Carnival, the residents would gleefully rope off Broadway, the main street in town, for an entire week (Allen, 626-627). The residents were sure to have tons of fun at the Carnival. While precisely what the village provided at the Carnival is unknown, they probably had rides for the kids, food, and, of course, the opportunity to meet new people. The other big event was the horse races, which ran at McConnell's Grove in the northern part of the village (Allen, 627). They ran from the early 1900's till the 1930's (Allen, 626-627). The biggest race was run on the Fourth of July,

followed by a magnificent fireworks display (Allen, 626-627). The rest of the year the town kept itself occupied with seeing what the neighbors were up to and then publishing the information in the local paper, *The Journal News*. The contents of the paper could be summoned up in these two phrases, printed at one time or another on the master head: 'Like a letter from home' and, 'The only newspaper in the world that gives a damn about Spencerville, Ohio' (Journal News, 2). The paper did keep the residents appraised of important information such as Mr. And Mrs. Oscar Redick and son Robert were Sunday guest of Rev. and Mrs. Albert Taylor or that Miss Dora Davenport spent Saturday with her friend, Miss. Marie Belt (Western Union).

Fast forward to 1980, Spencerville's economy has somewhat diminished over the years but was still booming. The community chose to tie their economy with manufacturing (Wood, 2). In the 1980's there were many companies that still had manufacturing companies in the area: Hayes-Albion, Inc. (Trim Trends), Ohio Decorative Products, Reliable Bluffing Co., Rural Machine & Iron, Thomson Chemical Co. Inc., Gerber Incorporated, Morrison & Krendl Machines, Sandkuhl Tile Company, MacDonald's Industrial Products, and Quality Buffing Company (Allen, 274-290 & Wood, 2). These companies manufactured everything from auto parts to metal platting (Allen, 274-290). Spencerville also has a group of service industries such as the local grocery store, restaurants, two gas stations, several doctors' offices, a dentist, two banks, a pharmacy, and Springborn Laboratories, a biomedical research company (Wood, 2).

In recent years, only two businesses have opened in Spencerville, Kerri's Confections, a bakery, and a new Shell gas station with a Subway restaurant (New Gas, 1). The Subway restaurant was the first and so far only fast food chain to open in Spencerville. The service industry in the village appears to still be going strong, as none of the aforementioned businesses have gone out of business.

While the service industries haven't changed, unfortunately, many of the companies that were located in Spencerville in the 1980's have either shut down or moved their operations somewhere else. The only manufacturing businesses left in Spencerville are;

Ohio Decorative Products, Springborn Laboratories, (now know as Charles River Labs), Flexible Foam, Reliable Buffing, and Sandkuhl Tile Company (Principle, 1). The recent drop in automobile sales has hit the community's economy rather hard. In August of 2006, MacDonald's Industrial Products was forced to close their plant because of slumping car sales, leaving about 120 people unemployed (Principle Employers, 1). In October 2006, the most recent causality of the slumping automobile sales, Trim Trends, announced that they will be shutting down, idling 215 employees (Principle, 1). Due to the slumping economy, many residents of Spencerville either work from home or commute to another community for work.

Despite the lack of jobs, many people still choose to live in Spencerville because they like the culture and lifestyle of a small community. Education has been especially stressed in the recent years of the community. The school system is small but effective. According to one resident, Mrs. Jackie Sandkuhl, "kids don't fall through the cracks like they do at larger school and the school's small enough that kids can excel, without being exceptional" (Sandkuhl, 1). She also believes that "the teachers are very caring and since they often know the families of the students have a more personal stake in wanting to see the students flourish academically" (Sandkuhl, 1). Another resident agrees with Mrs. Sandkuhl. Mrs. Vija Lee says that she "likes the small class and believes that there should be no more than eighteen students in a classroom" (Lee, 1). She feels that "in a small classroom students receive more individual attention" (Lee, 1). The State of Ohio would apparently agree with these two ladies, they have rated the school effective for four years in a row with the school meeting 19 out of 25 of the state indicators (School Rated 'Effective', 1). The school district has also met the federal government's adequate yearly progress benchmark. (School Rated 'Effective', 1)

Much of the village's activities revolve around the school. A fall Friday night is filled with one thing in this community: high school football. How well the team performs has had very little effect on the fans' enthusiasm or attendance. Another highlight of the fall is the school musical. The youth of the town show off all their talent that night. The musical is always sold out and always entertaining.

In the winter, basketball is a major event and has become even more so because of the team's success. The students show good sportsmanship, which reflects very well on the village. In *The Lima News*, there appeared an editorial, written by Duane Bollenbcker, featuring the student's actions at a girl's basketball game between Bluffton and Spencerville. When the game was complete the Black Pack from Spencerville got out of their seats and shook hands with the Super Fans from Bluffton, demonstrating an all too rare example of good sportsmanship between fans at a high school sporting event (Bollenbcker, A6). The other highlight of the winter is the school Christmas programs. The elementary grades kindergarten through third grade holds a special program that has become a tradition in the village. In the spring there is baseball, softball, and track to keep the community entertained, along with the regular activities that occur at the end of the school year.

The school also tries to impress upon the students the need to volunteer and to help others, which was probably the reason that the students are able to show good sportsmanship. The school starts trying to turn students into good citizens in elementary school. The students draw pictures for soldiers and make crafts for the veterans' hospital. They also go to the local nursing home to sing songs and cheer the residents. In middle school, the students send Christmas cards to members of the military, especially those who were born and raised in Spencerville. During study hall, the students are also allowed to volunteer in the elementary. In high school, the school hosts food and penny drives. The students can also be library workers, teacher's assistants, or office workers. The students are also given the opportunity to become involved in summer volunteer programs at the local hospitals. There are even some students who take volunteering to the international community. Rachel McConnell traveled to Romania for two weeks to work with orphans and teenagers with AIDS (McConnell, D5). Laura Reindel helped build a church in the Ukraine, and Susan Yocum went to Belize to help out in a preschool.

However, the students do not have a monopoly on volunteering. Many citizens are interested in helping their community in this small village. The school provides an avenue of volunteer

opportunities for interested citizens (Cummins, G4). The school is not the only organization that offers residents a way to share their talents. Individuals may get involved in the all volunteer fire department or EMS (Cummins, G4). For residents that are not inclined to be involved in emergency services, there are the garden club, which plants flowers at the park, library and other areas around town, scouts, youth sports like football, volleyball, and baseball, the local food pantries, and many activities run by churches, such as blood and food drives (Cummins, G4).

The village also quite often comes together for a good cause. During Christmas the VFW sponsors a Christmas party for underprivileged children in which Santa comes and presents are given out (Losing a Tradition, B5). The Girl Scouts, with the help of the community, have sent care packages to soldiers serving in Iraq (Girl Scouts, 1). The village is also involved with Habitat for Humanity.

Another major aspect of the village's appeal is the religious and political aspects of the town. This one aspect of the community has not changed since Spencerville was founded. The community has had a church since it was a trading post, and most of the community can be found in a church at some point in time on any given Sunday (Cochrun, 1). The community is also almost completely Republican. The village has always been religiously devout and politically conservative.

Spencerville will have a bright future but not economically. Economically the village will no doubt have almost nothing to offer. There has been many closing of business in the last twenty years and more will probably close in the next twenty years. If nothing is done to attract businesses, Spencerville will become a bedroom community of other larger communities in the next ten years. Many of the village's residents already commute to work and more are likely to follow. The town will be kept alive by people who like living in a small community and who want to watch their children grow up in a relatively safe environment with a good education and caring teachers.

The community will remain culturally the same as it has been since the small village was founded. The residents will still place a high value on helping others in need, and sports are guaranteed to still

remain the excitement of the village. The canal will remain here, but it will be only a source of local folklore with older kids telling younger ones don't get to close to the canal or a canal gator will eat you. Unfortunately, I do not see the canal becoming a bigger part of the village's culture even though it once was the focal point of the village, although if cleaned the canal would be beautiful. While there have been plans proposed to clean up the canal, it is unlikely that the canal will be improved because the village has to pay for a new school and revamp their water system.

The village has several new building projects that will bring major benefits to the community. The village recently built a new library, which was a huge improvement over the small cramped area that was the former library. The community is currently constructing a new school. The school will no doubt bring many new faces to the village as the capacity of the school to teach more students rises. The town is also building a new water tower to replace the old rusted out one, which will add to the village's aesthetic beauty. These facilities will attract more people to the area, especially the school which can now hold a large number of students. So, the community will enlarge filled by people who want to live in a small, friendly, and caring atmosphere.

Spencerville is definitely the quintessential small village. The community represents everything an individual thinks of when a small community comes to mind. The town has had a rich past and holds the idea of helping others very high. Everyone knows their neighbor here and even with a bleak economic outlook the town holds much potentially to remain the same close-knit community that it has always been.

