CURRENTS IN TEACHING AND LEARNING
VOL. 6 NO. 1, FALL 2013

Teaching and Learning in the 21st Century: Making the Most of Collaboration, Technology, and Critical Thinking

Ana Pérez-Manrique

As I sit down to write my first editorial for *Currents* and reflect upon my new role as editor, now held for a few months, I realize yet again that teaching (and, indeed, learning) is not a one-way street, not even a bilateral exercise, but a collaborative effort that involves many in different capacities. In the process, we teach and learn new contents and develop new skills; we teach and learn how to best use those resources available to us; we teach and learn to think critically and ethically; we teach and learn to rely on the expertise of others, and in the end we experience growth, both intellectually and emotionally. All these phases that I underwent during my first semester as editor parallel the topics covered today in this issue, as the authors present their work on collaboration, team-work, technological and human resources, critical and ethical thinking, and mindfulness.

In our first essay, "Identifying Collaboration, Teamwork, and Leadership Practices on Campus," Gretchen Reevy, Christopher Chamberlain, and Julie Stein introduce us to the growing importance of these three interrelated competencies in higher education. Qualities and skills such as being adaptable, mastering teamwork, valuing and respecting diverse cultures and opinions, resolving conflict, giving constructive feedback, valuing ethics, and having the ability to listen actively are highly valued by today's job markets and industries. As a consequence, the authors of this essay sought to identify the frequency of students' exposure to collaboration, teamwork, and leadership in their coursework and co-curricular activities; assess the value that students and employers give to these competencies; and make initial recommendations regarding their integration in academic instruction.

Conscious of the technology world that we all live in, the authors of our second essay, Sara Heath and Eva White, explain the process of designing an online team-taught course in "Walking the Line: Lessons in Online Interdisciplinary Instruction." After giving initial consideration to the most persistent concerns about online instruction and its most frequent hurdles, the authors walk us through several important issues to be addressed during the design phase of an interdisciplinary online course, such as the challenges of learning the technical aspects, maintaining a high quality of instruction, developing an innovative and attractive approach to interdisciplinary team-taught courses, figuring out how to balance the disciplines equally in the curriculum,

and building a strong online community where the communication lines can replicate the benefits of face-to-face interaction. In their essay, Heath and White explain how they successfully solved these issues as part of the process of creating such a course.

Also exploring the benefits of technology in teaching and learning, Lori Tanner, Richard Hartsell, and Angela Starrett introduce us in "Tweeting or Instructing: Using Twitter as a Pedagogical Tool in College Algebra" to the use of Twitter as a primary means of delivering course content, far beyond its better known function as a social or a class discussion tool. Thanks to Twitter and mobile applications like *Inflow Plus* or *Doceri*, the authors of this study were able to make their problem-solving communication with a specific student simultaneously available in real time to every student and allowing all the students to contribute their ideas, thus extending classroom instruction beyond regular class time and also enabling students to tutor their own peers. The results proved the use of Twitter for college instruction to be highly effective in several fronts.

In our second teaching report, "Assessing Ethical Thinking as a Cognitive Task: A Reliable Rubric," Meg Gorzycki, Diane Allen, and Pamela Howard underline the importance of integrating ethical reasoning in multiple courses across disciplines, but also note the challenge it poses to educators when trying to measure this type of thinking. To that end, the authors of this report, convinced that "like critical thinking, ethical thinking can be revealed in response to cognitive tasks," have developed and refined an assessment tool to evaluate ethical thinking. The concrete results of this case study are unveiled here, a reliable "rating rubric designed to detect critical and ethical thinking represented in student responses to moral dilemmas."

Amy Getty and Dan Chibnall also delve into the topic of fostering critical thinking in "Skillful Scaffolding: Using Information Literacy Techniques to Enhance Literature Studies." In their report, the authors underline the importance of developing informational literacy skills among students, especially in this day and age when we are inundated by information and new technologies. To that end, Getty and Chibnall propose a series of scaffolded assignments, carefully designed and carried out by a close collaboration between faculty and librarians, that will allow students to acquire critical skills that can be transferable to other academic courses and to real life situations. By assigning a series of activities that require students to search for both web and traditional secondary sources related to a given class topic, to create rubrics to evaluate their findings and justify the selection of their criteria, and finally to compare and contrast their sources, the authors argue, they prepare their students to meet Information Literacy Competency Standards. These exercises allow students to practice and master the skills of defining the scope of an inquiry, access needed information efficiently, evaluate information and its sources critically, and use information ethically.

In "Enhancing Business Students' Emotional Skills Through Mindfulness Practice," the arts, in the forms of painting, film, photography, Bach, and jazz, help Charlie Yang and Ellen Durnin create and implement in the classroom three different mindfulness practices aimed to "facilitate students' learning of practical skills for paying attention to their emotions and feelings in a wholesome manner." Through the practice of mindful meditation, empathetic storytelling, and musical metaphors, the authors seek to develop "the students' inner resources for a more balanced and integrated way of life," arguing that mindfulness brings desirable benefits for a successful professional and personal life by improving working memory capacity, reducing mind wondering, and preventing mindless impulses.

Finally, in "This Way for Vampires: Teaching First-Year Composition in 'Challenging Times,'"

Sandie Friedman responds to scholar Linda Adler-Kassner and her push to eliminate any content other than writing itself from first-year composition courses. Acknowledging that the current economic crisis constitutes indeed a period of "challenging times" for students, who "are pressured to take a pragmatic, career-oriented approach to college," the author advocates the use of vampires—as a metaphor for pop culture topics—in writing courses. Friedman argues that more attractive topics serve a double purpose: they appeal to a broader spectrum of students while serving as a spring-board to spark their intellectual curiosity.

My last few lines acknowledge the collaborative effort that enables *Currents* to exist. I cannot conclude this editorial without extending my heartfelt gratitude to *Currents*' diligent team of peer reviewers, copyeditors, and APA reviewers for their commitment and dedication. This issue would have never become a reality without them: Matthew Ortoleva, Eric N. Dickman, Richard Garrett, Sara Kacin, Karen Woods Weierman, Tona Hangen, Vrinda Kalia, Jennifer Berg, Andrea Billics, Kim Hicks, MaryLynn Saul, James Bailey, Don Vescio, Frederick Dotolo, Elizabeth Siler, Gouri Banerjee, Jennifer Schulz, Joan Mahoney, Maria Fung, Reabeka King, Carol Lerch, Jennifer Lanter, Ruth Haber, Dan Shartin, Brandi Silver, and Francisco Vivoni. A special thank you to our graduate assistants Ashley Janes and Shannon Curran, to web expert Karl Wurst, to Andrea Billics and Patricia Marshall for their continuous support, and to former editor Josna Rege, for her generosity, her gracious and wise teachings, and the many hours and emails she dedicated to guide me through this new adventure. THANK YOU!

Identifying Collaboration, Teamwork, and Leadership Practices on Campus

Gretchen M. Reevy, Christopher J. Chamberlain, and Julie Stein

Abstract

In support of the newly adopted Institutional Learning Outcomes of collaboration, teamwork, and leadership (CTL) at California State University, East Bay (CSUEB) the researchers surveyed employers, students, and the course catalogue to identify the frequency of student exposure to CTL in classes and co-curricular activities and the perceived importance of these competencies. Results were that employers highly valued and that students reported frequent exposure to these skills. A literature review revealed the growing importance of CTL in education with the recognition that more work was needed to identify CTL pedagogical best practices and instruct faculty on their use.

Keywords

collaboration, teamwork, leadership, education, teaching

Gretchen Reevy holds a Ph.D. in Psychology from University of California, Berkeley. Since 1994 she has taught in the Psychology Department at CSU-East Bay. She is author of Encyclopedia of Emotion (2010) and co-editor of Praeger Handbook on Stress and Coping (2007) and Personality, Stress, and Coping: Implications for Education (2011).

Chris Chamberlain is an Associate Professor at CSUEB. He holds a Doctor of Management in Organizational Leadership from the University of Phoenix and has over 20 years of field experience working in municipal recreation in the San Francisco Bay Area. He is a regular contributor to recreation administration publications and speaks at conferences across the nation.

Julie Stein has a B.S. in Industrial Psychology and an M.S. in Human Resources Management from California State University, East Bay. She has 25 years combined experience in corporate education and college and university instruction. She is currently an Instructional Design Specialist at CSU East Bay and working on a General Education reform initiative for the CSU Chancellor's office.

Introduction

Organizations, including businesses and universities, have long recognized the growing value of collaboration, teamwork, and leadership (CTL). A rich scholarship has developed around these concepts, providing a theoretical background for understanding each. Consistent with this widespread valuing of CTL, the California State University, East Bay (CSUEB) community, through a campus-wide, inclusive year-long process, recently identified CTL as one of its six core values, stated in the form of an Institutional Learning Outcome (ILO): "Graduates of CSUEB will be able to work collaboratively and respectfully as members and leaders of diverse teams and communities" (CSUEB Academic Senate, 2012).

Leading national educational organizations identify collaboration, teamwork, and/or leadership skills as essential for college graduates. The Association of American Colleges and Universities (AAC&U, 2005), as part of a national advocacy and research initiative called "Liberal Education and America's Promise" (LEAP), has produced a list of essential learning outcomes for college students, one of which is teamwork and problem solving. The California State University, in Executive Order 1065, adopted the LEAP outcomes in September 2011 (Reed, 2011). In a 2013 survey of 318 employers con-

ducted by Hart Research Associates for the AAC&U, 67% of employers stated that they wanted colleges to place more emphasis on teamwork and collaboration in diverse group settings. In the same survey, 74% of employer respondents stated that expecting students to develop the skills to conduct research collaboratively with their peers would be a new approach to learning that had the potential to help students succeed (Hart Research Associates, 2013).

The AAC&U (2009) also created a teamwork value rubric that involves assessing individuals on the following qualities: contributions to team meetings, facilitation of the contribution of team members, individual contributions made outside of team meetings, fostering of constructive team climate, and responding to conflict. Additionally, the Academic Advising and Career Education (AACE) department at CSUEB researched skills that Bay Area employers routinely seek and produced a list of 15 frequently sought skills, one of which was teamwork and collaboration (R. Angle, personal communication, April 2010).

Faculty and administrators have also advocated for leadership training. In a report summarizing results from a study of over 50,000 students in 52 higher education institutions in the United States, the authors discussed the growing recognition in universities that leadership training was an essential component of a college education, recommending that college professors routinely instruct leadership skills, even in courses that have not traditionally focused on leadership development (Dugan and Komives, 2007).

CSUEB, now in its 52nd year as a higher education institution serving the San Francisco Bay Area, along with the 22 other CSU campuses, is in the midst of a paradigm shift regarding formal classroom pedagogy. As various job markets and industries continue to develop partnerships, collaboratives, and multi-national identities, institutions of higher education, in particular CSUEB, are grasping the growing importance of the intentional development of collaborative, team-based learning, and leadership skill in their students (Clark, 2010; CSUEB Workforce Roundtables, 2008; Drummond, 2012; Mabry, 2011). As CSUEB campus leaders came to consensus about the importance of teaching collaboration, teamwork, and leadership, it became clear that the university was uncertain about the degree to which students were exposed to CTL on campus as well as the ways in which Bay Area employers who hired CSUEB graduates used these skills in the work place.

Given the importance of CTL for college graduates, the current study sought to: (1) identify where students are exposed to CTL instruction or experiences in coursework and in co-curricular activities at CSUEB, (2) assess the value that two groups of stakeholders, students and employers, placed on CTL competencies, and (3) make preliminary recommendations regarding CTL instruction at CSUEB based upon a review of the external literature and opinions of CSUEB students and employers of CSUEB graduates. For the purposes of this study, collaboration, teamwork, and leadership were defined as follows:

Collaboration involves working with others cooperatively to solve problems, make decisions, or produce something that cannot easily be produced by someone acting alone (Zaccaro, Rittman & Marks, 2001). Collaboration requires the ability to communicate openly, to value and work with diversity, and to respond constructively to conflict (Larson and LaFasto, 1989). Collaboration can be short term and informal, or it can develop over time and with more formal agreements about how outcomes will be achieved.

Teamwork occurs where people interact to accomplish shared goals. Teamwork involves cooperating and coordinating to get work done in an interdependent fashion, with defined roles, and clear objectives (Kouzes and Posner, 2007; Levi, 2011). Team members are often selected on the basis of the knowledge, skills, and

experience that they contribute to the work of the team. Teamwork is usually best accomplished with the influence of a leader and a team that has shared accountability for its actions. Working in teams involves sharing one's expertise and relinquishing some autonomy to work closely with others to achieve better outcomes. Teamwork requires the ability to establish productive working relationships, applying interpersonal communication skills, working well with diverse others, and responding constructively to conflict.

Leadership is a reciprocal influence relationship in which leaders enlist the support of others engaged with them in the accomplishment of a common goal (Bass, 1985; Bass and Avolio, 2000; Burns, 1978; Rost, 1993). Leaders are responsible for achieving a group's shared commitments and desired outcomes. To be effective, leaders must be able to communicate a vision that engages others toward a common goal. Effective leaders value all team members' contributions, and they interact with team members in ways that draw out potential contributions. Leaders communicate expectations, enroll others in the common goal, set the direction for team action, provide guidance and feedback, motivate followers, and encourage cooperation.

Research and Findings

The current research involved three components: (a) a survey of employers who participated in job fairs on campus during October 2012, February 2013, or April 2013; (2) an online survey of CSUEB students; and (3) a survey of the CSUEB 2011-2012 course catalog. Our original research methods included the collection of faculty syllabi across colleges, but our results did not yield a sample that was either large enough or adequately representative to enable analysis of this component.

Employer Survey

Employer surveys were distributed to job fair participants by one of the researchers or a CSUEB Academic Advising and Career Center employee. Job fair participants were asked to complete the survey at their convenience and return the survey to the researcher either at the completion of the job fair, in person, or through U. S. mail. The employer survey was a three-page hard-copy questionnaire that asked the employers to evaluate the importance of the abilities to collaborate, to work with a team, and to exercise leadership in their employees. The survey also included demographic questions. The assessment of CTL included both overall questions about CTL (e.g., "How important is the ability to collaborate when you consider hiring college graduates?") and questions about specific features of or skills involved in collaboration, teamwork, and/or leadership (e.g., "Rate the importance of the following competencies for success in your organization: the ability to actively listen"). The survey also included open-ended questions. Twenty-seven employers completed the survey. Employer respondents reported their type of business as follows: private company or publicly traded company (33.3%), non-profit organization (11.1%), government agency or municipality (25.9%), school, school district, college, or university (18.5%), or other (7.4%) -- (3.7% did not answer the question). Numeric results of the employer survey are presented in Table 1.

Results indicated that employers rated collaboration, teamwork, and leadership as very important competencies for their employees; each item on the questionnaire was rated higher than four (out of a maximum of five). Open-ended survey responses, described below, also revealed the importance that employers place on CTL skills and provided a vivid, real-world picture of the ways in which these skills were applied in the workplace.

Qualitative survey responses

In response to the question, "Which *collaboration* skills would you most like to see in college graduates?" the skills most frequently cited were good oral and written communication, strong interpersonal skills, the ability

Survey Item	Mean
1. How important is the ability to collaborate when you consider hiring college graduates?	4.63
2. How important is teamwork ability when you consider hiring college graduates?	4.85
3. How important is leadership ability when you consider hiring college graduates?	4.56
4. Rate the importance of the following competencies for success in your organization:	
4.1. Understanding the ways that cultural, gender and other differences can affect team dynamics	4.23
4.2. Collaborating within diverse groups with patience, objectivity, respect, inclusivity and equity	4.80
4.3. Crafting consensus when presented with differing values, perspectives and priorities	4.40
4.4. Identifying, mitigating, and resolving conflicts	4.64
4.5. Understanding team member roles and responsibilities	4.52
4.6. Applying the key elements of leadership, including fair allocation of work and rewards	4.38
4.7. The ability to participate in team decision-making and creative group brainstorming	4.52
4.8. The ability to actively listen	4.96
4.9. The ability to give and receive constructive feedback	4.80
4.10. Being sensitive to and appreciative of the views of others	4.68
4.11. Being comfortable in diverse social and professional setting	4.60
4.12. Being aware of one's own perspectives and biases	4.64
4.13. Understanding the implications of values and ethics for leadership, teamwork and collaboration	4.80
4.14. Leading diverse groups with patience, objectivity, respect, inclusivity, and equity	4.64
4.15. The abilities to identify strengths of team members and nurture these strengths in service of group goals	4.24

Note. n = 27. Scale for items 1-4 is as follows: 1 = not at all important; 3 = moderately important; 5 = very important.

Table 1: Results of Employer Survey: Mean Scores for Survey Items

to manage conflict, and valuing and respecting the different cultures and opinions of others. In response to the following, "Describe... under what circumstances employees in your organization need to collaborate," the most frequent responses were program development, special projects, in support of the organization's mission and goals, for product development, process improvement, making decisions under pressure, addressing client concerns, and working in client communities.

In response to the question, "Which *teamwork* skills would you most like to see in college graduates?" the skills most frequently cited were operating as a part of many teams, adaptability, working with others' ideas, clearly communicating, and listening. In response to the following, "Describe... under what circumstances employees in your organization work in teams," the most frequent responses were: acting quickly and effectively in the client's best interest, intervening in a crisis, to support communities, to establish rapport, and to work with other viewpoints and diverse groups.

In response to the question, "Which *leadership* skills would you most like to see in college graduates?" the skills most frequently cited were: leading by example, high personal accountability, conflict and problem resolution, and high integrity. In response to the following, "Describe... under what circumstances employees in your organization use leadership abilities," the most frequent responses were [when]: able to take constructive criticism from their manager, positive and hard-working, meeting the needs of the community, "stepping up" when needed, and working on multiple teams.

Interpretation of employer survey results

A few themes emerged from the employer survey results. First, employers reported that they valued all CTL competencies assessed in the survey. Both communication skills and listening were rated relatively highly in the numeric results and were mentioned frequently in the qualitative data. Additionally, valuing and respecting diverse cultures and opinions was mentioned frequently. In general, collaboration and teamwork skills were valued more highly than were leadership skills. In summary, employers in our survey valued highly the multi-dimensional ways that employees get work accomplished through working together and also valued employees' leadership behaviors whether or not in a formal leadership position.

Student Survey

A link to an online survey was sent to CSUEB students in the winter quarter of 2013. The survey was managed through the Office of Planning and Institutional Research on campus and the software used was Qualtrics. The survey link was sent to 2940 CSUEB students (588 freshmen, 588 sophomores, 588 juniors, 588 seniors, and 588 graduate students), which represented 17% of the total CSUEB student body in winter 2013. A total of 877 (29.2 % of the 2940) started the survey and 690 (23.5%) completed the survey. One hundred sixty of the 877 were deleted because they did not answer any CTL questions. The final sample consisted of 717 (24.4% of the 2940 recipients). The survey asked respondents to estimate how frequently they were exposed to CTL and related experiences in classes and co-curricular activities, the extent of their involvement in co-curricular activities, identification of CSUEB courses in which they were exposed to CTL, and their assessment of the degree to which their CTL experiences at CSUEB prepared them for the workforce and contributed to their personal growth. They were asked to consider all quarters in which they were enrolled at CSUEB when answering these questions. The survey also included demographic questions. Most demographic characteristics of survey respondents, and demographic characteristics of CSUEB students in general, reported for comparison purposes, are presented in Table 2. Men are underrepresented in the current study (30.4% in current sample compared to 39% at CSUEB). Although ethnicity was assessed somewhat differently for the current study compared to

the institutional data from the university, it appears that individuals identifying as Asian and as multiracial, race unknown, or other, may be overrepresented in the current sample. In the current sample participants ranged in age from 15 to 63 with a mean of 25.8. Average age of CSUEB students was 25.0 in winter quarter of 2013. Lastly, in the current study, respondents represented diverse majors and reported their current class standing as follows: 20.9% freshman; 16.3% sophomore; 16.9% junior; 21.6% senior; 22.6% graduate student; 1% open university; 0.5% missing. Results of the student survey are presented in Tables 3 and 4.

Summary of student survey results

Results indicated that students reported exposure to CTL experiences or instruction and/or group activities frequently in their coursework; students reported at least one of these types of experiences in about 50% of courses. Participation in co-curricular activities was generally low. Our literature search did not reveal data that may provide a direct comparison to the co-curricular survey data we obtained; we could not, therefore, evaluate the typicality of the participation rates reported in the current study. However, Walpole (2003) reported on a large sample (n = 2417) of four-year low-income college students, sampled from several universities across the United States, who were asked whether they spent any time in student clubs or groups. Forty-eight percent responded that they spent no time at all in student clubs, a result that suggests that CSUEB co-curricular participation rates may range from low to typical, although further research is needed to draw this conclusion.

Students reported that coursework generally prepared them to be effective as both team members and leaders; students further reported that coursework contributed more to their team member and leader effectiveness than did participation in co-curricular activities. Students claimed personal growth in both team member and leader effectiveness over the time that they had attended CSUEB, and they attributed part of this growth to their experiences at CSUEB. In summary, from the student perspective the university appeared to be frequently exposing students to CTL and group activities in courses, and students perceived that their classroom experiences were at least moderately effective in preparing them as team members and leaders. Further study of CSUEB co-curricular activities is needed to determine where and how CTL exposure exists in those activities, and whether the exposure is effective in teaching CTL competencies.

Because students' ratings of the degree to which CSUEB prepares them to enter the workforce as effective leaders and team members were relatively low in comparison to the ratings that employers supplied regarding the value of these competencies, we analyzed the data on the two relevant student survey items separately for different class levels (freshman, etc.). We anticipated that students taking smaller classes (graduate students and seniors, and to a lesser extent, juniors) and freshmen at CSUEB may perceive that CSUEB prepares them relatively effectively compared to sophomores' perceptions of CSEUB's effectiveness. Each CSUEB freshman student is part of a year-long learning community infused with high impact practices that include CTL components such as common intellectual experiences, collaborative assignments and projects, and service learning. The sophomore year lacks this structure; additionally, sophomores are more likely to be in large lecture classes where CTL is less likely to be integrated into the curriculum.

One-way ANOVAs were conducted on each of the two relevant survey items, with class level as a factor. For the item, "To what extent do the following aspects at CSUEB prepare you to enter the workforce as an effective *leader*: course work?" the result of the omnibus ANOVA was non-significant $F(5, 648) = 1.12$, $p = .351$. Mean ratings on the item were 3.62 for freshmen, 3.32 for sophomores, 3.46 for juniors,

Demographic Variable	% in Survey Sample	% in CSUEB Population
Gender		
Male	30.4	39
Female	67.0	61
Other or Missing	1.5	
Racial/Ethnic Background		
American Indian or Alaskan Native	0.4	0.3
Asian or Pacific Islander	32.5	22.6
Black	12.2	11.2
White	24.9	20.7
Multiracial	12.0	15.4*
Other or Race Unknown	14.5	
Missing	3.5	
Hispanic/Latino	23.3	22.3
International	8.1	7.5

Note: In the current study, two questions assessed ethnic background: one which asked about all backgrounds except Hispanic/Latino and a separate question asking about Hispanic/Latino background; percentages for all ethnic background except for Hispanic/Latino add up to 100. Regarding the CSUEB data, all information about ethnic background, including Hispanic/Latino, and international student status were derived from a single question.

*This percentages represents multiracial, other, or race unknown.

Table 2: Demographic Characteristics of Student Survey Respondents and of Students Who Attended CSUEB in Winter 2013

3.51 for seniors, and 3.61 for graduate students. For the item, "To what extent do the following aspects at CSUEB prepare you to enter the workforce as an effective *team member*: course work?" the result of the omnibus ANOVA was significant $F(5, 639) = 2.76$, $p = .018$. Mean ratings on the item were 3.93 for freshmen, 3.53 for sophomores, 3.86 for juniors, 3.82 for seniors, and 4.03 for graduate students. For the item about team membership, pairwise comparisons of each mean with every other mean were conducted using Tukey's HSD test. Results revealed that the mean rating produced by sophomores (3.53) was significantly lower than graduate students' mean rating (4.03), $p = .012$, supporting the idea that smaller class size and/or engagement in relatively more CTL experiences may leave students with the perception that they are relatively well prepared for CTL competencies in the workplace. None of the other comparisons produced significant results. Although most comparisons on the two survey items did not produce significant differences, on both survey items, mean scores are lowest for sophomores and are highest for freshmen and graduate students.

Survey Item	Percentage
1. Please indicate the percentage (%) of courses which involved learning about or the course work required:	
1.1. Group work	50.55
1.2. Leadership	46.96
1.3. Teamwork/collaboration	55.29
1.4. Applying teamwork and leadership skills in a real-life setting	50.93
1.5. The influence of diversity (culture, race, gender, or age) upon group behavior	55.78
1.6. Identification and resolution of conflicts within groups	46.42
1.7. Collaboration and creative group brainstorming	53.36
1.8. Respecting the views of others in group settings	65.05
1.9. Importance of integrity and ethics when interacting in a group	62.72

Note: n for all items ranges from 612 to 687

Table 3: Results of Student Survey: Percentages for Survey Item #1

Course Catalog Survey

The course catalog survey was conducted using the CSUEB 2011-2012 catalog. Each of the departments on campus was researched separately, a total of 88 programs, scanning for the following words in course descriptions: "leadership," "teamwork," "collaboration," and "group." Table 5 illustrates the incidences of these key words in course descriptions. The courses are organized by college.

As the table shows, course catalog descriptions generally make infrequent reference to the CTL terms we searched. This result is inconsistent with the student survey results presented in Table 3, which show that student survey respondents perceived that CTL experiences or instruction are present in the majority of courses.

Conclusions and Recommendations for Future Research and Practice

This study represented a first step toward understanding the prevalence of CTL instruction and exposure on college campuses, the value that students, faculty, and employers place on CTL instruction and exposure, and ultimately, the ways in which CTL may be effectively taught. The current study specifically addressed the prevalence of CTL on one college campus through surveying both students and the course catalog and the value that students at the campus and local employers place on CTL competencies. The student survey

Survey Item	Mean
2. Have you been involved in any of these co-curricular activities?	
2.1. Student Government	1.19
2.2. Academic clubs	1.30
2.3. Cultural clubs	1.28
2.4. Greek organization (fraternity/sorority)	1.17
2.5. Recreational clubs	1.22
2.6. Religious clubs	1.12
2.7. Special interest clubs (orientation team, peer advocates, etc.)	1.20
2.8. Attending intercollegiate athletic events	1.32
2.9. Attending campus entertainment events, such as comedy shows, dance performances, etc.	1.52
2.10. Attending campus intellectual events out of the classroom, such as seminars, special lecture events, etc.	1.55
2.11. Recreation and Wellness Center programs and events	1.65
3. To what extent do the following aspects at CSU East Bay prepare you to enter the workforce as an effective leader?:	
3.1. course work	3.46
3.2. co-curricular activities	3.29
4. To what extent do the following aspects at CSU East Bay prepare you to enter the workforce as an effective team member:	
4.1. course work	3.80
4.2. co-curricular activities	3.44
5. Your personal growth since entering CSU East Bay can be attributed to many factors some of which may NOT be related to your experiences at this college. PERSONAL GROWTH: Indicate the extent of your personal growth since entering this college (regardless of the college's contribution to that growth). COLLEGE CONTRIBUTION: Indicate the extent of the college's contribution (i.e., your college experience both in and out of class) to your growth.	
5.1. Personal growth in regard to becoming an effective leader	4.01
5.2. Personal growth in regard to becoming an effective team member	4.07
5.3. College's contribution to growth in regard to becoming an effective leader	3.58
5.4. College's contribution to growth in regard to becoming an effective team member	3.69

Note: n for all items ranges from 612 to 687. For question #2, 1 = never, 2 = occasionally, 3 = often. For questions #3, #4, and #5, 1 = none, 3 = moderate, 5 = very much

Table 4: Results of Student Survey: Means for Survey Items #2 through #5

revealed that students were reporting frequent exposure to CTL experiences in courses at CSUEB and believed they benefited from these experiences. The research with CSUEB employers revealed that CTL competencies were highly valued in our graduates. Our results corroborate the results of the Hart Research Associates survey (Hart Research Associates, 2013) which found that a majority of employers highly value teamwork and collaboration skills in their employees. Our results also extend the findings of Hart Research Associates by investigating the perceived value of many specific aspects of CTL (e.g., listening, valuing ethics, giving constructive feedback, resolving conflict, collaborating within diverse groups), and showing that a sample of CSUEB employers highly value all aspects of CTL that we surveyed. Additionally, we extended the Hart survey by collecting students' opinions regarding the effect of CSUEB instruction and experiences on workforce preparation for CTL and personal growth in CTL. In general, our current study and our external literature review revealed that educators, students, and employers agreed that learning CTL competencies was a fundamental part of a college education.