References

Allen County Historical Society and the Lima Public Library. The 1976 History of Allen County, Ohio. Ed. John R. Carnes and Beatrice Boose Hughes. Evansville, IN: Unigraphic Inc., 1976.

Bollenbaher, Duane. "Fans from School Set Good Example." The Lima News. 5 March, 2005. A, 6

Chochrun "Time Marches On." The Journal News [Spencerville, OH]. 11 May 1939.

Cummins, Lynn. "Spencerville Citizens Help Out at School." The Lima News. 27 Feb. 2005. G, 4.

"Girl Scouts Seek Donations For Troops in Iraq." The Journal News [Spencerville, Oh]. 27 Apr. 2006. 1

"The Journal-News & the Beebe Clan." The Journal News. http://www.thejournal-news.com/History.htm Accessed: 6 Oct. 2006.

Kincaid, Kim. "The Keeth Hotel." The Lima News. 8 October 2003. D, 1-2.

Lee, Vija. Personal Interview. 4 Oct. 2006.

"Losing a Tradition, Making New Ones." The Lima News. 25 Dec. 2004. B, 5.

McConnell, Rachel. "Students Can Build A Better America through Service." The Lima News. 2 April 2006. D, 5.

"New Gas Station Opens." The Journal News [Spencerville, OH]. 19 Feb. 2004. 1.

"Oil History of Lima, Ohio." http://www.bookrags.com/wiki/Lima_

Ohio. 10/27/06.

Robinson, C. Ernest and Women's Progressive Association. The History of Spencerville. June, 1967.

Sandkuhl, Jackie. Personal Interview. 7 Oct. 2006.

"School Rated 'Effective' On State Report Card." The Journal News [Spencerville, Oh]. 31 August 2006.

"Western Union" The Journal News [Spencerville, OH]. 1 May, 1930.

Wood, Redmond. Lecture Notes. 12 Sept. 2006.

CPR™ for the College Classroom: An Operator's Manual

Kay E. Strong
Associate Professor of Economics
Bowling Green State University—Firelands

The Editor apologizes for the clarity of the figures presented in this paper. The process of printing the journal renders the input of the figures to be illegible. Please refer to the online version of the journal for a larger representation.

Abstract

Calibrated Peer Review™ (CPR), a web-based instructional tool, provides "writing gain for students" without adding "grading pain for the instructor!" CPR encourages frequent writing and peer review opportunities for students in a guided environment.

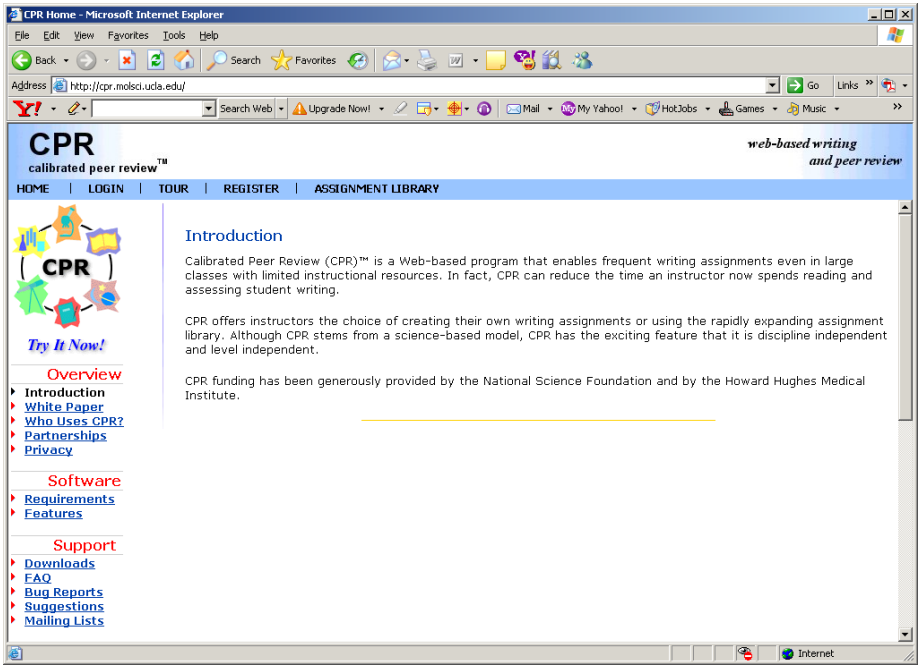
CPR ™ is a four phase process. Phase one involves preparation and submission of the student's text response to the writing assignment. During phase two students evaluate three instructor written calibrations (high quality, mid quality and low quality) of the same assignment using pre-specified rubrics assessing content and style. In phase three anonymous assignments are assigned to each student for peer review. At phase four, the student is presented his/her own assignment for self-review.

The CPR tool provides immediate feedback on student performance at each phase. At the conclusion CPR produces a complete set of results corresponding to performance at each phase. The guided environment, the rubrics and the weighting factors bypass problems commonly associated with students reviewing student work.

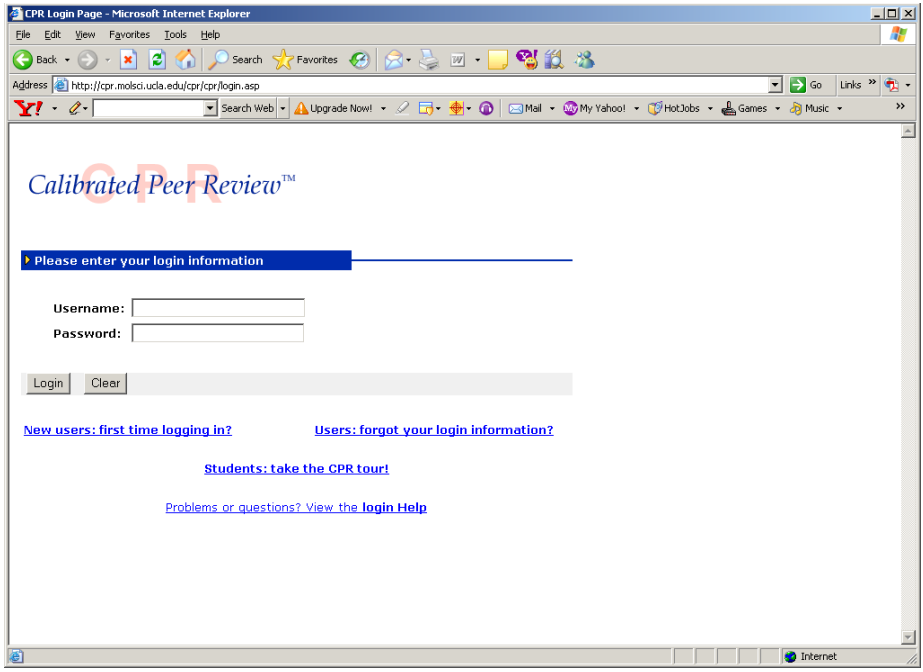
The intent of the ***Operator's Manual*** is not to establish the merits of Calibrated Peer Review a a viable instructional tool but rather provide a visual step-through on its usage. As such let's begin at the beginning …

Entering the URL < **http://cpr.molsci.ucla.edu/** > into the search engine of your choice will take you to the home of CPR™ at UCLA.

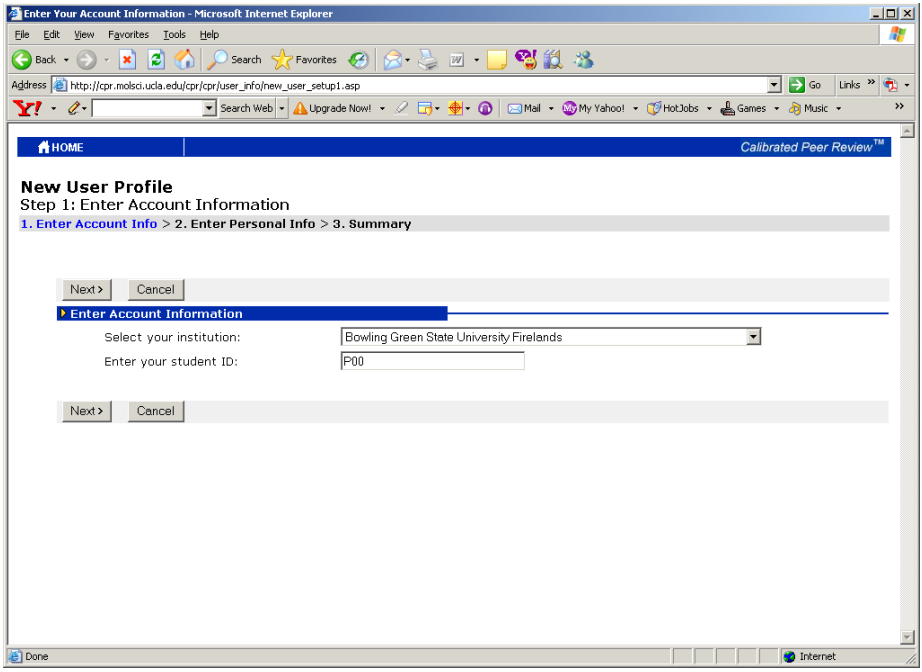
Calibrated Peer Review™ was created by Orville L. Chapman, Professor of Chemistry and Biochemistry and a member of the National Academy. The White Paper description on CPR under the heading Overview at the website is available as a PDF.