Next Steps for Research on CTL Instruction and Experiences on Campuses

We propose some next steps for research on CTL instruction and experiences on campuses. One next step will be to investigate the frequency with which faculty believe they are providing CTL instruction or experiences, the frequency with which the CTL experiences they provide are *intended* to teach CTL competencies (as opposed, for instance, to being used to reduce workload through requiring written papers for groups of students rather than for individual students), and the pedagogical approaches faculty are using to develop CTL competencies in students. Ultimately, research will involve identifying which CTL teaching methods

College	Leadership	Teamwork	Collaboration	Group
Science (677)	2 (.30%)	4 (.60%)	0	20 (2.3%)
Letters, Arts, & Social Sciences (1270)	9 (.71%)	5 (.40%)	6 (.47%)	62 (4.9%)
Business & Economics (273)	2 (.73%)	6 (2.2%)	1 (.37%)	3 (1.1%)
Education & Allies Studies (471)	63 (13.4%)	8 (1.7%)	8 (1.7%)	32 (6.8%)
Library (2)	0	0	0	0
Other (11)	0	0	0	5 (45.5%)

Note: "Other" includes programs not associated with a particular college such as General Studies. Numbers in parentheses next to name of college represent the total number of courses in that college. Percentages in parentheses next to incidences represent the percentages of courses in that college which include the relevant term (e.g., "leadership") in course descriptions.

Table 5: Course Catalog Survey: Incidences of the Words "Leadership," "Teamwork," "Collaboration," and "Group" in Courses, Organized by College.

are effective. Research on faculty will involve obtaining course syllabi and interviewing faculty individually. As data from faculty are obtained, these data can be compared to data from students. Students' perceptions of class experiences may or may not align with faculty perceptions. Our student survey results indicate that students perceive that CTL instruction or activities are occurring frequently in classes as indicated in Table 3, but without corresponding data from faculty, we do not know the extent to which faculty perceive that they are teaching CTL, either for the express purpose of teaching CTL or because requiring group work of students can reduce workload for faculty.

A second and related next step will be to determine the *nature* of CTL that is valued and formally taught: what are faculty members' concepts of CTL? Do faculty view collaboration, teamwork, and leadership as interrelated concepts? Do they believe that CTL processes should be primarily task-oriented ones? While collaboration, teamwork and leadership can exist independently of each other in theory and were often described this way in early CTL literature, in real-world contexts and in more modern conceptualizations, they are often linked or interrelated. For example, Foster (1989) related leadership to a communal and collaborative process, based on a dynamic relationship built of networked relationships of trust and norms of reciprocity. Collaborating with others often leads to the concept of team, as defined in the current study, as having varying degrees of reciprocal leadership processes in it. This is contrasted, for example, with the concept of leadership as an authoritarian, top down leadership style, or teamwork or collaborative working that is task-oriented without being relationship-orientation. A process in which each member does a piece of the project with little or no interaction other than his or her assigned role and/or deliverable product bears a stark contrast to what Bass (1985), Foster (1989), and Kouzes and Posner (2007) describe as an emerging, prevailing style of leadership that is more transformational and collaborative in nature. The concept of trust was also found to be more identifiable in relationships that were more relations-oriented and participative in nature between leaders and followers (Bass, 1990; McGregor, 1960). Fukuyama (1997) noted that those who do not trust each other will only work together under a system of formal rules and regulations. Such a lack of trust will diminish the ability of the organization to grow, learn, and develop as a team. Trust, therefore, becomes a common thread that links collaboration, teamwork and leadership. Future research on the teaching of CTL would benefit from assessing the nature and level of understanding of these concepts that faculty members themselves possess.

A third next step will be to survey recent graduates of CSUEB after they have joined the workforce about their impressions of their CTL preparation. In our results, students felt moderately prepared for the workforce in regard to CTL competencies, and their perceptions of preparation varied somewhat by class level (i.e., freshman, etc.). However, those students who did not currently have jobs or who had not worked while attending CSUEB rated those items about workforce preparation based on speculation rather than on direct experience in the workforce.

General Recommendations for CTL Instruction, Based on Current Study Results and Literature Review

Recent reports published by large research groups, such as the AAC&U and the National Research Council, recommend that teaching at all levels, including university, focus on "deeper learning," which means learning that will "transfer" to new situations (AAC&U, 2005; National Research Council, 2012). Both the AAC&U and the National Research Council specify that focusing on deep learning and learning transfer is relevant to the teaching of CTL competencies, among other types of competencies.

Teaching for transfer may be achieved through various methods. For example, teaching should be done in an intentional and systematic fashion, with learning goals that are clearly defined. Results of research indicated that "learning for transfer requires knowledge that is mentally organized, understanding of the broad principles of the knowledge, and skills for using this knowledge to solve problems" (National Research Council, 2012, p. 4-25). As described above, without data from faculty, we do not yet know the extent to which CTL instruction at CSUEB is intentional and systematic.

Another teaching method that leads to deeper learning is to provide students with ample opportunity to practice new knowledge and skills. Learning is much less likely to "stick" without sustained practice (AAC&U, 2009; National Research Council, 2012). At CSUEB students report that they are exposed to CTL experiences frequently in classes, and thus may be experiencing "sustained practice." Clearly, sustained practice is a necessary but not sufficient condition for learning; teaching methods must also be effective.

A general instructional technique or attitude that is helpful regardless of the content of the lesson is to encourage students to believe that their personal qualities can be improved, since evidence reveals that individuals who think this way perform better on cognitive tasks (Yeager and Walton, 2011). This message of malleability could be communicated to students by their professors and by personnel in centers on campus that work one-on-one with students to improve their learning and skills, such as disability services and tutoring services. For instance, some people believe that there are "born leaders," but evidence indicates that leadership qualities can develop in individuals (Kouzes & Posner, 2002).

College faculty will need to be taught how to integrate new teaching principles into their teaching. This will require faculty development work and adequate time for the faculty to receive training (National Research Council, 2012). Universities should support offices of faculty development on campuses in their training of faculty in teaching methods that may not be well known (e.g., the importance of sustained practice across courses and of clear articulation of learning goals in a course).

Conclusions

CSUEB students report frequent exposure to CTL experiences. The researchers were surprised to learn that students appear to be gaining experience with teamwork and collaboration in classes at a much higher rate than is represented in the course catalog; CTL instruction at CSUEB is partly "hidden" at present and it is expected that this is also true on other campuses. Although our students may be experiencing "sustained practice" in CTL on campus, there is not yet sufficient evidence at CSUEB, or at universities in general, about the degree to which and the ways in which our CTL teaching practices are effective. There is a need for research that includes faculty members' reports of frequency of CTL instruction, both "intentional" and for pragmatic reasons (e.g., reducing workload), and of faculty members' methods for teaching CTL. Employers highly value CTL competencies and it is incumbent upon universities to prepare students for the 21st century workplace.

Acknowledgments

Dr. Michael Moon, contributor; Dr. Sharon Green, contributor; William Goodman, student researcher; Sylvia Head, Academic Advising and Career Education; Lawrence Bliss, Academic Advising and Career Education; and Amber Machamer, Planning & Institutional Research. This work was supported by a California State University, East Bay Programmatic Excellence and Innovation in Learning grant.

References

Association of American Colleges and Universities. (2005). *The essential learning outcomes.* Retrieved June 20, 2013 from http://www.aacu.org/leap/vision.cfm

Association of American Colleges and Universities (2007). *College learning for the new global century.* Retrieved from http://www.aacu.org/leap/documents/GlobalCentury_final.pdf

Association of American Colleges and Universities. (2009). *VALUE: Valid assessment of learning in undergraduate education*. Retrieved November 10, 2013 from http://www.aacu.org/value/rubrics/Teamwork.cfm

Bass, B. (1985). *Leadership and performance beyond expectations*. New York: The Free Press.

Bass, B.M. (1990). *Bass & Stogdill's handbook of leadership: Theory, research & managerial applications* (3rd ed.). New York: The Free Press.

Bass, B.M., Avolio, B.J. (2000). *MLQ multifactor leadership questionnaire* (2nd ed.). Redwood City, CA: Mind Garden, Inc.

Burns, J.M. (1978). *Leadership*. New York: Harper & Row.

California State University, East Bay Academic Senate. (2012). *Institutional learning outcomes*. Paragraph 2. Retrieved from http://www20.csueastbay.edu/faculty/senate/files/Policies/ilo-sen-prez-approved-5-24-12.pdf

California State University, East Bay Workforce Roundtables (2008). *Educational strategies for meeting the East Bay Area's emerging workforce needs*. Retrieved from http://www20.csueastbay.edu/about/strategic-planning/files/pdf/Educational%20Strategies%20for%20Workforce%20Needs.pdf

Clark, N. (2010). Developing emotional intelligence abilities through team-based learning. *Human Resource Development Quarterly,* 21 (2), 119-138. doi: 10.1002/hrdq.20036

Drummond, C.K. (2012). Team-based learning to enhance critical thinking skills in entrepreneurship education. *Journal of Entrepreneurship Education,* 15, 57-63.

Dugan, J. P., & Komives, S. R. (2007). *Developing leadership capacity in college students: Findings from a national study. A Report from the Multi-Institutional Study of Leadership.* College Park, MD: National Clearinghouse for Leadership Programs.

Foster, W.F. (1989). Toward a critical practice of leadership. In J. Smyth (Ed.), *Critical perspectives on educational leadership* (pp.39-62). London: Falmer.

Fukuyama, F. (1997). *The end of order*. London: Social Market Foundation.

Hart Research Associates. (2013). *It takes more than a major: Employer priorities for college learning and student success*. p. 8, 10. Retrieved from http://www.aacu.org/leap/documents/2013_EmployerSurvey.pdf

Kouzes, J.M., & Posner, B.Z. (2007). *The leadership challenge: How to get extraordinary things done in organizations* (4th ed.). San Francisco: Jossey-Bass.

Larson, C.E., & LaFasto, F.M.J. (1989). *Collaborative team leader survey*. Denver, CO: Author.

Levi, D. (2011). *Group dynamics for teams*. Thousand Oaks, CA: Sage.

Mabry, S. (2011). Tackling the sustainability dilemma: A holistic approach to preparing students for the professional organization. *Business Communication Quarterly,* 74 (2), 119-137. doi:10.1177/1080569911404051

McGregor, D. (1960). *The human side of enterprise*. New York: McGraw-Hill.

National Research Council. (2001). *Knowing what students know: The science and design of educational assessment.* J.W. Pellegrino, N. Chudowsky, and R. Glaser, (Eds.). Committee on the Foundations of Assessment, Board on Testing and Assessment, Center for Education, Division of Behavioral and Social Sciences and Education. Washington, D.C.: National Academy Press.

National Research Council. (2012). *Education for Life and Work: Developing Transferable Knowledge and Skills in the 21st Century.* Committee on Defining Deeper Learning and 21st Century Skills, James W. Pellegrino and Margaret L. Hilton (Eds.). Board on Testing and Assessment and Board on Science Education, Division of Behavioral and Social Sciences and Education. Washington, DC: The National Academies Press.

Reed, Charles B. (2011). General Education Breadth Requirements - Executive Order No. 1065. Retrieved from http://www.calstate.edu/eo/EO-1065.html

Rost, J.C. (1993). *Leadership for the twenty-first century*. Westport, CT: Praeger.

Walpole, M. (2003). Socioeconomic status and college: How SES affects college experience and outcomes. *The Review of Higher Education,* 27(1), 45-73. doi: 10.1353/rhe.2003.0044

Yeager, D.S. & Walton, G.M. (2011). Social-psychological interventions in education: They're not magic. *Review of Educational Research,* 81, 267-301. doi: 10.3102/0034654311405999

Zaccaro, S.J., Rittman, A.L., & Marks, M.A. (2001), Team Leadership. *Leadership Quarterly,* 12, 451-493. doi: 10.1016/S1048-9843(01)00093-5

Walking the Line: Lessons in Online Interdisciplinary Instruction

Sarah E. Heath and Eva Roa White

Abstract

A growing body of scholarly literature shows that online instruction is increasing in popularity, although many faculty members continue to harbor reservations about following this trend. Concerns among faculty persist in spite of growing institutional support in the form of faculty training and financial incentives. This exploration of a series of online, upper-level, team-taught interdisciplinary courses addresses some of the perceived barriers to online teaching. These courses engaged current scholarship about the major issues in online instruction, including technical training, instructional design, and development of productive managerial and social roles. Furthermore, this paper focuses specifically on team teaching, a field that has enjoyed less scholarly inquiry. We make a series of recommendations that might encourage more participation in online interdisciplinary instruction.

Keywords

online instruction, interdisciplinary teaching, team teaching, online team teaching, barriers in online teaching, teaching roles

Sarah Heath is an Assistant Professor of History in the Department of Sociology, History, and Political Science at Indiana University Kokomo, where she teaches courses in the social and cultural history of the United States. She is interested in many elements of the scholarship of teaching and learning, including team teaching and best practices in online instruction.

Eva Roa White is an associate professor of English in the Department of Humanities at Indiana University Kokomo, where she teaches literature and writing courses. Aside from her interest in the scholarship of teaching and learning, her research focuses on Immigration Studies, Irish Studies, Galician Studies, British Literature and Cultural Studies.

Introduction

For several years, institutions of higher education have faced increasing pressure to introduce and expand online course offerings (Allen & Seaman, 2011; Lloyd, Byrne, & McCoy, 2012). Because they accommodate student scheduling demands and commuting or work preferences, online course offerings provide an element of convenience that many students appreciate. These are also attractive to campuses that continually seek to sustain enrollments by providing flexibility. Many campuses are seeking means by which they can increase institutional revenue and better utilize campus and personnel resources. In a world that is often eager to adopt and exploit technological developments, it seems logical to anticipate that online or other virtual systems of class delivery will continue to be in demand as part of the trend towards modernization and globalization of the collegiate curriculum.