Entry into the software assumes that someone at your institution (or another institution) has been established as an Administrator with the capability of creating accounts and adding students to those accounts. If this is not the case, contact the author for a special Student ID and CPR Username to take a test drive. Click on "**LOGIN**" across the top bar. This page is the main entry point for both instructors and students. Let's begin CPR™ by experiencing the instructional tool from the student's perspective. We will complete a brief CPR™ assignment.

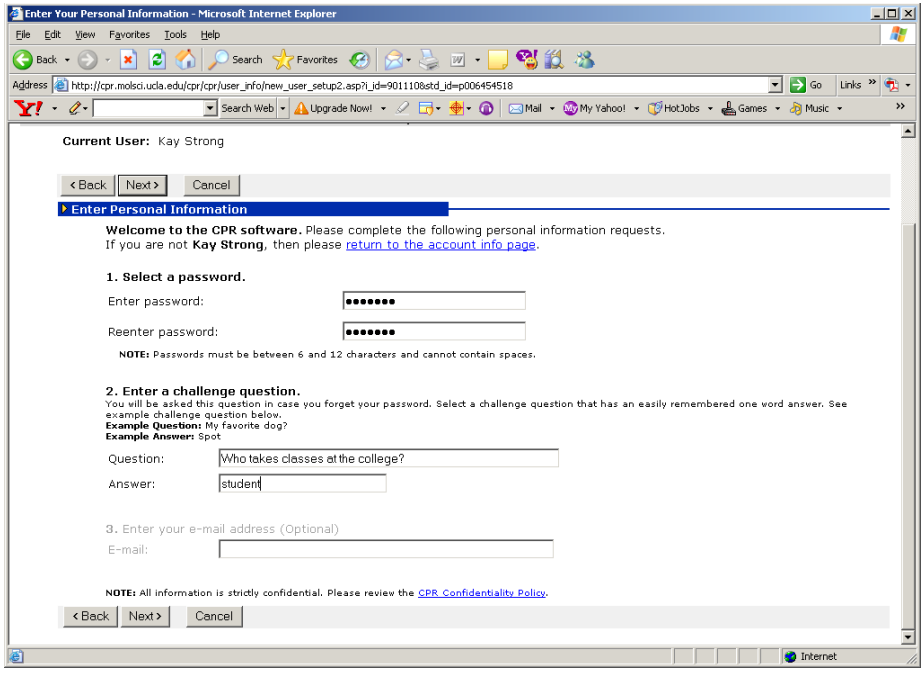


As a first time user, enter the link: **New users: first time logging in?**.

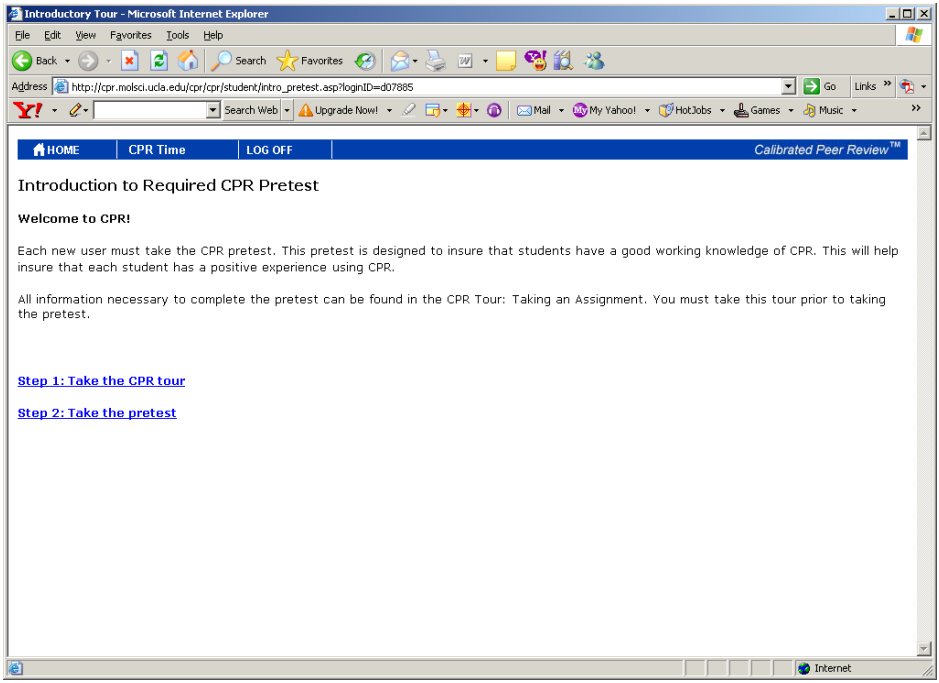


The screen will prompt you to select your INSTITUTION. Scroll down through the names and choose, for example, "Bowling Green State University Firelands." Enter the institution's unique Faculty/Student ID: "P000000001" or if you are taking a test drive, use the Student ID and CPR Username given to you by the author.

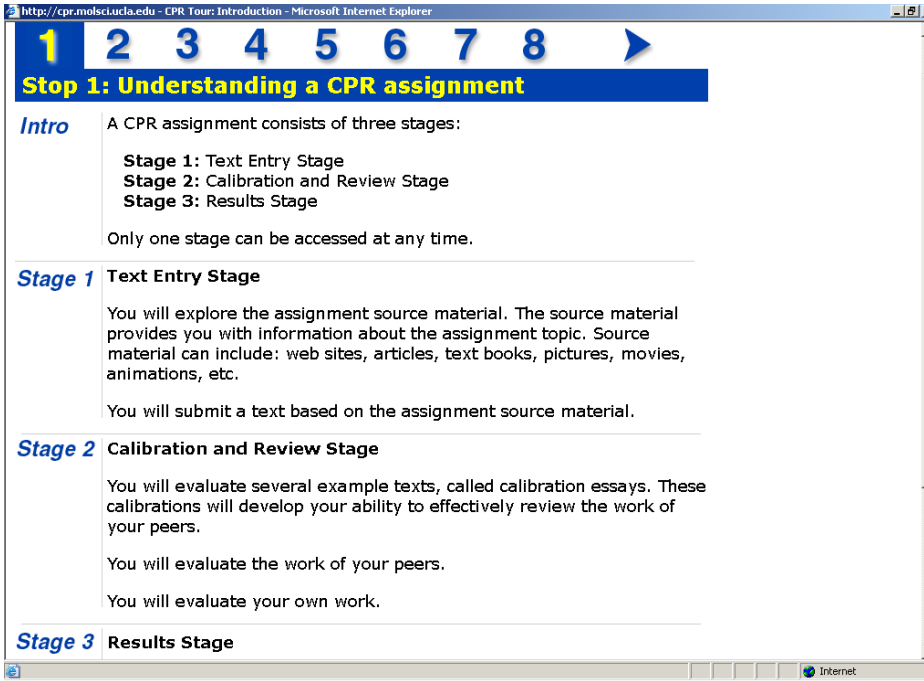
Select **NEXT.** Your dedicated CPR Username will be a combination of one letter followed by 5 numbers. You will be asked to enter a password. Please, jot down both your CPR Username and password for future reference. However, should you lose this information, the link: Users: forgot your login information is available to help you out in a pinch!



From the login window, enter your CPR Username and password and select the "**NEXT**" button.



Open the link: Step 1: Take the CPR Tour! Spend a few minutes exploring the CPR process.



Congratulations, you have finished the **Taking an Assignment** tour!

A FEW REMINDERS:

- You can use CPR from any place where you have access to the Internet.
- CPR uses a central server time for managing assignment deadlines. This may NOT match the time on your clock or computer. Make sure to check the CPR server time by clicking on the **CPR Time** menu bar link if you are working near a deadline.

Respond to the 12 question pre-test and submit your responses for grading. The software will record an entry for the Instructor indicating whether a new student has Finished Pretest on the Student List page.

NOTE: This pretest covers the basic knowledge necessary to effectively participate in a CPR assignment. If you are still unclear about any of these questions, revisit the CPR Tour: Taking an Assignment page or see

your instructor.

Any student that does not understand how to use CPR will not only diminish the value of the assignment for their peers but may also receive a lower overall score.