However, many instructors have valid concerns about the rising popularity of online instruction. Some are preoccupied with acquiring sufficient tech-

nical training to organize and present materials online. Others worry that courses without face-to-face meetings remove a crucial interactive component from their work with students. Still more perceive online courses as lacking key pedagogical elements and thus robbing students of a high-quality learning experience. Indeed, the available research often shows that these perceived concerns about online instruction are so powerful that they discourage many faculty members from participating in online instruction at all.

A new conversation about Massive Open Online Courses, or MOOCs, further complicates the consideration of online instruction. Usually free, MOOCs provide an opportunity for some campuses to offer popular courses with the hope that they may encourage future online enrollment (and revenue). Some have come to praise MOOCs as one of the best ways to draw in students who are already tech savvy and who may be attracted to the online courses that involve especially compelling delivery formats. Others, however, criticize the high dropout rates in MOOCs and are concerned that a completely online delivery will deny students the value of the face-to-face learning and mentoring that take place on physical campuses (Friedman, 2013; Kolowich, 2013; Rivard, 2013; Winkler, 2013). Even though academics have not yet researched the merits and flaws of MOOCs to a great extent, MOOCs inspire concern among some instructors. The media focus on this new form of instruction seems to place pressure on some institutions to try to expand enrollments drastically by rushing to expand online offerings. To their credit, many administrators wish to participate in academic innovation for better reasons than media interest. However, some faculty members fear that the rapid expansion of online offerings may jeopardize the quality of those courses.

With these considerations in mind, we set out to create a series of online, interdisciplinary, team-taught courses about the history and literature of Irish and Irish-American identity, migration, politics, and conflict from the mid-nineteenth century to the present. While we were aware of (and experienced) some of the challenges that accompany any sort of new course preparation, we were particularly wary of the pitfalls of teaching online. As a result, our online course content engaged the rapidly-developing scholarship about online teaching and learning. We found that this approach to online instruction was fruitful.

In its several forms, "Walking the Line," the metaphor that gives our article its title, refers to the basic challenges and techniques that led to our success in interdisciplinary online team teaching and that should help others, as well. We consider several kinds of lines:

» Tightrope: Here, "walking the line" meant sustaining a balance between the disciplines of history and literature. We achieved this balance by complementing traditional historical and literary written resources with other media (film, music, podcasts, and digitized media). This enabled the two of us—and our students—to engage both academic fields as we considered any of the resources. Instructors who consider team teaching online interdisciplinary courses should give thought to locating resources that will help them balance the presentation of materials from their academic fields.

» Borderlines: The available literature about best practices in online instruction was a helpful borderline that defined and clarified our approaches to these courses. As well, clear rubrics that guided student activity and assessment helped us and our students to stay aligned with course objectives. We felt that seeking pedagogical and technical training should be considered by all instructors interested in online education. In this case, drawing inside the lines can be a helpful source of support rather than a burdensome restriction.

» Lifeline: Staying connected to sources of support was important for us and our students. Creating an online community and lines of communication was crucial to replicating the beneficial elements of face-to-face mentoring and interaction that students miss in some online situations. For us, links to campus resources, such as online pedagogical training, peer review, and technical support, were key. Finally, establishing and maintaining a harmonious working relationship between the two of us was also fundamental to the success of our team-taught online courses.

Literature Survey

For many faculty members, there are persistent concerns about online instruction. These include the perceived quality of online instruction; the ability of students to engage the material in useful or effective ways; the fear that high enrollments or increased workload may exploit instructors compared to a "normal" course load; and the perceived lower quality of online course offerings (Kim & Bonk, 2006; Lloyd, Byrne, & McCoy, 2012). Additionally, although some instructors are interested in developing online courses, many worry about their ability to create interesting and engaging classes that sustain the effectiveness they strive to maintain in the physical classrooms (Gorsky & Blau, 2009; Kreber & Kanuka, 2006). Some raise concerns about their technical abilities (Breinhaupt, Fisher, Gardner, Raffo, & Woodard, 2011). Others fear that online courses require different pedagogical approaches that they may not have acquired (Baran, Correia, & Thompson, 2011; Breinhaupt, et al., 2011; Wilson & Stacey, 2004). The ongoing reluctance of some instructors to explore this instructional format may help to explain the relatively low rates of participation in online teaching (Allen & Seaman 2011; Lloyd, Byrne, & McCoy, 2012).

Less frequently investigated is the intersection between two popular areas of scholarly investigation—online coursework and interdisciplinary instruction. Numerous contributors have presented their visions of the pitfalls and the promises of interdisciplinary learning and team teaching (Auman & Lillie, 2008; Dyrud, 2010; O'Neill, 2010; Shibley, 2006). Online instruction, however, presents new considerations about the possibilities in team teaching. In an early article, Stohschen & Heaney (2000) express some trepidation about organizing a team-taught online course, but find that the ability to take risks, to disagree with each other, and to assess responses provide for an enjoyable experience (p. 41). Indeed, team teaching can connect both students and instructors at any distance, whether on a single campus or around the world. However, some learners may not experience the same sense of reward. Capdeferro and Romero (2012) conclude that online learners are sometimes "frustrated" with various collaborative learning activities and suggest that instructors' awareness of those frustrations may improve learners' online experiences (p. 38). Others, however, adopt a more optimistic outlook, claiming that online "co-teaching" provides numerous opportunities that benefit both students and instructors, including exposure to diverse points of view, timeliness of feedback, and ability to engage in collaboration or sharing of the workload (Scribner-MacLean & Miller, 2011).

Researchers have published numerous contributions that suggest what kinds of approaches should be used in order to improve college instruction. Some of these authors focus particularly on improving online teaching (Bain, 2004; Breinhaupt, et al., 2011; Brindley, Walti, and Blaschke, 2009; Gorsky and Blau, 2009; Kim & Bonk, 2006; Kreber & Kanuka, 2006; Schrum & Hong, 2002; Scribner-MacLean & Miller, 2011; Wiesenberg & Stacey, 2008; Wilson & Stacey, 2004). In fact, many instructors have concluded that online instruction offers numerous benefits. Strohschen and

Heaney (2000) certainly expressed their own apprehension over a decade ago, but they conclude that "traveling with a partner made the journey easier and more than doubled our resources in the strange digital environment we had entered" (p. 33). In addition, Wilson and Stacey (2004, p. 33) claim that when instructors take the time to construct assignments that enable "groups to socially construct knowledge," the quality of online instruction and interaction improves.

Breinhaupt et al. (2011) begin with Ken Bain's (2004) often-cited monograph as a basis for their compilation of best practices in online instruction, which include faculty learning communities to bolster online and technological skills, fostering student engagement, stimulating intellectual development, and building rapport with students (pp. 2-5). They and others note that the wealth of scholarly publications about face-to-face classroom experiences may be adapted to online teaching and learning experiences, but that doing so requires significant reflection about the content and the processes used (Breinhaupt, et al., 2011; Kreber & Kanuka, 2006). While it is likely that instructors respond to both the positive features and the challenges of online courses in different ways, it is safe to say that an awareness of the potential payoffs and problems will help to improve the overall experience.

Applying Best Practices

At our small, regional campus, administrators have paralleled the national trend, encouraging faculty to consider developing online courses. They have provided some incentives to do so, including training (both technical and pedagogical), compensation for course development, and agreements about enrollment limits and other course elements. Administrators have also encouraged the creation of a small pool of mentors in online teaching. Mentors not only provide reviews of courses in development; they may also obtain additional training through Quality Matters, a "faculty-centered, peer review process designed to certify the quality of online courses and online components" (Quality Matters, "About," 2013).

In this case, we have taught both 100% online and hybrid courses (the latter are defined at their institution as providing a minimum of 50% online presentation, but also including some face-to-face time) as a team. Both of these course formats are being addressed when referring to "online instruction," though for the most part, the elements that deal with 100% online delivery take center stage. We had previously worked together in a face-to-face interdisciplinary class, and as a result of our positive experience co-teaching, we decided to continue our partnership with fully online courses. With the support of an internal grant, we developed a series of Irish Studies courses that investigated the history and literature relating to Irish migration and the Irish-American experience.

Based on these experiences, we engaged important points raised by other scholars. First, although some instructors are resistant to online teaching and learning, we are part of the small cohort of faculty who develop online courses regularly and want to focus on some of the challenges of online teaching. Second, we are especially interested in addressing higher-level learning and finding a way to develop innovative courses designed for juniors and seniors, or disciplinary majors. Third, we believe in the value of interdisciplinary courses and want to develop online courses that represent the best elements of that format.

Our efforts to craft new courses address the more recent scholarship about teaching online courses. Some scholars start by acknowledging and accepting Bain's (2004) extensive commentary on best practices in teaching. Although Bain's comprehensive study follows teachers in traditional, face-to-face classroom formats, some scholars believe that those attributes are worth replicating in online instruction (Breinhaupt, et al., 2011). However, researchers have described ways to

integrate pedagogical content knowledge and subject matter knowledge, emphasizing a reflective approach to teaching in order to engage varied online roles and teacher competencies (Kreber & Kanuka, 2006; Baran, et al., 2011). Baran et al. (2011) go further, saying that a teacher should also be seen as a learner when it comes to engaging best practices for online learning. These best practices may include such factors as instructional design, the faculty managerial role, or social roles sustained in online learning. Other scholarship confirms that one key point for faculty has been learning the technical aspects of online delivery, but for some the question remains as to whether online courses allow the same high levels of instructional quality that face-to-face offerings provide (Allen & Seaman, 2011; Baran, et al., 2011; Gorsky & Blau, 2009; Lloyd, et al., 2012). Since much of the available scholarship has extolled the merits of online instruction and instructors' continuing efforts to improve those experiences for students, we were motivated to participate in online course development. We also wanted to explore how interdisciplinary team teaching would add another dimension to online teaching.

Research Aim

Amid the growing demand for online courses on many campuses, scholars have noted that only a limited cohort of faculty has been participating in online instruction recently. Some research has shown that "over 80% of faculty with no experience in online teaching or course development and one-third of all chief academic officers believe that online courses are inferior to face-to-face offerings" and pointed out that "faculty involvement in and perception of online education are dangerously low" (Lloyd, Byrne, & McCoy 2012, p. 2; Allen & Seaman, 2011). Perceived obstacles for many instructors included not only the elements of course administration, but also technical training, compensation, and ownership of those courses (Allen & Seaman, 2011; Lloyd, Byrne, & McCoy 2012). We saw this as an opportunity to address some of the barriers to online instruction. Furthermore, we were anxious to include team teaching because of its less-frequent appearance in the available literature.

Both of us are experienced with upper-level face-to-face course formats, interdisciplinary instruction, team-teaching, and online course development. While these significant categories of teaching and learning are not mutually exclusive, they include some different methods and priorities. As such, part of our objective was to arrive at a working model for online interdisciplinary instruction that would appeal to students. The key for us was to keep all of these factors in mind while developing an engaging team-taught interdisciplinary course.

Guided by the wealth of available scholarly literature, we identified at least four significant issues that had to be addressed in order to develop this series of online courses. First, challenges of online instruction, including issues of technical training, funding, or resources, had to be considered. Second, an even greater concern was maintaining the high quality of instruction. To that end, engaging the available studies about the best practices in online instruction was important. A chief interest in these considerations was the development of upper-level interdisciplinary learning in an online setting. While interdisciplinary learning and collaborative teaching certainly have been a significant focus in the available scholarly literature, the extent to which such efforts could be attained in an online setting has not received as much scholarly attention. Third, we wanted to offer an innovative approach to online and hybrid instruction by developing team-taught courses that could be cross-listed in each of their related disciplines. Our aim was to identify a workable format for effective online interdisciplinary instruction. Fourth, we maintained our own social roles to promote good teacher-student relationships. This reflection will sug-

gest some approaches to interdisciplinary, team-taught, online course instruction for higher-level students in a university setting.

Methods

Planning the Course

Much like Kreber and Kanuka (2006), and Baran et al. (2011), we were keen to integrate pedagogical content knowledge and subject matter knowledge. It was clear that in order to achieve these goals, technical training was necessary to deliver quality instruction to students. We had to fulfill multiple roles in our online collaborations. We acquired the technical skills to design and manage our course, and we also performed important social functions as mediators and mentors for our students. Finally, in order to work effectively as a team, we each had to map out our respective roles in course preparation and delivery to ensure the most productive approach to the course.

Baran et al. (2011) listed numerous roles and functions, including instructional design, managerial role, and social role. These roles address the "three dimensions that are lacking in the current approaches that need further exploration: a) empowering online teachers, b) promoting critical reflection, and c) integrating technology into pedagogical inquiry." We took seriously each of these functions, particularly the role of facilitating students' efforts at higher order learning processes in online learning (Kreber & Kanuka, 2006, p. 121). Consideration of these issues prepared us for the fundamental change in the nature of interaction between instructor and student (Baran et al., 2011, p. 430).

To allay some of the concerns about online instruction, our institution addressed several of these concerns by putting in place Lloyd, Byrne, and McCoy's recommendations: "Institutions of higher learning may increase faculty involvement in online education by providing more opportunities for: (1) resistant faculty to 'try out' online instruction to varying degrees; (2) open discussion of issues surrounding online instruction; and (3) experienced online instructors to serve as facilitators" (2012, p. 8). Our institution has done each of these to some extent. Furthermore, the Faculty Senate on our campus has formed a committee dedicated to distance education. However, our experience did not reflect Lloyd, Byrne, and McCoy's (2012) finding that "one of the most frequently cited and highly rated barriers reported in this study was time commitment" (p. 9). Though the commitment of time and effort was greater than for a face-to-face course in the planning stages, the amount of time spent on day-to-day effort after the course was set in motion declined rather significantly.

Technical Training and Online Teaching Philosophy

The technical training presented an opportunity to become teachers as learners, as recommended by Baran et al. (2011), who believed in the use of Mezirow's transformative learning theory (1991) for online teaching. The instructors' online teaching philosophy corresponded closely to three premises encompassed in Baran et al.'s (2011) findings: "(a) viewing online teachers as active adult learners, (b) recognizing that transformative learning occurs through critical reflection, and (c) considering that transformation happens as teachers conduct pedagogical inquiry with technology" (p. 425).

Realizing that not all faculty members are prepared to teach online courses, our institution strongly encourages instructors—and offers a financial incentive—to take some training for online instruction. Online instructors may decline this training and the financial incentive. Some do because acceptance of the monetary reward also requires that faculty members share ownership of the course (that is, the institution can offer a version of the course at a later date, taught by a different instructor). Whatever the circumstances, we agree that people should consider engaging in

online training. Teaching online requires a paradigm shift, which includes moving from being at the center of instruction to facilitating learning from the sidelines. This shift necessitates a new skill set that meets the needs of the new teaching and learning environment. As Baran et al. state, "It is important that we do more than transfer face-face classroom strategies to the online environment" (2011, p. 422).

The institutional training was very helpful to us because it taught us how to use the software and allowed us to engage in online pedagogical discussions which primarily centered on the new skills and instructor presence required in the online classroom. Although the training was very good, we both believe that the next step in campus training should include discussions that are more representative of learning in different academic fields. For example, trainers in this instance had selected pedagogical materials from physical sciences that sometimes were not as helpful for our fields in humanities and social sciences. The goal should be to optimize training that accommodates different academic disciplines and teaching styles. In our case, the training included helpful guidance in basic online instruction; practical workshops in SoftChalk, document formatting, and PowerPoint presentations for learners with disabilities and advanced tutorials on our institution's course management system. Increasing comfort with the pedagogical and the technical aspects of online instruction should be considered by all instructors interested in online education.

Our institution requires that any faculty member who receives course development money have 90% of the course prepared and ready for evaluation by an external reviewer at least two weeks before the class is scheduled to begin. Although this might sound onerous (and it can be), such an early deadline offers several advantages. A major benefit is that lessons are prepared for the entire semester and evaluated by experts even before the class begins. Thus, instructors have more time to build the online community and to assess student work while the course is in progress. Courses here are subject to an external peer review. We have found this pre-course review very rewarding because it examines content, technical, and pedagogical elements all at once. For us, this assessment proved to be more helpful than our typical face-to-face peer observations, which oftentimes only consider a single day's interaction with students, rather than the entire online experience.

One of us took Quality Matters (QM) courses, which included a) the QM Rubric, and b) the QM Peer Review Process, and has become a peer reviewer of online courses at our institution. The Quality Matters program advertises its encouragement of "research-supported, best practice-based quality standards and appropriate evaluation tools and procedures" and promotes "…institutional acceptance and integration of QM standards and processes" in online instruction (Quality Matters, "Mission," 2013). Our institution has adopted QM standards; its participation in Quality Matters assures that online courses meet a broadly accepted set of standards. Training in a universally-accepted set of guidelines is one means by which instructors might consider ways to adjust their approaches to online instruction.

One element of online training that proved extremely helpful was a required self-assessment and a peer review of the courses. Before the courses were allowed to go live, we submitted a self-assessment report, based on the Rubric for Online Instruction. The Rubric for Online Instruction originally was created by California State University, Chico, and further adapted by a member of our campus community. The Rubric for Online Instruction used at our institution included many elements similar to the Quality Matters rubric and so provided a helpful list of recognized criteria to be considered. These included several different components for the course, such as learner support and resources (see Appendix for one sample of such mate-

rials); online organization and design; instructional design and delivery; assessment and evaluation of student learning; innovative teaching with technology; and faculty use of student feedback. This was the first step in acting as reflective teachers before actually engaging in online teaching. The next step consisted of an interview with a peer reviewer, who evaluated the online course design and offered suggestions in how to improve it in terms of clarity, aesthetic quality, resources, navigation, communication, assessment, and technical issues. Here was another opportunity to reflect on how the course design met broader instructional goals. We valued the commentary that came from peer reviewers and encourage others to seek peer evaluation and support in the development of their courses.

Instructional Design

A large concern was the need to use universal design for the course materials to make them accessible to as many students as possible. The goal was to make the modules as engaging and interactive as possible while promoting analytical insight and synthesis of sources. The course material was presented in the form of learning modules with the institution's course management system as the learning management tool. SoftChalk was used to create attractive modules that balanced learning with social engagement. Even though history and literature are heavily oriented around written sources, we also introduced other media, including video, music, and podcasts, in order to draw upon varied student interests and abilities in considering the available material.

The course design and planning were intensive, in order to prepare the whole course well in advance of the beginning of the semester. This is a key difference between online and face-to-face instruction; the early preparation allowed us to engage in a peer review and to enact minor changes before opening the course to enrolled students. As in all interdisciplinary efforts, we had to strike a balance between our two disciplines and discuss whether to integrate sources in specific modules or to devote smaller segments—activities, assignments—to an individual discipline. Either way, students were asked to compare historical narratives to literary portrayals as a continual objective in the course. Each of us also had to consider whether (and when) to limit the selection of sources in order to accommodate the other person's material. For the most part, negotiations proved very friendly and collaborative. In the rare cases in which there was some disagreement, we referred back to our common course objectives of keeping a balance between the disciplines and considering how much material was appropriate for students for one course segment. Instances of disagreement were extremely rare because we both shared common ideas about the elements of online pedagogy that were being addressed. For example, we held similar beliefs about the amount and variety of content materials that should be included in each module. As well, we agreed about the importance of allowing students enough time to digest dense or emotionally intense material. The active process of discussing approaches to the course was another means by which each of us achieved critical reflection. In the end, although the availability of a more diverse array of source material at first seemed daunting, it soon became clear that this diversity was helpful in achieving the course objectives.

Indeed, a main objective was to ensure that both instructors and students had the opportunity to interact in a supportive environment and have room for self-reflection. Because we were physically removed from our students, we made this a priority. As Baran et al. state, "Central to the transformative learning process is helping learners to critically reflect on, appropriately validate, and effectively act on their (and others') beliefs, interpretations, values, feelings, and ways of thinking" (Baran et al., 2011, p. 425). The weekly online forums provided students with a safe setting in which to discuss difficult topics. There, students could explore and reflect on their own posts and those of others in

a valuable exchange of ideas. The instructors had the opportunity to reflect on their teaching and to learn from these interactions individually. Later, as a team, we discussed our impressions of how the students seemed to be learning and which strategies seemed to work or needed tweaking before crafting responses to the students together. Students received this direct feedback in the grade book on the course management system, and we also wrote longer messages to the class when we noticed common problems (for example, with formatting citations or clarifying a difficult concept). Sometimes students communicated with us to discuss the approach they intended to take on an upcoming submission, so that they could engage in a dry run of their arguments before they submitted a more formal essay. In various ways, active and regular communication was a lifeline that extended in both directions. While neither of us found that these communications replaced fully the face-to-face interactions enjoyed in other courses, online students engaged in vigorous discussions about the source material, and they often sought out instructors' feedback, just as they might in a traditional setting. Working together was a means by which we could discover new avenues for discussion and interaction with our students.

Managerial Role

During the semester, we engaged in observation and reflection throughout the course so that adjustments could be made as the term progressed. The forums offered an opportunity to reevaluate the learning modules and showed the results of the students' interaction with the learning materials. Occasionally, we provided announcements that clarified points or provided additional resources and direction in order to deepen students' consideration of some material. Privately, we made notes for revision for the next time the course would be taught. Sometimes, adjustments were implemented in time for the next class assignment (for example, changing how many questions were asked to avoid repetition in forum submissions) and sometimes in the next course (organizing groups for some exchanges to ensure that graduate students in split graduate/undergraduate courses were fulfilling our institutional requirement that they complete additional work with harder materials; altering the rubric for integrative papers to include more specific guidelines about how points were to be awarded). It was important to continue to consider minor revisions and to polish the course's elements after viewing student engagement with the material, and other online instructors should contemplate the same. Making revisions to the course became relatively simple, since our commitment to the course objectives shaped the activities we planned.

We avoided many of the pitfalls of co-managing referred to by Strohschen and Heaney (2000) by adhering to the strategies listed by Scribner-MacLean and Miller (2011). One of the most effective strategies in co-managing assessment and reducing workload was the evaluative forum rubric that we devised together (see appendix). A clear set of guidelines facilitated students' engagement with the course material. We also co-wrote grading comments and uploaded them into the course's online grade book. We communicated (in person, by phone, or through email) about concerns regarding individual student submissions BEFORE releasing grades. While this process might seem rather involved, it proved convenient and effective. On a week when one instructor had additional significant obligations, the other took the lead in drafting the first round of comments. These were forwarded in a Word document. The second person evaluating the work usually had to add fewer comments: since remarks were derived from the course's published rubric, there was no need to rewrite them. When we met in person to finalize the scores, we copied and pasted from our Word document into the comments section of the course management system's grade book. Students were informed of the extent of our collaboration throughout the course. Such

information was presented in class announcements and in the syllabus and was demonstrated by our signing all messages and announcements to students jointly.

Social Role

Both of us understood the importance of building a strong online community before students could engage in learning. To this end, the first course module was devoted to learning about all participants' interests and hobbies. It was effective in that students who had already taken courses with us had the opportunity to reconnect with each other and that all were able to forge new friendships and find common ground through shared interests and life circumstances. At that point, after they had prepared students for discussion and begun to build a sense of community, faculty could begin the real work of the course, and student learning could begin. Courses were organized around forums that required one student post and two replies. Although the forum posts were formal essays, replies allowed for more relaxed delivery. It was still possible to hold students to an academic standard, even when their tone was less formal (slang was prohibited, for example), and students were still required to discuss the assigned sources. As well, students could submit ungraded comments to a Chat Room where they could interact informally and offer each other help and support.

Establishing a supportive online community was a major goal, but we also made sure to present a united front to students and others. This was not difficult, but it was important to offer a harmonious presence to ensure uniformity of standards and the clear message that the decision of one instructor had occurred with the close consultation of the other. By showing that we were united in our approach, our goals, and our standards on individual assignments, we were helping our community to function effectively. We also had to work as a team in dealing smoothly with administrative concerns (preparation pay, scheduling, overload credit) and across two different departments (it was vital to specify who should make administrative decisions) as well as with staff and technical support. Planning ahead to ensure smooth communication meant that it was possible to draw on lines of support when these were needed.

Conclusions

Over time, we found that "walking the line" was a helpful metaphor for our endeavor. First, the line was a tightrope that helped us to balance our two different subject areas. Second, it was a borderline that defined our instructional rubrics and our approach to organizing the course. Finally, walking the line also served as a lifeline that kept both students and faculty members connected to sources of support. During the planning and implementation of the courses, we were very careful to "walk the line."

Instructors who consider team teaching online interdisciplinary courses should give thought to implementing aspects of the line metaphor in their own work. They can strive to locate resources that will help them balance the presentation of materials from their academic fields. Seeking pedagogical and technical training should also be a consideration. Making use of available institutional resources may ease perceived burdens. Finally, we recommend that instructors seek out and build lines of support for their students and for themselves.

References

Allen, I. E., & Seaman, J. (2011). Going the distance: Online education in the United States, 2011. Babson Survey Research Group. Retrieved from http://www.onlinelearningsurvey.com/reports/goingthedistance.pdf

Auman, A., & Lillie, J. (2008). An evaluation of team-teaching models in a media convergence curriculum. *Journalism & Mass Communication Educator*, 62(4), 360-375.

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

Baran, E., Correia, A., & Thompson, A. (2011). Transforming online teaching practice: Critical analysis of the literature on the roles and competencies of online teachers. *Distance Education*, 32(3), 421-439.

Berge, Z. (2009). Changing instructors' roles in virtual worlds. *Quarterly Review of Distance Education,* 9(4), 407-415.

Breinhaupt, T. M., Fisher, L. S., Gardener, J. G., Raffo, D. M., & Woodard, J. B. (2011). What the best online teachers should do. *MERLOT Journal of Online Teaching,* 7(4), 1-7.

Brindley, J. E., Walti, C., & Blaschke, L. M. (2009). Creating effective collaborative learning groups in an online environment. *International Review of Research in Open and Distance Learning*, 10(3), 1-18.

Capdeferro, N., & Romero, M. (2012). Are online learners frustrated with collaborative learning experiences? *International Review of Research in Open and Distance Learning*, 13(2), 26-44.

Dyrud, M. A. (2010). In this issue: Team-teaching, part II. *Business Communication Quarterly,* 73(2), 190-191.

Friedman, T. (2013, January 26). Revolution hits the universities. *The New York Times*. Retrieved from http://www.nytimes.com/2013/01/27/opinion/sunday/friedman-revolution-hits-the-universities.html?_r=0

Gorsky, P., & Blau, I. (2009). Online teaching effectiveness: A tale of two instructors. *The International Review of Research in Open and Distance Learning,* 10(3). Retrieved from http://www.irrodl.org/index.php/irrodl/article/view/712/1270

Kim, K., & Bonk, C. J. (2006). The future of online teaching and learning in higher education: The survey says… *Educause Quarterly*, (November 4, 2006), 22-30.

Kolowich, S. (2013, February 21). Competing MOOC providers expand into new territory—and each other's. *The Chronicle of Higher Education*. Retrieved from http://chronicle.com/blogs/wiredcampus/competing-mooc-providers-expand-into-new-territory-and-each-others/42463

Kreber, C., & Kanuka, H. (2006). Scholarship of teaching and learning and the online classroom. *Canadian Journal of University Continuing Education*, 32(2), 109-131.

Lloyd, S. A., Byrne, M. M., & McCoy, T. S. (2012). Faculty-perceived barriers of online education. *MERLOT Journal of Online Learning and Teaching*, 8(1), 1-12.

Mezirow, J. (1991). *Transformative dimensions of adult learning.* San Francisco: Jossey-Bass.

O'Neill, K. (2010). Teaching across the great divide. *Business Communication Quarterly*, 73(2), 212-215.

Quality Matters (2013). About us. Quality Matters. Retrieved from https://www.qualitymatters.org/about

Quality Matters (2013). Our mission. Quality Matters. Retrieved from https://www.qualitymatters.org/our-mission

Rivard, R. (2013, March 8). Measuring the MOOC dropout rate. *Inside Higher Ed.* Retrieved from http://www.insidehighered.com/news/2013/03/08/researchers-explore-who-taking-moocs-and-why-so-many-drop-out

Schrum, L., & Hong, S. (2002). Dimensions and strategies for online success: Voices from experienced educators. *Journal of Asynchronous Learning Networks*, 6(1), 57-67.

Scribner-MacLean, M., & Miller, H. (2011). Strategies for success for online co-teaching. *MERLOT Journal of Online Teaching*, 7(3), 419-425.

Sibley, I. A. (2006). Interdisciplinary team teaching. *College Teaching*, 54(3), 271-274.

Strohschen, G., & Heaney, T. (2000). This isn't Kansas anymore, Toto: Team teaching online. *New Directions for Adult and Continuing Education*, (87), 33-41.