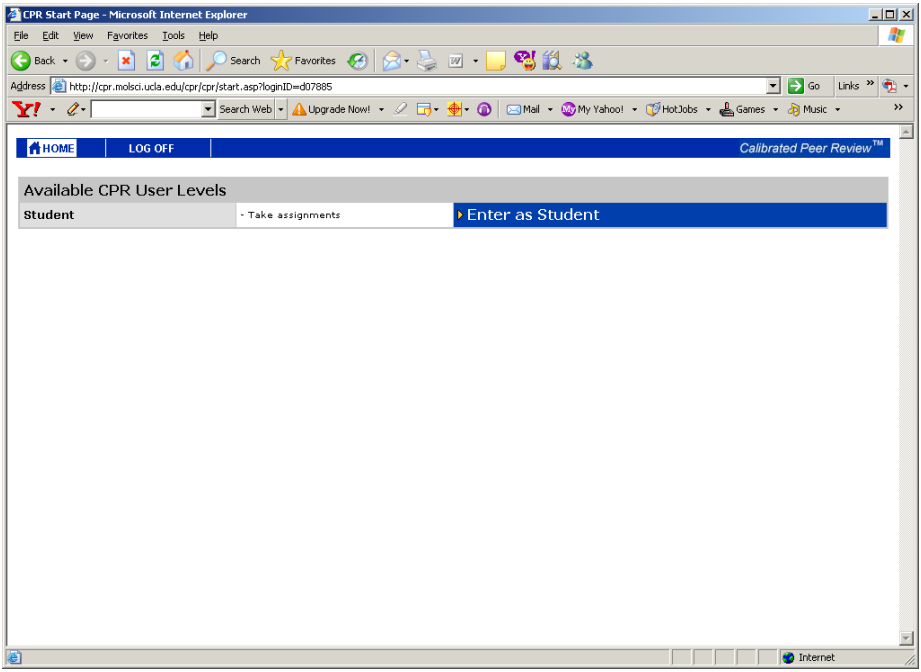
If you understand all of the information covered by this pretest, then

Start Using CPR

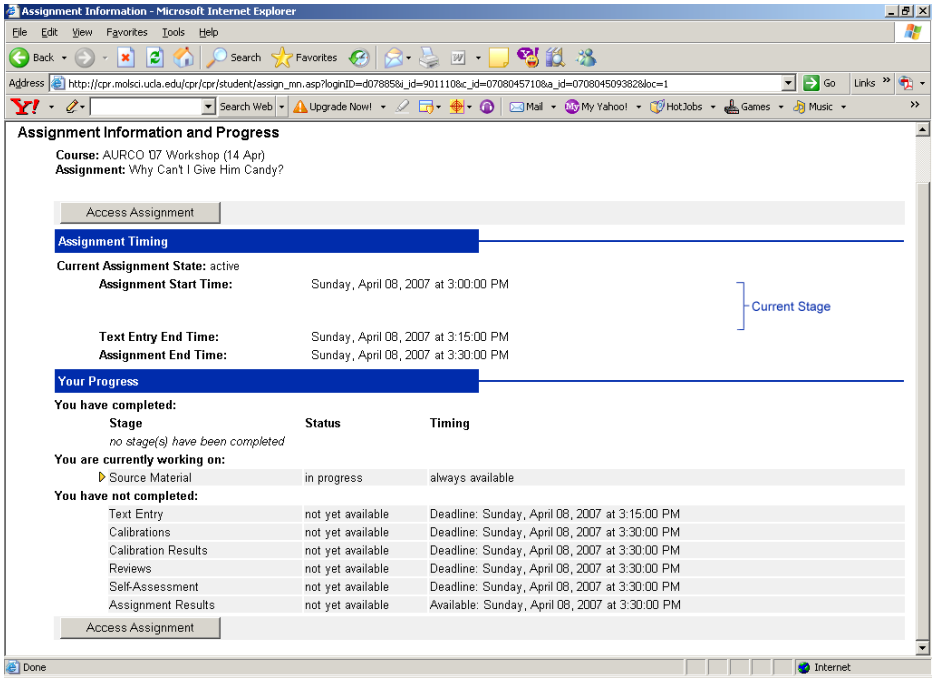
Return Home

A. TRIAL RUN the tool for the Student's perspective.

Select the **Start Using CPR** button. You will be directed to a brief assignment. Select **ENTER AS STUDENT**.

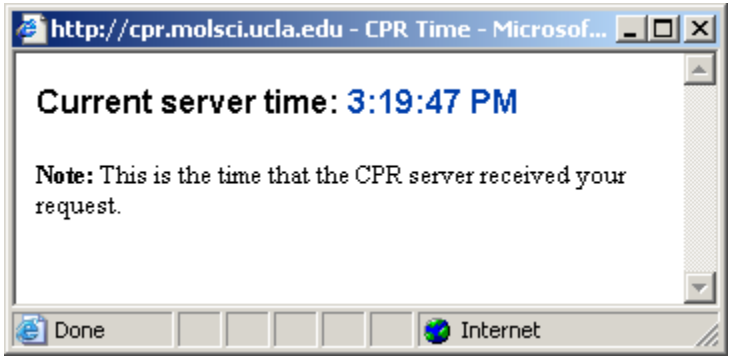


Begin your Student Assignment: "**Why Can't I Give Him Candy?"**



Select **Access Assignment** button and complete the CPR process.

Reminder: CPR uses centralized UCLA time and does NOT use the time on a local computer. You can check the time by clicking on the link: **CPR Time** at the top of the assignment screen.



You should complete your word processing outside the CPR

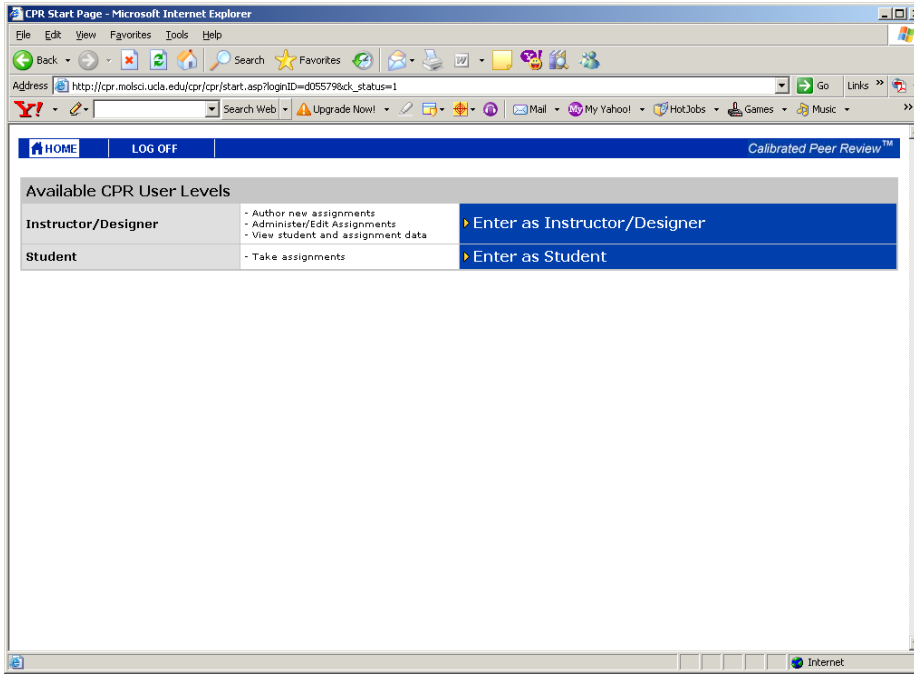
program and save your text on a temporary drive or the desktop. Once you have completed the written assignment, simply "copy and paste" it into the TEXT ENTRY window.
Since the CPR program does not recognize certain formatting formalities, add HTML tags to your writing assignment before you enter it into the text window.

Paragraph definition: <p> text <p>
Bold : text
Italics: <I> text </I>
Line break:
 text </br>
Subscript: H₂O gives H_2O
Superscript: Na⁺¹ gives Na^{+1}

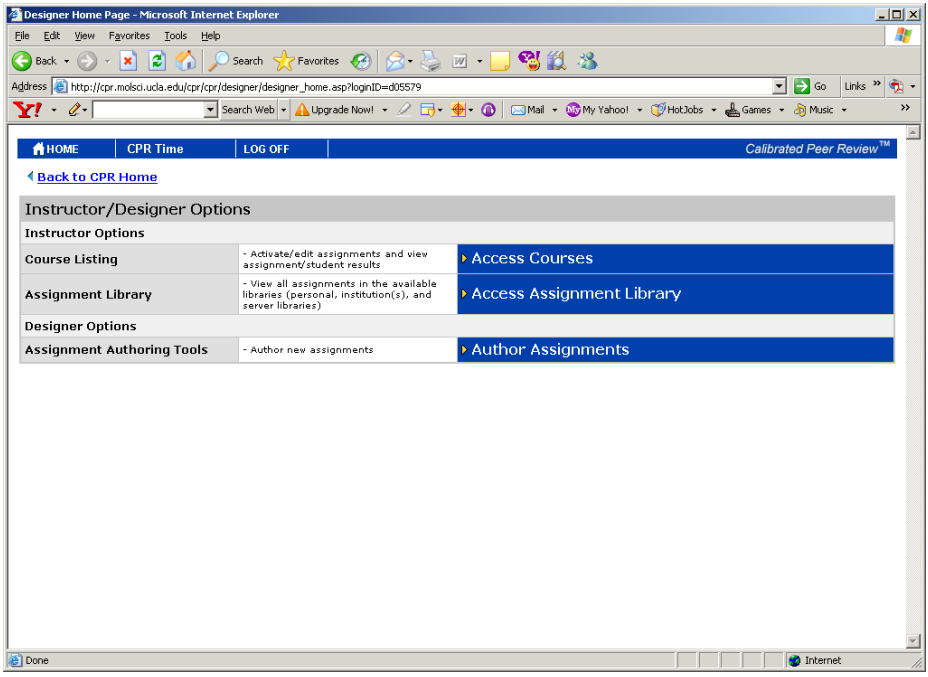
Once the **Assignment End Time** is reached you will be able to check your results.

Need more information? From the CPR homepage, you can access **Downloads** under the SUPPORT link on the left-hand side of the page. The "*Student Handout*" can be distributed to students prior to their first assignment and "*Student Results*" following the completion of the finished assignment. Students will undoubtedly need a fuller explanation.

B. Now, let's switch roles from student to Instructor/Designer. Need more information? Again from the CPR homepage, you can access **Downloads** under the SUPPORT link on the left-hand side of the page. The "*Quick Start for Instructors*" describes how to activate a CPR assignment.



Enter as Instructor /Designer allows you to perform three functions: (1) Access Courses: administer/edit assignments or view student and assignment data, (2) Access Assignment Library: Personal, Institutional and Server, and (3) Author a new assignment.


Designer Home Page - Microsoft Internet Explorer
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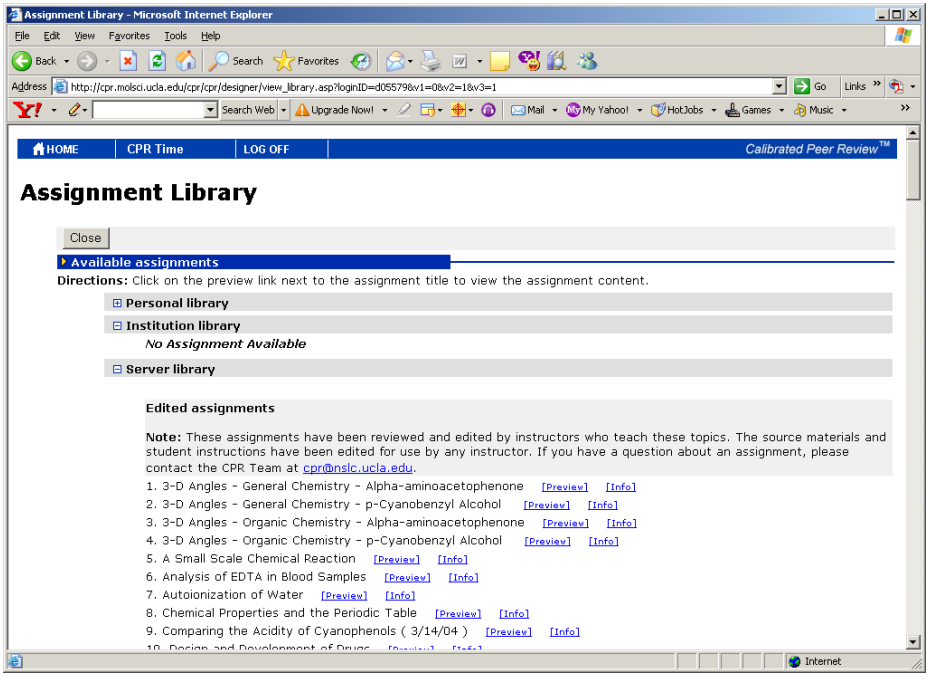
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Edited assignments
Note: These assignments have been reviewed and edited by instructors who teach these topics. The source materials and student instructions have been edited for use by any instructor. If you have a question about an assignment, please contact the CPR Team at cpr@nslc.ucla.edu.
1. 3-D Angles - General Chemistry - Alpha-aminoacetophenone [Preview] [Info]
2. 3-D Angles - General Chemistry - p-Cyanobenzyl Alcohol [Preview] [Info]
3. 3-D Angles - Organic Chemistry - Alpha-aminoacetophenone [Preview] [Info]
4. 3-D Angles - Organic Chemistry - p-Cyanobenzyl Alcohol [Preview] [Info]
5. A Small Scale Chemical Reaction [Preview] [Info]
6. Analysis of EDTA in Blood Samples [Preview] [Info]
7. Autoionization of Water [Preview] [Info]
8. Chemical Properties and the Periodic Table [Preview] [Info]
9. Comparing the Acidity of Cyanophenols (3/14/04) [Preview] [Info]
Internet

There are two types of assignments in a "ready-for-use" format available in the Server Library.

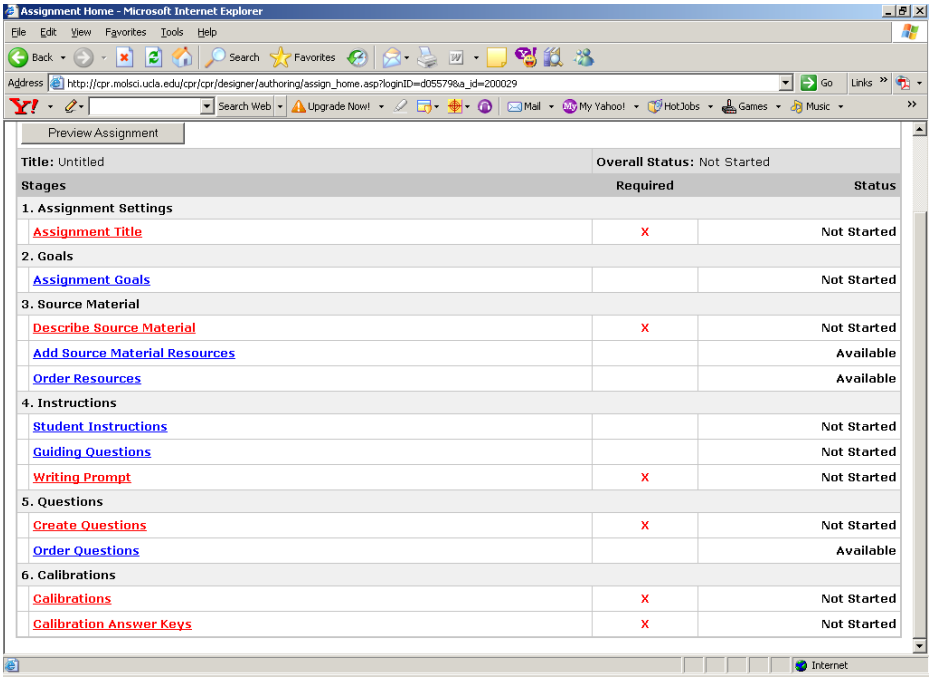
Edited assignments

Note: These assignments have been reviewed and edited by instructors who teach these topics. The source materials and student instructions have been edited for use by any instructor. If you have a question about an assignment, please contact the CPR Team at cpr@nslc.ucla.edu.

Contributed assignments

Note: These assignments have been placed in the library for instructors to preview and use. Unlike the edited assignments listed above, these assignments have not been modified or peer reviewed. If you have a question about an assignment, please contact the author.

We will try our hand at authoring a **New Assignment**. From the list, highlight the button for "Untitled," then select it.