Wiesenberg, G., & Stacey, E. (2008). Teaching philosophy: Moving from face-to-face to online classrooms. *Canadian Journal of University Continuing Education*, 34(1), 63-69.

Wilson, G., & Stacey, E. (2004). Online interaction impacts on learning: Teaching the teachers to teach online. *Australasian Journal of Educational Technology*, 20(1), 33-48.

Winkler, T. (2013, March 6). Top unis will take anyone, thanks to MOOC. *The Australian*. Retrieved from http://www.theaustralian.com.au/higher-education/opinion/uop-unis-will-take-anyone-thanks-to-mooc/story-e6frgcko-1226591023137#

Appendix

Undergraduate forum grading rubric:

A to B+ (50-43 points) Fully participated; questions and comments were appropriate, well-written, analytical, and to the point; and demonstrated knowledge of and referred to reading material, using appropriate evidence to support ideas and assertions. Follows guidelines re: essay format (introduction, 3 body paragraphs, conclusion). Uses short, specific quotations (brief passages-at least one sentence) or cited paraphrases from both historical and literary sources. Uses academic essay format and proper citations, where appropriate. Effectively links both historical and literary readings and resources. Refers to additional resources such as films, Web links, or other readings. Integrates effectively both historic and literary sources in posts. *At least three substantial posts (1 post, 2 replies) per week over two days minimum and participation in the discussion*.

B to C+ (42-39 points) Comments and questions were generally appropriate but not well thought out or did not demonstrate the level of writing skills, knowledge of the reading assignments equivalent to the first category. Attempts to link both historical and literary readings/resources. Uses quotations or paraphrasing from assigned materials, but not always effectively. Uses essay format, but tends to be less correct, thorough, or analytical than A/B+ work. Integrates both historic and literary sources in posts to a limited degree. Little mention of additional resources.

C to D+ (38-34 points) Comments were average with weak writing skills. Participated only one day during the week, fewer than three submissions, posts were brief, replies consisted only of agreement with other's comments. Little or no inclusion of readings. Link between history and literature sketchy or lacking clarity, or the student includes one but not the other. Might be missing some or all reference to resources. Analysis lacking; tends to summarize or describe rather than to explain. Did not appear to read or respond specifically to other's posted comments/questions. Tends to offer only limited comparisons between historical and literary themes. No specific quotations from literary or historical readings or from additional sources. Did not use both literary and historical sources.

D to F (33-0 points) No participation or very little participation. No serious engagement of historical or literary readings and additional course materials. No attempt to integrate historical and literary sources/readings. No analysis, and descriptive content lacking. Not in essay format. Posts and replies were severely underdeveloped, in "textese," inappropriate, rude, derisive, or profane.

Tweeting or Instructing: Using Twitter as a Pedagogical Tool in College Algebra

Lori Tanner, Richard Hartsell, and Angela Starrett

Abstract

The use of social media in learning environments tends to be limited to non-primary instructional roles in the learning environment, with most uses contained within such categories as providing learner feedback or encouraging informal discussion. This study documents the introduction of Twitter into a primary instructional role in a college algebra class. Twitter is used as a means of providing instruction and collaboration in the two-thirds of a college algebra class devoted to problem solving. This paper will highlight a unique case of using Twitter as a primary means of delivering course content in college algebra. Data show improved test scores and lower attrition.

Keywords

Twitter, social media, college algebra, technology intensive courses

Lori Tanner, PhD, is Director of Advanced Cyberinfrastructure Education Outreach for Clemson University's Computing & Information Technology Division. She collaborates with faculty, researchers, students, and workforce partners in next generation advanced computing. Her research focus is in cross disciplinary technology integration and the impact of the social media movement.

Richard Hartsell is an Assistant Professor of Educational Foundations at the University of South Carolina Upstate. He teaches undergraduate and graduate courses in the philosophy of education and the social and political foundations of education. His research interests center on the relationship between culture and institutionalized education.

Angela Starrett is an Instructor of Mathematics at the University of South Carolina Upstate. She holds bachelor's degrees in psychology and in applied mathematics, and she has a master's degree in mathematical sciences. She has spent the last three years teaching undergraduate math courses while working on her doctorate in educational research and psychology.

Introduction

Twitter (2013) was launched as a social networking site in July, 2006, and gained almost instantaneous acceptance by the public in general and the millennium generation in particular. Such rapid initial acceptance launched Twitter on a trajectory of growth in use that saw it pass the 500 million registered users mark in 2012. By using the internet to provide what is an essentially free and open short messaging service (SMS) platform, Twitter has been able to combine successfully the low cost, open source and democratic characteristics of internet use with the convenience and mobility of a proprietary SMS service. Such a combination of characteristics has not only propelled Twitter's meteoric growth, it has also allowed Twitter to expand into uses not envisioned by its creators. Uses such as political organizing tool, emergency means of communication in natural disasters, and reporting platform for breaking news attest to the general acceptance of Twitter within the population as well as to its versatile functionality as a means of communication.

Despite Twitter's rapid public acceptance and expanding functionality, the educational world has been slow to explore instructional possibilities inherent in social media. At least based on anecdotal evidence, much of the initial reaction to students tweeting in an educational environment focused on teachers trying to talk louder than Twitter—in other words, teachers trying

to figure out how to make students turn their attention away from Twitter and back to the business at hand, listening to the teacher. Nevertheless, whether because of an evolving revelation pertaining to the pedagogical possibilities for Twitter or simply because of an "if you can't fight it, co-opt it" change of heart, educators are slowly beginning to employ social media in general, and Twitter in particular, as means of furthering student learning. This acceptance began to be documented in academic journals in 2008 when a trickle of academic articles emerged that focused on Twitter as a teaching tool. From 2009 onward, the number of such articles has steadily increased to the point where, although educational journals have not been flooded with articles about Twitter there is a growing acceptance regarding possible instructional applications of social media.

Literature

Not surprisingly, owing to its roots in social media, much of the initial research pertaining to the pedagogical benefits of Twitter focused on the communicative and collaborative possibilities Twitter can bring, either as a formal component of or an informal addition to a learning environment. For instance, Ebner and Schiefer (2008), and Ebner (2009) were among the first studies to document how individuals in an e-learning community used Twitter as an informal means of communication and collaboration. Similarly, Costa, Beham, Reinhardt, and Sillaots (2008) described the use of Twitter in a summer school class as a means, albeit a back channel means, of enhancing student interaction and communication about course topics. A common theme of many of these early studies was that they focused more on Twitter as a means of enhancing student interconnectivity than as a means of primary instruction and content delivery.

Shortly after this first group of studies documenting Twitter as a tool for enhancing social collaboration in the classroom appeared, another group of studies began to emerge. The focus of these studies was slightly different: they presented Twitter as an ancillary means to engage students in specific learning activities. The activities in such studies emphasized the use of Twitter as means of reinforcing and/or applying more traditional learning activities. This reinforcement and application through Twitter use normally took one of two forms: (1) the introduction of more authentic, real world tasks to the learning environment; (2) the increase of student reflection and discussion, either individually or collaboratively, of traditionally presented subject matter. Among the first category were studies by Antenos-Conforti (2009), Borau, Ullrich, Feng, and Shen (2009), and Perifanou (2009), which documented how the use of Twitter allowed students studying a foreign language to interact with native speakers of the language as well as with a wide range of non-native speakers of various proficiency levels. Similarly, Holotescu and Grosseck (2009), Waller (2010), and Lowe and Laffey (2011) focused on Twitter as a means of creating real world applications for material initially presented in traditional classrooms. Among the studies documenting Twitter use as a means of generating student reflection and discussion of learning activities initiated in traditional learning environments were Wright (2010), which examined Twitter as a means of creating increased student reflection in a setting where practicum experiences comprised a significant part of the assigned tasks for a course; and Dunlap and Lowenthal (2009), which documented the use of Twitter as a tool for expanding students' interaction with each other when discussing and reflecting on material presented in a traditional classroom setting. Similarly, Junco, Elavsky and Heiberger (2013), Junco, Heiberger and Loken (2011), Elavsky, Mislan and Elavsky (2011), and Agherdien (2011), and Sullivan (2012) all documented various uses of Twitter as a means of generating student interest and discussion of subject matter presented in both e-learning and traditional classroom settings.

Despite the growing body of studies focusing on possible pedagogical applications for Twitter, one area of research remains underrepresented; there have been relatively few studies on the use of Twitter as a teaching tool in real-time, traditional instruction settings. The few studies approaching this topic, such as Kassens-Nor (2012) and Park (2013), tend to focus on Twitter as supplemental to traditional teacher-centric means of classroom instruction. Since the majority of classes continue to be taught in traditional classrooms employing direct instruction methodology, research pertaining to Twitter as a primary classroom instructional method, as opposed to a supplement to classroom instruction, needs to be fostered if the full potential for Twitter as an educational tool is to be accurately analyzed. Thus the study that is the subject of this paper focuses on the role Twitter plays as a means of primary instruction in a traditional college algebra classroom.

Methodology

The first use of Twitter as an instructional tool in the particular method documented by this study occurred during the fall semester 2012 as part of a college-wide technology enhancement plan; however, the genesis for Twitter's use as a primary means of instruction occurred several semesters earlier. In an attempt to provide her students with additional individualized assistance in solving algebra problems, the instructor of the sections in which Twitter was incorporated provided her students with her private cell phone number. Students were encouraged to send a text message to the instructor when they encountered difficulty solving an equation assigned as homework. The instructor's phone would alert her of a student message and she would respond quickly to the struggling student. In their text messages requesting assistance, students would often include a picture of their work indicating where they were having difficulty with the equation. The teacher would then respond with a combination of a short text and a picture of a similar solved equation or a corrected version of the student's work. Although this methodology worked well on a limited, individual student basis, it was severely constrained by the individualized nature of its communication exchange. Because she was only communicating with one student at a time, the instructor found herself answering the same or similar questions from multiple students thereby resulting in a highly inefficient use of her time. Moreover, owing to the closed communication loop between the teacher and the student, other students could not benefit or participate in the discussion either by gaining insight applicable to their own work or by offering suggestions to students who were struggling with solving an equation.

To overcome these limitations while preserving the effective aspects of the tutoring-by-text-message model, the instructor designed, in conjunction with the university's technology initiative, a college algebra course that made significant use of Twitter's social communication functions. The three credit-hour course was part of the university's general education requirement and consisted of one fifty minute lecture and two fifty minute lab sessions per week. The lecture combined students from four lab sections and conceptually introduced material that would be used to solve problems in the two fifty minute lab sessions. The lab sessions were based on the Pearson Publishing product *My Math Lab* that was used in conjunction with the course textbook (Lial, Hornsby, & Schneider, 2011a, 2011b). In the lab session students were asked to solve a series of self-correcting equations and word problems. The four lab sections totaled 77 students; all 77 students attended the common lecture session.

Twitter use was initially integrated into the course as a continuation of the lab sessions because students needed time well beyond the required 100 minutes of lab time to complete the assignments. Eventually Twitter came to be employed during the class labs.

When students encountered a problem working on equations from *My Math Lab*, they would send a tweet indicating the specific difficulties they were encountering. Because tweets are limited to 140 characters, students would include a picture, or pictures, of their attempt to solve the equation.

The instructor would then tweet a response using a mobile application like *Inkflow Plus* or *Doceri* (IOS platform), again including a picture or pictures, which provided individualized assistance to the student. For students who were unsure of how to start a problem, the instructor would tweet a picture of a worked example. Figure 1 shows an example of a student's tweet with a picture of where he is stuck. In Figure 2 the instructor has captured part of the student's problem and then used *InkFlow Plus* on iPad/iPhone to illustrate the steps to solve the equation and sent the tweet back. Because the communication between the student and the instructor was simultaneously available in real time to every student (even those not having Twitter accounts) in all four sections, students encountering similar difficulties in solving the lab problems could benefit from each individualized communication exchange. Twitter pictures of worked examples became a common sight on lab computers, especially for the more difficult word problems. Furthermore, the shared social nature of the Twitter communication exchanges simultaneously presented each student in the class the potential to tutor or be tutored by every other student in the class. Such a classroom dynamic differentiates this use of Twitter as an instructional tool from the less direct uses discussed in the literature review for two reasons. First, rather than being relegated to a role as a means either of increasing student collaboration outside the classroom or of presenting real world opportunities for the application of classroom learning, Twitter is utilized in this case as a primary instructional instrument. The individual problem solving portion of the class in which Twitter use was introduced did not exist in the previous incarnation of the algebra class as a supplement to the

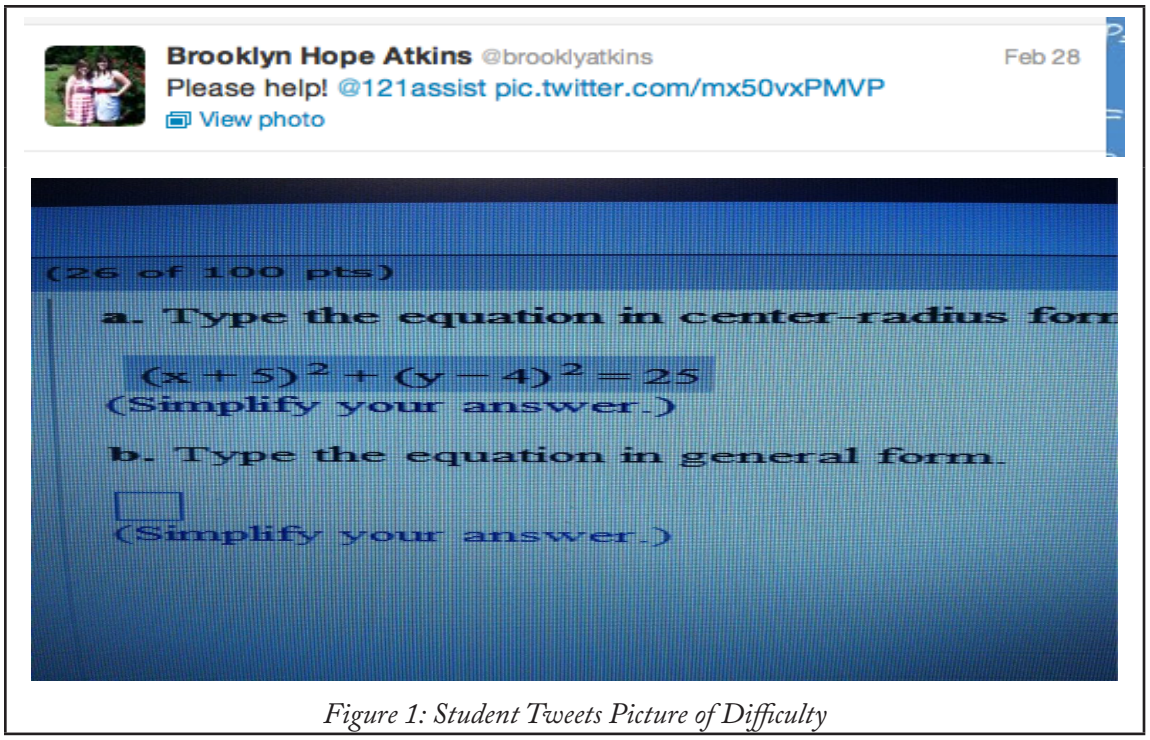

Figure 1: Student Tweets Picture of Difficulty

lecture part of the class. Rather it co-existed with the lecture class, both in theory and application, as a co-equal part of classroom instruction. Introducing Twitter use to this integral part of classroom instruction thus brought Twitter into a primary classroom instructional role that is substantially different from asking students to apply classroom learning, such as asking foreign language students to apply their knowledge by engaging in Tweets with native speakers.