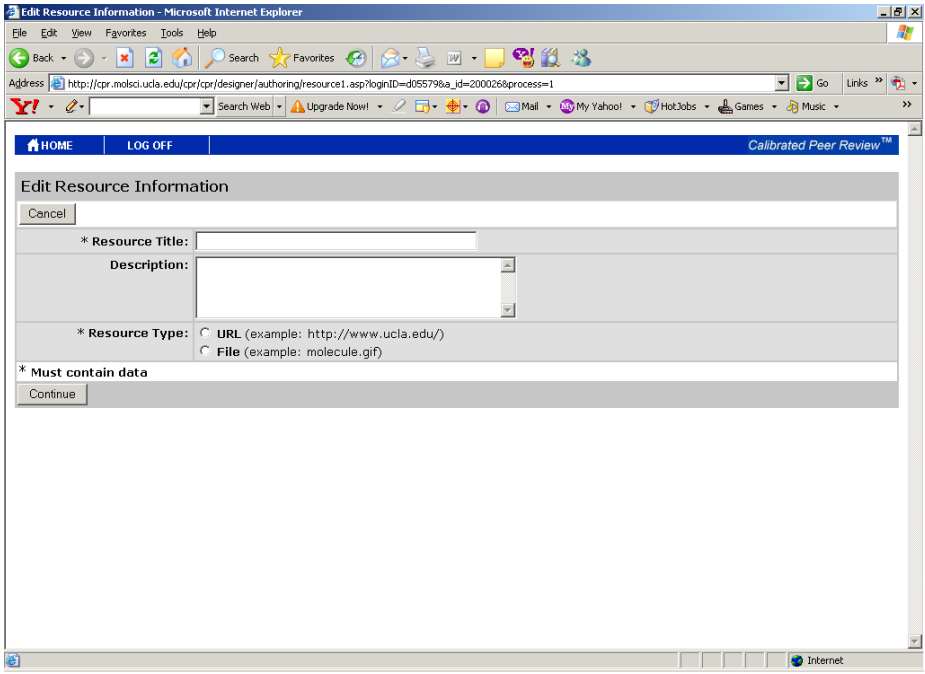


There are six (6) steps involved in completing the New Assignment before activation is possible.

1. Assignment Setting → select **Assignment Title**. Enter a Title. Save and Close the window. Notice that the **Status** of this step changes to "Finished."

2. Goals → enter the assignments goals or learning objectives. Save and Close the window. Remember to use the HTML code to create paragraphs and such.

3. Source Material → enter the source of material student should use to complete this assignment, for example textbook chapters and pages, PDF files or Internet websites. Adding Source Material Resources will allow students easier access to URLs or files during assignment completion. You can reorder the content of the page using Order Resources.



4. Instructions → **Student Instructions** are a good place to remind students about word count (maximum and minimum), use of HTML format for paragraphing, working outside the software to word process the assignment before submitting it as TEXT or other comments.

→ **Guiding Questions** help students focus on the specific demands of the assignment and form the basis for assessing student success over the assignment.

FOR EXAMPLE

<p> Instructions: In preparing your research, your writing assignment must minimally address the issues raised by the following statements:

<p>1. Identify the key problems developing in the retirement system and developing in the healthcare system beginning in the year 2006.

<p>2. Use factual evidence to support your claims about the problems developing in both the retirement and healthcare systems.

<p>3. Identify specific policies Congress has enacted over the period 2006 to 2026 to address the problems of both the retirement and healthcare system.

<p>4. Assess the successfulness of each policy enacted over the period 2006 to 2026 as of 5 April 2026.

<p>5. Describe how these policies are affecting the 2026 federal budget, the national debt in 2026 and economic growth over the intervening twenty years (2006 to 2026).

→ **Writing Prompt** is the springboard for the writing assignment. I use it establish the point of view from which students are to tackle the assignment.

FOR EXAMPLE

<p>The year is 2026. As a college student you have been assigned the task of researching the history of the U.S. retirement and healthcare system beginning with the year 2006. Areas of particular interest in your research are the nature of problems developing in 2006; identification of the specific policies that were enacted to address the problems over the intervening twenty years (2006 to 2026); determination of the success of each policy enacted to resolve problems associated with the retirement and with the healthcare system; and impact today (2026) of those earlier policy decisions on the current 2026 economy.

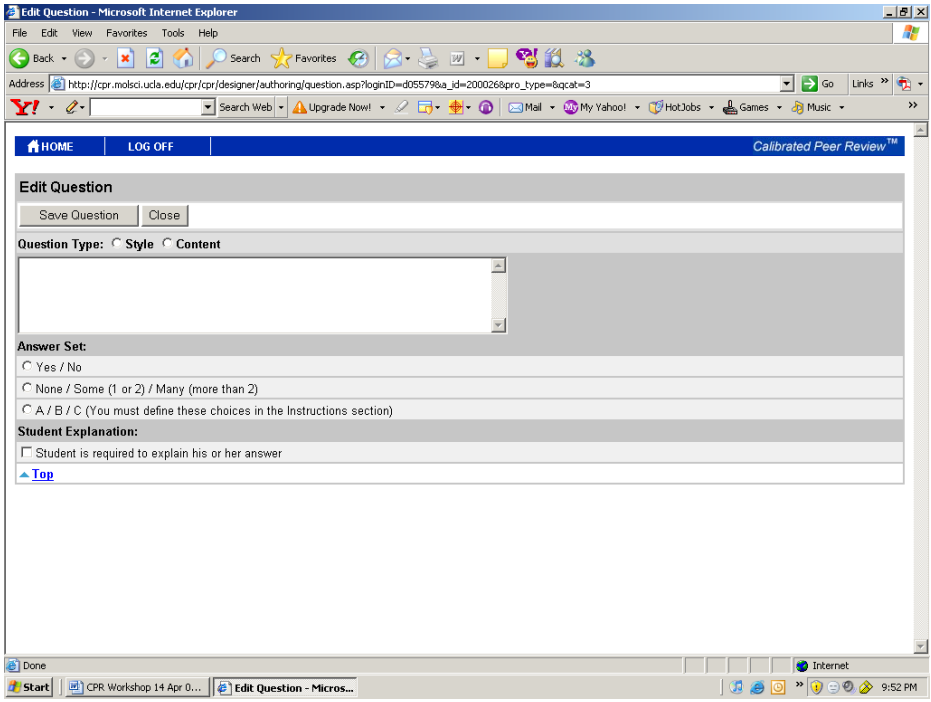
5. Questions → **Create Questions & Order Questions**. These questions can be with respect to "content" or "style" of the assignment. You may write Yes / No questions, None / Some (1 or 2) / Many (more than 2) or A / B / C which requires that you define these choices.

FOR EXAMPLE

Is the beginning of the early retirement phase of 79 million baby boomers correctly identified as between 2008?

Is financial difficulty (expenditures > revenues; exhaustion of the trust fund assets) identified as one challenge being faced by (a) both the

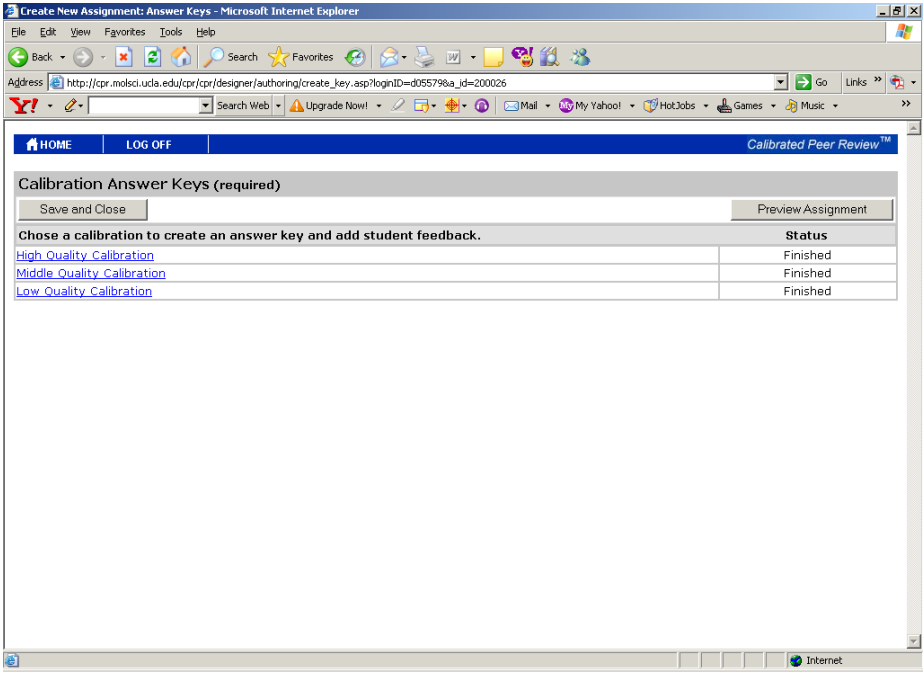
retirement and healthcare systems (b) by either the retirement system or the healthcare system (c) by neither system in 2006?



6. **Calibrations** → It's time for you to be creative! You will need to write three responses or grading keys to your original assignment; one as **High Quality Calibration**, one as **Middle Quality Calibration** and one as **Low Quality Calibration**. The High Quality Calibration must be your absolute best—on target and errorless. The Middle and Low Quality Calibrations will be used to address common misconceptions or errors about the material, or represent a superficial response lacking depth of understanding. Mix these content problems with writing style and grammar errors, if you wish. My preference is good writing style and correct grammar so that students focus on the content requested in the Guiding Questions.

The Calibrations prepare students in the usage of the rubrics (questions) during peer review process.

Your last responsibility before "Activating the Assignment" is to develop the **Calibration Answer Keys**. The keys provide students' feedback on whether their responses are correct or not. To move forward to the Peer Review stage, students need to successfully pass the through the calibrations.