Secondly, by using Twitter in such a manner classroom instruction was extended beyond scheduled class time. The format for the problem solving aspect of the class prior to the introduction of Twitter only allowed for the instructor and students to collaborate on problem solving during the specified timeframe of the class. By making Twitter the instructional medium through which collaboration occurred during the problem-solving portion of the class, the instructional opportunities for the class were extended to anytime when class members engaged in tweeting about the problems. In essence, the use of Twitter changed the problem solving portion of the class from a synchronous environment, where collaboration and instruction were limited by time and place, to an asynchronous environment in which the possibility for collaboration and instruction remained continuously open. Such a transformation implies a substantively different application of Twitter as an instructional tool than the applications discussed in previous literature.

Results

The use of Twitter in this college algebra course resulted in numerous benefits for the students, teacher, and institution. First and foremost, it prevented students from quitting the assignment, and possibly the course, out of frustration over their inability to grasp quickly the concepts needed to solve complex equations. Because Twitter gave students access to instant feedback regarding their understanding of lecture material and their efforts to solve specific equations,

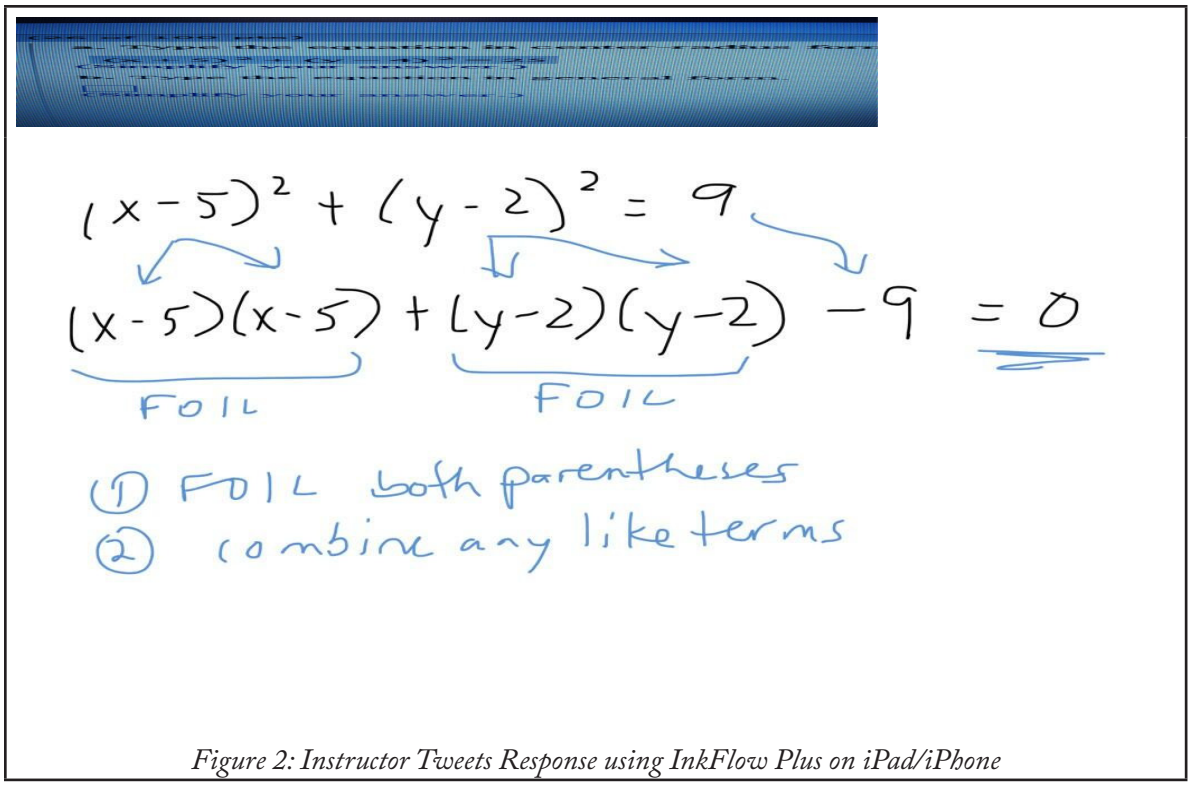

Figure 2: Instructor Tweets Response using InkFlow Plus on iPad/iPhone

student levels of frustration over not being able to grasp the material did not fester and rise to levels at which they simply gave up trying to understand the material or perform the assigned problems. By opening a new channel of individualized communication allowing for quick feedback related to course content, Twitter alleviated for many students the frustration-to-annoyance-to-apathy spiral that ultimately results in unsuccessful course completion.

Historically, college algebra sections at the institution where the study was conducted were in line with national data that show an approximately 45% withdrawal-failure-D-grade rate (WFD rate) for college algebra classes. During the fall 2012 semester, non-Twitter sections of college algebra at the institution did somewhat better than the national average as they were observed to have a 32% WFD rate. However, during the same semester the traditional college algebra sections using Twitter as an alternate means of instruction saw the WFD rate significantly decrease to 9%, an 80% improvement over the non-Twitter sections taught in the fall of 2010 and a 72% improvement over the non-Twitter sections taught in fall of 2012 (see Table 1).

The individualized instructional opportunities provided by the use of Twitter also contributed to the high successful course completion rate in the Twitter sections by allowing the instructor to monitor and encourage students on an individual basis. When students tweeted questions, the instructor often included in her answers individualized reminders of upcoming assignments the student should focus on and personalized words of encouragement connected to the student's progress in the course. Particularly in the larger sections and for students who struggled in mathematics, Twitter's ability to provide communication that delivered course subject matter on an individualized basis while allowing for encouragement of a student's efforts undoubtedly made for a far less alienating experience. Consequently, as the completion rate suggests, students likely to be unsuccessful in completing the course received both the individual assistance and encouragement necessary for successful completion.

In addition to displaying higher retention rates, students enrolled in the sections using Twitter scored higher on each of the course's three department standardized exams. Chart 1 shows a comparison between exam scores of the traditionally taught sections and the Twitter sections. Depending upon the exam, students in the Twitter sections scored approximately five to ten percent higher than their counterpoints in non-Twitter sections on exams common to all sections. The fact that the range between Twitter and non-Twitter sections was greatest on the final exam is highly significant because it suggests the effect of using Twitter as a means of instruction is cumulative over the course of the semester. Specifically, it suggests that the more students are exposed to Twitter-based instructional techniques, the greater the difference will be in their relative performance compared to students not exposed to such techniques. This discrepancy between student

College Algebra Overall Performance							
	A	B	C	D	F	W	WFD rate
Traditional Courses Fall 2010	N=64	N=96	N=99	N=51	N=51	N=100	44%
Twitter Model Course Fall 2012	N=28	N=24	N=15	N=2	N=6	N=1	9%
Traditional Courses Fall 2012	N=44	N=59	N=31	N=31	N=18	N=31	32%

Table 1: College Algebra Grades

performance in Twitter and non-Twitter sections is even more impressive in light of the significantly higher retention rate of the Twitter sections, as illustrated in Table 2. Normally, a significant rise in retention would foreshadow a decline in overall class performance because the majority of students accounting for the increase in retention tend to be marginal students who struggle with the course content. Theoretically at least, such students would tend to lower overall class performance because their individual performances would reflect a lower level of content knowledge than the performances of students whose retention in the class was never in question. That fact that the sections employing Twitter were simultaneously able to raise the retention rate and the overall level of student performance is thus doubly impressive and suggests that Twitter-based instructional techniques raise the level of content mastery across a wide range of student ability levels from struggling students in danger of dropping the course to high achieving students who enter the course with high content knowledge levels.

Conclusion/Implications for Further Research

Analysis of the study's data suggests one primary conclusion: utilizing Twitter as a primary means of instruction in college algebra is highly effective both in terms of increasing the successful completion rate within the course and in regard to increasing class-wide mastery of subject matter. The combination of retention, remediation, and content mastery that Twitter use achieved in the selected sections of college algebra is rare for any instructional methodology and suggests several secondary conclusions that can be drawn from the study. First, it appears that the rise in content mastery indicated by this study was not achieved by sacrificing the increase in what could be termed 'classroom social connectivity'—the increased student communication, collaboration, and engagement documented in previous studies of the social and motivational effects of Twitter use in

Exam performance Comparison Between College Algebra Courses					
Exam	Breakdown	Traditional 1	Traditional 2	Traditional 3	Twitter
Exam 1	Avg correct	14	10	13	13
	Average %	78%	58%	72%	72%
	n	43	55	23	77
Exam 2	Avg correct	20	14	16	18
	Average %	80%	56%	64%	72%
	n	41	21	23	75
Final Exam	Avg correct	30	30	31	34
	Average %	75%	75%	78%	85%
	n	38	18	21	72
No show or Withdrawal		5	3	2	5
	% of n	12%	14%	9%	6%

Table 2: Exam Performance Breakdown Between Courses

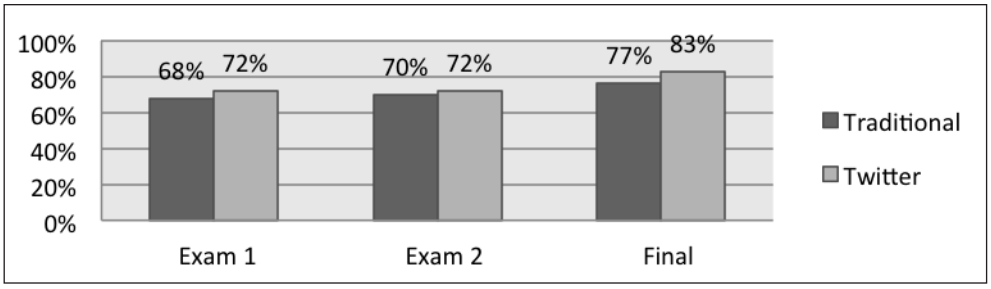

Chart 1: Exam Performance Comparison

courses. In this respect, the present study builds upon previous studies by suggesting that Twitter can be used as a primary means of instruction and still maintain its enhanced classroom social connectivity functions without any additional Twitter use designed specifically to enhance this connectivity.

Another conclusion that can be drawn from the study is that the benefits of Twitter use documented by the study are not discipline specific. Because the increased retention and academic performance of the Twitter sections can be traced to the increased social and visual communication channels created by the use of Twitter, there is nothing to suggest similar benefits could not be replicated in other content areas. There is, in short, nothing specific to the understanding and solving of algebraic equations that would suggest that they would be more likely than material from other content areas to see a rise in content mastery through Twitter use. In fact, the Twitter-based instructional methodology described in the study could be translated verbatim to the study of other content requiring visual applications of conceptual understanding. Other content areas requiring equation solving, such as physics and chemistry, could obviously utilize Twitter in precisely the same manner employed in this study. Less obviously, any skill-based writing course, from basic composition to creative writing, could employ the same methodology simply by sharing writing drafts instead of algebraic equations on Twitter. Non-general education courses such as engineering, architecture, and graphic design could also make use of the Twitter-based instructional technique described in the study.

Finally, because the increased content mastery documented by the study was rooted in Twitter's inherent social connectivity and visual communication functions, other instructional methodologies that employ Twitter would appear to have the potential to achieve positive results in student performance. What differentiates Twitter and other social media from other digital communication tools such as Wikis or Google docs is the cultural acceptance and credibility social media have in the lives of present day students. In essence, Twitter is one of the languages students speak in their lives outside of school. Employing Twitter as a means of instruction in the two-thirds of a college algebra class devoted to problem solving allows students to learn and collaborate in a digital language that in many ways is as familiar to them as their vernacular. The invention of other social media-based instructional techniques, as well as research into the comparative effectiveness of these techniques, is thus called for by the results of the study presented here.

References

Agherdien, N. (2011). Twitter and Edulink: Balancing passive consumption with knowledge creation. *Proceedings of the International Conference on E-Learning,* 489-492.

Antenos-Conforti, E. (2009). Microblogging on Twitter: Social networking in intermediate Italian classes. In L. Lomicka & G. Lord (Eds.), *The next generation: Social networking and online collaboration in foreign language learning* (pp 59–90). San Marcos, TX: CALICO Publications.

Borau, K., Ullrich, C., Feng, J. & Shen, R. (2009). Microblogging for language learning: Using twitter to train communicative and cultural competence. *Proceedings of the International Conference on Web Based Learning—ICWL 2009* (pp 78–87). Berlin: Springer-Verlag.

Costa, C., Beham, G., Reinhardt, W. & Sillaots, M. (2008). Microblogging in technology enhanced learning: A use-case inspection of PPE summer school 2008. Paper presented at the *European conference on Technology enhanced Learning (ECTEL),* Maastricht, the Netherlands.

Dunlap, J. C. & Lowenthal, P. R. (2009). Tweeting the night away: Using Twitter to enhance social presence. *Journal of Information Systems Education,* 20(2), 129–155.

Ebner, M. (2009). Introducing live microblogging: How single presentations can be enhanced by the mass. *Journal of Research in Innovative Teaching,* 2(1), 91–100.