We've FINISHED!

It's time to activate the Assignment. This is a piece of cake! Return to the Instructor / Designer home page. Select **Access Courses.** Choose your course. Under Course Options, choose **Manage Assignments** >> ACTIVATE NEW ASSIGNMENT. The activation sequence is as follows:

1. Select Assignment > 2. Scoring > 3. Word Count > 4. Grade > 5. Timing > 6.Participation

The Scoring Template allows the instructor to determine the criteria for mastery at each phase, calibration, peer review and self-assessment, by establishing the level of deviation allowed from the

Rating calculated by the software. Student ratings can **NOT** deviate by more than **3.0** points from the **AVERAGE RATING** to receive full credit in the three review stages with "low difficulty;" by not more than 2.5 points with "moderate difficulty" and by not more than 2.0 points with "high difficulty."

The instructor pre-establishes the word count for the assignment. A student whose text submission falls outside the parameters will be prompted to make the necessary adjustments up or down before the software will accept the text entry.

By assigning higher or lower point value at the various stages the instructor has control over the "most" important aspects of the assignment. A higher value placed on text entry suggests that compliance with assignment requirements carry greater weight in establishing the student's grade.

The instructor will set the start time for text entry, transition to review and completion deadlines. The main server for the CPR™ is housed at UCLA (CA). The internal time stamp reflects west coast time (USA). Students may need to be reminded of this at the start of each assignment.

Your part is done! You have only to wait for the Assignment End Time to expire and gather the summary output from the assignment. Several detailed reports will automatically be generated.

Student progression through a **CPR™** process is meticulously tracked from the Start Time to the Assignment End Time. Instructors have demand access and can readily monitor class progress through the four phases; text entry, calibrations, reviews and self-assessment

The purpose of this Operator's Manual is familiarization with the operation of **CPR™**. For a more empirical analysis of **CPR™** contact the author.

Biographical Information

Kay E. Strong is an Associate Professor of economics and applied statistics at Bowling Green State University Firelands. She has a well established record in the presentation as well as publication on innovative teaching strategies both internationally and nationally. Kay

received her training in the use of Calibrated Peer Review™ during the summer of 2005 from Dr. Arlene A. Russell, Senior Lecturer in the Department of Chemistry on the campus of UCLA <russell@chem.ucla.edu >. Kay can be contacted at kstrong@bgsu.edu or BGSU Firelands, One University Drive, Huron, OH 44839.

Studying Contemporary Ohio Women Poets: A Colloquium

Robert Miltner, Andrew Rihn, and Yvonne Williamson
Kent State University Stark

Introduction

Ohio is a state rich in literary history, and this is becoming increasingly true regarding the contributions contemporary women poets are making to this body of regional literature. Given a selected group of contemporary women poets from Ohio—diverse in age, background, ethnicity, place of origin or relocation—readers will find distinct voices, styles, and emotions which address issues of social relationships, sense of community, sensibility, issues, and beliefs. Moreover, while some of the poets' work is serious or even elegiac, the work of others is humorous and at times satirical, and while some of the poems are lyric-narratives which document and explore living in the moment, other poems explore the past, whether religious, geographical, familial, or personal. Though it can be fairly argued that these are indeed traits common to contemporary poetry in general, a case can be made that by studying women poets who currently live in Ohio, some particular instances of local and regional identity emerge, and that an awareness of these particulars enriches both teachers and students.

Robert Miltner, Instructor

Contemporary Ohio Women Poets is a special topics class offered at Kent State University Stark; it is cross-listed between English and Women's Studies. Most of the reading that students encounter in literature classes is national or global, but in this class, the focus is turned on our own state, and at our own contemporary women poets. One clear focus of the class is to move beyond the limitations of late 19th Century regionalism and local color literature which was dominated by dialect writing, local customs, and general idiosyncrasies. While this school of writing demonstrated "the dual influence of romanticism and realism" ("Regionalism"), ultimately

it turned out to be "a sensation for a time [yet] it produced little of lasting value" (Encarta). Still, the question surfaces regarding how to read contemporary Ohio women poets: as retro-regionalists or as members of a larger cultural tableau.

The poets and books used for the most recent class offered included Maggie Anderson's Windfall, Diane Gilliam Fisher's Kettle Bottom, Susan Grimm's Lake Erie Blue, Nin Andrews' The Book of Orgasms, Joanne Lehman's Morning Song, and Mary Weems' Tampon Class; the first four are full-length books while the last two are chapbooks, that is, short collections of around 20-25 pages. All of these writers now live in Northeast Ohio, though they arrive from places as close as Columbus, or as far east as West Virginia or Virginia.

The Spring 2007 class was fortunate to have Joanne Lehman, whose book was the first one we read, visit the class to read from her book, share new poems, then answer questions and discuss Ohio poetry. In her discussion, she considered her Ohio sense of place and in particular her position as a Mennonite writer who lives among the Amish. Ultimately, she saw herself as a feminist, Mennonite, regional writer.

The students in Contemporary Ohio Women Poets are asked to read, reflect, discuss, write brief response papers, and produce either one long or two short research papers. Given the challenge of writing about contemporaries, students encounter difficulties in locating book reviews, press publicity, interviews, and brief articles, when available, on the poets; they also learn how to research by association. For example, in researching for Diane Fisher's Kettle Bottom, students were shown how to use definitional research (e.g., dramatic monologue, poetic sequence, Appalachian literature) and associational research (e.g., Spoon River Anthology, mining strikes in West Virginia in the early years of the 20th Century).

In addition, students learn how to write and peer review book reviews. The class engaged in a collaborative project with Kate Fox, then editor for The Ohioana Quarterly, in which each student reviewed new books by Ohio women poets, and which appeared in the spring issue of the Ohioana Quarterly. The poets whose work was reviewed included Mary Weems (whom Andrew Rihn reviewed) Thylias Moss

(whom Yvonne Williamson reviewed), as well as Amy Jo Schoonover, Pat Mora and others.

Andrew Rihn, Student

When I signed up for the course on Contemporary Ohio Women Poets, I was not exactly sure what to expect. The class sounded quite different from the other English courses I had taken where most courses dealt with literature from England and from the past. When those courses did diversify, they often move even further, not closer, to home. To see a course focused on local writers was atypical and I was unusually excited to be taking it.

Very early on in the class I asked a question which would remain central for me throughout the semester: why contemporary Ohio women poets? Those qualifiers seemed somewhat arbitrary to me. Ohio is no cultural magnet; people do not often seek it out as a place to live. Similarly, gender and time period are both basically accidents of birth. What I wanted to know was whether there could be more that connected these writers than mere chance. Was there a recognizable style between contemporary Ohio women poets? Would their work be identifiable as a group?

As we read the work of the six poets, I looked for connections between their works. I compared style and form, structure and length. I heard echoes between the personal/historical narratives of Diane Fisher and the lyric narratives of Joanne Lehman. Maggie Anderson's work had some of the pastoral sensibility of Lehman's but was more dense. Susan Grimm's work carried on that denseness of language, revealed some of the tight language play that characterizes Nin Andrews' prose poems. Mary Weem's work took the subtle politics of Anderson and Fisher and made them more overt, more resolute. In short, there were connections between the writers, but I could not recognize any single sense of style or subject. It was clear these poets were related, but I was still not sure how closely.

Throughout the course, our class discussions would digress into related subjects, however a more relevant discussion about Ohio history kept coming up day after day. These discussions would sometimes be purely historical, other times anecdotal. We would

discuss our families' histories, how we came to live in Ohio, and how that colored our readings. We discussed geography and population, noting the incredible range between the Appalachian south of Ohio and the Western plains, between Amish country and the industrial cities. Ohio has areas defined by water, by farming, by industry, and by shopping malls. The rich whose names dominate history have lived in Ohio, but so have the nameless poor. We saw how migration patterns affected the settling of Ohio, from Lake Erie in the north and through the Appalachian Mountains to the south.

These discussions, which at first seemed like digressions, would inevitably turn back to the poets we had been reading. By looking at the author's hometown, and knowing so much about the area, we were able to make connections between the land and her poetry. For example, in Susan Grimm's long dense stanzas we saw a reflection of the cityscapes of Cleveland, the city in which she lives and writes. Diane Fisher's poems in Kettle Bottom reflect dirt-poor coal miners in West Virginia who had little but each other. We discussed how Joanne Lehman's rural Mennonite childhood may have helped shape the quiet, reflective poetry she now writes, and heard her discuss this in detail when she visited the class. So, within the work of each poet, we saw how location could provide more than specifics, how geography could inform more than the details of their work. The role that the state of Ohio played in every book was a central one, even when it was never named.

I was somewhat surprised to find such a connection to this state within the work of these poets. While their living in Ohio may indeed have been "accidental," that the state turns up so prominently in their poetry is not. This course on Contemporary Ohio Women Poets provided me with a very focused look at a very small, identifiable group of poets. In taking such an in-depth approach to these writers as a group, I was able to see the state of Ohio through the commonalities between their writing in a way I would not have if we read only one or two of them. Likewise, our class would never have had the discussions it did had these writers not been, in fact, our neighbors.

Yvonne Williamson, Student

As one of the women enrolled in this course, I know that feminist theory requires us to work with a text in such a way as to determine whether or not it promotes or denies typical patriarchal ideologies. In her Learning for a Diverse World, Lois Tyson states:

Patriarchal ideology (the patriarchal system of beliefs and assumptions) is difficult for most of us to recognize clearly and consistently because our everyday experience is so saturated with it. We have become so accustomed to patriarchal ideology that it often seems invisible. However, its invisibility makes this ideology all the more dangerous: it's easier to address a problem we can see than a problem that pretends it does not exist (84).

Tyson states that some texts may show patriarchal ideology to promote it, such as those texts in which the females who do not follow accepted roles are portrayed negatively. Others, meanwhile, illustrate patriarchal behaviors in order to demonstrate the adverse effects of such beliefs. This leads us to the question of how women define themselves as women in their literary works. More specifically, how do contemporary Ohio women negotiate a sense of self in their poetry?

Women are not merely, to put it in the vernacular, dainty ribbons and bows nor pretty pink flowers and soft perfumes, rather, womanhood is a being, a becoming, a constant growth and change. We learn to be women from the experiences that life throws at us, both the experiences that we have no control over and those that we invite in. Everything impacts this journey of becoming.

One constant that contemporary Ohio women poets use to define themselves is the relationships of which they are a part. For some, such as Appalachian writers like Joanne Lehman and Maggie Anderson, those relationships are tied deeply and heavily to the land. Joanne Lehman's Morning Song's two opening poems address her feelings and attachments to both her father and her mother juxtaposed against a backdrop of life on an Ohio farm. "Wagon Hitcher" is a comment on the strength and solidity of her ties to her father: "I never/ doubted the John Deere wheels--/ trusted you like God on the seat, your two feet/ on the clutch and brake,/ you half-turned to watch,/ our bond forged with a satisfying clink/ when the pin made the hitch" (3).

Interestingly, while she opens her chapbook with the intimacy that exists between father and daughter, her mother/daughter dichotomy is slightly less enthusiastic: "And mom, who was she? Another Eve/ hacking to bits that devil of a garter snake/ rather than be tempted into poetry--/ beating the rhythm of her fear/ into the uncoiling green music" (4). Lehman's mother is not the woman who blatantly took the forbidden fruit from the tree of knowledge, both cursing and blessing all of humanity with one sweet bite. Instead, she is "another Eve," a new kind of woman, a woman who destroys the thing that she does not understand, a woman whom her daughter feels unable to comprehend.

While Lehman found strength in her father and weakness in her mother, Maggie Anderson portrays women with an illumination of spirit, a humble and quiet fortitude. In "The Wash in My Grandmother's Arms," from her book Windfall, Anderson looks at a picture of a grandmother whom she never knew and sees a reflections of her own strength, "…and I locate my inheritance: how she holds to her task/ in the face of speculation, as if the picture could/ not possibly turn out, as if the sheets were trying/ to fly away from her like pale extinct birds" (28). Here, Anderson is assigning strength to a picture of her grandmother and therefore, allowing herself to be strong no matter what the outcome may be.

As we move farther north into Ohio, to the Cleveland area, we lose the more simple poems about individual feelings and move into poems which convey multiple emotions simultaneously. We are witness to a shift in sentiment, to a deeper and more tightly woven sea of relationship and being. Susan Grimm, in her Lake Erie Blue, gives us the poem "Without Tongues: Family Stories," in which she brings up the question of nature versus nurture; "'How am I like Dad?' Do they really want to know--/ whether it's painted on their genes or breathed in/ from the cloud of body and ego heat we call home?/ What could they discount? A nose is not a future" (31). Family ties carry with them more than simply a firsthand view of life, they are the backbone that both make us who we are and teach us who we do not want to be.

Mary Weems takes this familial relationship one step further in "Mary" from her chapbook Tampon Class. She walks into the shoes

of 'Mary' and leaves us to wonder who exactly is speaking. Is it Mary Weems, Mary the mother of Jesus, or just any ordinary Mary walking down the streets of Cleveland? All Weems tells us is that "She's memorized every profane utterance/ in the English language and when she butts out/ the first man she sees will get a selection/ so choice he'll drown on his Petrarchan view of women" (np). The 'Mary' in all of us can relate to this desire to break free from the confines of expectations and show the world what grows inside.

To be a woman is much more than satin and lace, it is more than what the outside appears to be, and no one should be fooled by expectations of frailty. There is a greater story to be told here, one worthy of intricate consideration. We must move over these words of wisdom, the wisdom of womanhood, deftly and with precision. We must delve deeply into the hearts of those who create us, become us, and leave us in wonder.

Into which of Tyson's categories each of these women fall, whether they promote or disrupt the patriarchal ideology, depends largely on the mood that each individual poem is attempting to convey, much like our own day-to-day existence. Thus, after decades of studying "dead white guys," a class on Contemporary Ohio Women Poets is a refreshing and necessary change of pace. So much of our undergraduate career has been devoted to 'what has been' when 'what is' is equally as important, if not more so. This class has opened my eyes to the many arenas through which women can and do express themselves today, without feeling the need to mimic men like Spencer or Tennyson.

Conclusion

Contemporary Ohio Women Poets offers us, as faculty and students, a mirror through which we can view a reflection of both ourselves and the world that surrounds us. The greatest aspect of such a class has been to see the world through the eyes of women who live today in a place that we understand and know like our own extended families. The joy of reading these women's words is that we can relate to them because we are all Ohioans. We are the ones who have first-hand knowledge of the hills, the pastures, the farms, and the city

streets, for these are the places in which our families live.

What we learn from this class is how to locate ourselves, as individual people, on the diverse quilt that is Ohio. By reading, reflecting, discussing and writing about the poems by Ohio women who are our contemporaries, we see our own lives, however provincial or cosmopolitan, through their eyes. These, in turn, become like our second set of eyes, reinforcing and redefining our local, regional and national identity, our history and our understanding of gender. As a result, we are both inside the quilt looking out and outside the quilt, enriched by viewing the texture, color, and pattern of both the whole quilt and each individual swatch.

Works Cited

Anderson, Maggie. Windfall: New and Selected Poems. Pittsburgh: University of Pittsburgh Press, 2000.

Andrews, Nin. The Book of Orgasms. Cleveland: Cleveland State University Press, 2000.

Fisher, Diane Gilliam. Kettle Bottom. Florence, MA: Perugia Press, 2004. Grimm, Susan. Lake Erie Blue. Kansas City, MO: BkMk Press of the University of Missouri-Kansas, 2004.

Lehman, Joanne. Morning Song. Kent, OH: Kent State University Press, 2005. "Regionalism and Local Color Fiction." http://www.wsu.edu/~campbelld/amlit/lcolor.html 8/14/2007.

"Regionalism." American Literature: Poetry. MSN Encarta. http://encarta.msn. com/encyclopedia_761596671_4/American_Literature_Poetry.html 8/14/2007

Tyson, Lois. Learning for a Diverse World: Using Critical Theory to Read and Write about Literature. London: Routledge, 2001.

Weems, Mary. Tampon Class. Columbus, Oh: Pavement Saw Press, 2005.

Biographical Information

Robert Miltner, associate professor of English at Kent State University Stark, teaches in the Northeast Ohio MFA program at Kent State. He is the author of ten chapbooks of poetry, including Rock the Boat, Box of Light, Against the Simple and most recently, Fellow Traveler. Miltner is editor of The Raymond Carver Review and co-editor of New Paths to Raymond Carver: Essays on his Poetry, Fiction and Life, forthcoming in 2008 from University of South Carolina Press. Andrew Rihn, a senior at Kent State University Stark majoring in English and minoring in Writing and Women's Studies, is a tutor in the Writing Center. In addition to presenting at AURCO in 2006 and 2007, he has presented at the East Central Writing Center Association conference in 2007. His poetry has been published in Canto, Icon, 21 Stars Review, NeoAmericanist, and Poetic Injustice, and his prose has appeared in the KSU Stark Writing Center Review and Monthly Review.

Yvonne Williamson is a senior English major at Kent State University Stark Campus where she works as a tutor in the Writing Center. She is on the staff of the campus creative arts magazine, Canto, and is a reviewer and staff member for The Writing Center Review. Her book review of Tokyo Butter by Thylias Moss was published in the summer 2007 issue of Ohioana Quarterly.

Ohio Public University Regional Campuses

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13. Ohio State University—Marion
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17. Ohio University—Lancaster
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19. Ohio University—Zanesville
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22. University of Cincinnati—Raymond Walters
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