Ebner, M. & Schiefner, M. (2008). Microblogging—More than fun? In I. A. Sánchez & P. Isaías (Eds.), *Proceeding of IADIS Mobile Learning Conference 2008* (pp. 155–159). Portugal.

Elavsky, C., Mislan, C., & Elavsky, S. (2011). When talking less is more: Exploring outcomes of "Twitter" usage in the large-lecture hall. *Learning, Media and Technology,* 36*(*3), 215-233.

Holotescu, C. & Grosseck, G. (2009). Using microblogging in education. Case study: Cirip.ro. *Paper presented at the 6th Conference on e-Learning Applications*, Cairo, Egypt.

Florida Center for Instructional Technology (2013). *The technology integration matrix*. College of Education: University of South Florida. Retrieved from http://fcit.usf.edu/matrix/credits.php

Junco, R., Elavsky, C., & Heiberger, G. (2013). Putting twitter to the test: Assessing outcomes for student collaboration, engagement and success. *British Journal of Educational Technology,* 44(2), 273-287.

Junco, R. R., Heiberger, G. G., & Loken, E. E. (2011). The effect of Twitter on college student engagement and grades. *Journal of Computer Assisted Learning,* 27(2), 119-132.

Kassens-Noor, E. (2012). Twitter as a teaching practice to enhance active and informal learning in higher education: The case of sustainable tweets. *Active Learning in Higher Education,* 13(1), 9-21.

Lial, M., Hornsby, J. & Schneider, D. I. (2011a). *Essentials of college algebra* (10th ed.). New York: Pearson.

Lial, M., Hornsby, J. & Schneider, D. I. (2011b). *MyMathLabPlus for essentials of college algebra* (10th ed.). Retrieved from http://www.pearsonmylabandmastering.com/northamerica/mymathlab/

Lowe, B. & Laffey, D. (2011). Is Twitter for the birds? Using Twitter to enhance student learning in a marketing course. *Journal of Marketing Education,* 33*(*2), 183–192.

Park, S. (2013). The potential of web 2.0 tools to promote reading engagement in a general education course. *Techtrends: Linking Research & Practice to Improve Learning,* 57(2), 46-53.

Perifanou, M. A. (2009). Language micro-gaming: Fun and informal microblogging activities for language learning. *Communications in Computer and Information Science,* 49, 1–14.

Southern Association of Colleges and Schools Commission on Colleges. (2011). *The Principles of Accreditation: Foundations for Quality Enhancement (5th ed.).* Decatur, GA: Author.

Sullivan, J. (2012). A tale of two microblogs in China. *Media, Culture & Society,* 34(6), 773-783.

Twitter, (2013). The fastest, simplest way to stay close to everything you care about. *Twitter,* Retrieved from http://twitter.com/about

Waller, M. (2010). 'It's very very fun and ecsiting'-using Twitter in the primary classroom. *English 4--11*, (39), 14-16.

Wright, N. (2010). Twittering in teacher education: Reflecting on practicum experiences. *Open Learning,* 25(3), 259–265.

Assessing Ethical Thinking as a Cognitive Task: A Reliable Rubric

Meg Gorzycki, Diane Allen, and Pamela Howard

Abstract

One objective of higher education is to improve students' ethical thinking skills, but barriers to teaching and assessing ethical thinking can frustrate this goal. In this study, the relationship between ethical thinking and critical thinking provides the basis for creation of an ethical thinking assessment tool, modifiable across disciplines. As in common assessments of critical thinking, the tool includes a dilemma supported by mock documents. Students read and comment on the value of the documents in determining a choice regarding the dilemma. A rubric allows scoring of students' proficiency at identifying ethical dimensions of issues raised by the dilemma and blending elements and standards of both critical thinking and ethical thinking as cognitive tasks. The tool was tested in three different classes for students in the health care professions. Reliability of the rubric was established after three rounds of development.

Keywords

ethical thinking, cognitive task, reliability, assessment, rubric

Meg Gorzycki, EdD, is a Faculty Development Consultant at the Center for Teaching and Faculty Development at San Francisco State University.

Diane Allen, PhD, is an Associate Professor of Physical Therapy at the College of Health and Social Sciences at San Francisco State University.

Pamela Howard is an Associate Librarian at J. Paul Leonard Library at San Francisco State University.

Introduction

The cultivation of an ethical outlook relative to community-building and problem-solving is a long-standing objective in higher education. The expectation that a liberal arts education will improve students' ethical thinking has been widely expressed by educators and policy-makers throughout the history of the United States from the federalist and nationalist eras (Cremin, 1982), to the latter half of the 20th century (Bok, 1982; Cremin, 1990), and into the 21st century (Brookfield, 2011; Lewis, 2006; Shapiro, 2005). The Association of American Colleges and Universities (Association of American Colleges and Universities [AACU], 2007) identified ethical reasoning as an essential learning outcome. Ethical reasoning fosters social responsibility by cultivating honesty, integrity, serious regard for others' perspectives, and principled engagement with others. The AACU (2007) study revealed that over 86.9% of university professionals believe that there should be an institutional focus on ethical and moral reasoning. Just 38% of students in that study said that formal coursework provided frequent opportunities to develop ethical and

moral reasoning. Students noted that the teaching of ethical thinking is often restricted to courses specifically designed to study ethics.

As a life skill, ethical thinking has a place in multiple courses across disciplines, but the integration of ethical thinking into disciplines other than philosophy may be seen as an insurmountable challenge by faculty unfamiliar with the epistemology of ethical thinking (Goodpaster, 2002). Many professors feel anxious about teaching ethical thinking because they do not see the relevance of ethics to their course or they lack adequate training to integrate such studies (Lewis, 2011).

While schools and universities are philosophically committed to producing graduates who understand how to think ethically and who have a preference for such thinking, teaching and assessing ethical thinking presents two special challenges to educators. First, the concept of ethics is complex and often associated with moral indoctrination. By capitalizing on the association between critical thinking and ethical thinking, the authors propose an assessment of ethical thinking that necessitates mental processes different from those of indoctrination. Secondly, thinking, including ethical thinking, cannot be directly observed; it must be represented by proxy behaviors. In this instance, the authors utilize students' articulations of their rationales for a given decision as insights into their thought processes. The purpose of this investigation is to explore a viable paradigm for ethical thinking that can be readily applied to instruction in multiple disciplines and assessment of student learning via a validated and reliable ethical thinking rubric.

Ethical Thinking

Einstein wrote, "When we survey our lives and endeavors we soon observe that almost the whole of our actions and desires are bound up with the existence of other human beings" (Einstein, 2007, p. 8). It is the social condition of inextricable relationships that compels ethics. To introduce our study we explore the meaning of ethics and clarify the way this inquiry has conceptualized it.

In the Aristotelian sense, ethics is a matter of "human action[,]… opinion about human action, or right human action, or right opinion about human action," and the rationale for studying ethics is to reflect upon the question of whether one is living one's life rightly (Finnis, 1983, p. 1). The late French philosopher, Paul Ricoeur, argued that there is no etymological distinction between ethics and morality as both refer to morés that connote "that which is considered to be good and that which imposes itself as obligatory" (Ricoeur, 1992, p. 170). He also recognized that the ethical aim is multi-faceted and included the good life, high standards of excellence in conduct, and living well or flourishing.

Ricoeur (1992) claimed that the concept of self "implies otherness to such an intimate degree that one cannot be thought of without the other" (p. 3) and that "the sense of justice is implied in the very notion of the other" (p. 194). A cardinal feature of the ethical aim in one's relationship with others is reciprocity between equals, which is dependent on the ability to appreciate that "the other" is likely to benefit from the same actions and conditions that benefit the self, and hence emerges the empathetic aspect of ethics (Ricoeur, 1992, p. 194). Regard for others is manifest not only in personal relationships, but in social institutions which themselves embody the common morés that bind the community together; thus, ethics is a matter of both public and private concern (Singer, 1994).

In a democratic society, reciprocity between equals has a special place in academic discourse, as educators prepare individuals to assume civic responsibilities. Some of the pedagogical challenges of teaching ethics—or, at least, of cultivating an ethical outlook—are to help students understand the value of thinking about the well-being of others and the institutional morés

that sustain conditions favorable to people's well-being, and to provide them with a framework with which to assess whether their own intentions and actions are aligned with ethical aims. Aristotle's concept of the good life—or more precisely the condition of flourishing— assumes a practical dimension inasmuch as each individual possesses the potential to affect the degree to which others will flourish (Finnis, 1983, pp. 8-9). These aspects of ethics hint that ethics is concerned with virtue and the goodness of one's character (MacIntyre, 1966). The critical element in the matter of ethics and the cornerstone of this essay's discussion about ethical thinking is the individual, the "self" who forms intention, thinks about matters, and chooses courses of action.

British philosopher Simon Blackburn (2001) argued that by nature human beings are ethical animals, as we perpetually judge, evaluate, favor, justify, and compare experiences and ideas. This implies that human beings sense an intrinsic value to thinking about what is "good," and that such thinking contributes to the constant negotiation that takes place between the individual and society. Blackburn's observations underscore the reality that ethical thinking is an activity that is willed and that can be consciously orchestrated, monitored, and evaluated in processes of metacognition. Ethical decision-making, therefore, is not merely a matter of sentiment or blind conformity to prevailing norms and customs, but a process that requires reflection, analysis, and monitoring of the quality of one's own thinking. The notion that ethical thinking is different from sentimentality and blind conformity is reinforced by contemporary neurological research that finds brain activity associated with moral reasoning in the same regions as brain activity associated with critical thinking (Casebeer & Churchland, 2003; Green & Haidt, 2002).

Father of psychometrics Edward Thorndike (1906) recognized that there are intellectual aspects to ethical thinking that can be fostered by schoolwork. These aspects include accuracy, thoughtfulness, patience, and open-mindedness. Thorndike did not create an instrument capable of measuring ethical thinking, but he helped to illuminate the link between ethics and cognition. Such a link is exemplified in the early work of educational psychologist Goodwin Watson (1925) who developed a test for fair-mindedness that employed the concepts of accuracy, thoughtfulness, and open-mindedness. Contemporary neurological research encourages educators to develop exercises that target discrete cognitive tasks associated with ethical thinking. Neuropsychologist Elkhorn Goldberg (2001) described the frontal lobes of the cerebrum as the "executive brain," an area vital to the human capacity to reason and make moral judgments, as it is the house of planning, anticipating consequences, focusing attention, and executing analytical tasks. "The frontal lobes," Goldberg wrote, "are critical in a free choice situation, when it is up to the subject to decide how to interpret an ambiguous situation" (p. 80). The executive brain moderates and suppresses emotional responses, which enables the individual to act in accordance with the individual's intentions or plans.

As researchers (Gonzzaniga, 2000; Reynolds, 2006) have documented, the cognitive aspect of ethical thinking, which includes prioritizing considerations, weighing evidence, and predicting consequences, is but one aspect of the complex mental process of making ethical decisions. This mental process also requires the moderation of emotions, sustained attention, and the perceiving of environmental conditions. The cognitive aspect is essential however, as it is involved in the way individuals frame a moral dilemma, grasp the essence of divergent points of view, understand the facts and concepts involved in the dilemma, prioritize discrete elements of issues, analyze those elements, evaluate the quality of judgment, and respond to stimuli that includes assertions found in prose and academic exercises.

Relationship of Critical Thinking to Ethical Thinking

Critical thinking is a cognitive and metacognitive activity that consciously analyzes and evaluates both the assertions made by others and the way one actually thinks about those assertions (Facione, 1990; Paul & Elder, 2009). Ethical thinking is an aspect of critical thinking which is distinguished by the deliberate and systematized investigation of the good or injury that may result in others from one's assertions, beliefs, assumptions, and actions. Although not all critical thinking is ethical thinking, many features of critical thinking may apply to this discussion. Critical thinking scrutinizes one's own thinking in progress with the objective of improving it (Ennis, 1996; Nosich, 2001). Critical thinking directs one's attention to discrete elements of assertions in order to assess the fairness, accuracy, depth, logic, relevance, breadth, significance, and clarity of assertions and one's thought and deliberately seeks to understand diverse perspectives and the implications of assertions (Paul & Elder, 2008). These latter characteristics of critical thinking assume an ethical aspect as implications, consequences, and perspectives normally concern others. Critical thinking is transformed into ethical thinking by the conscious decision to consider how others might experience matters, whether assertions or actions are likely to benefit or harm others, and whether assertions or actions will augment or diminish a just distribution of rights and resources (Ricoeur, 1992; Valasquez, Shanks, Thomas, & Meyer, 1996).

Ethical thinking, like critical thinking, is a construct that cannot be directly observed and measured. To assess critical thinking, researchers and educators have had to develop instruments that employ appropriate proxies for thinking processes, similar to the challenge educational psychologists faced at the dawn of the 20th century as they struggled to find the means of quantifying intelligence. The first initiatives to evaluate the quality of cognitive activity measured reflex and perception as proxies for intelligence (Cattell, 1890; McConnell, 2009). Introduced in 1905, Alfred Binet's intelligence test was revolutionary in the sense that it examined the content of subjects' descriptions--what they saw or what they thought was going on in a picture or sentence--as the proxy for cognitive activity (Siegler, 1992; Zazzo, 1993). Watson's test of fair-mindedness applied Binet's approach inasmuch as it drew conclusions about thinking from the subjects' responses to written prompts (Watson, 1925).

Subsequently, educational psychologists increasingly used tests that assessed the subject's ability to reason, detect illogical assertions, and identify implications based on how the subject responded to statements and interpreted readings. The Ennis-Weir Critical Thinking Essay Test (Ennis & Weir, 1985), Collegiate Learning Assessment (Council for Aid to Education, 2011), and Watson-Glaser Critical Thinking Appraisal (Watson, 1980) are examples of validated tests that use cognitive tasks, such as detecting illogical assertions and identifying implications and biases to detect subjects' proficiency with analyzing and evaluating assertions.

Generally, tests that measure critical thinking prompt discrete cognitive tasks, such as distinguishing correlation from causation, recognizing a bias, or detecting implications. Such tasks provide researchers with a window to the subject's analysis and judgment. The current research proposes that, like critical thinking, ethical thinking can be revealed in response to cognitive tasks. To align the cognitive tasks with the elements of ethical thinking, the authors sought to identify whether students could detect empathy, identify implications of equity and social justice, and recognize the presence of caring about public wellness in assertions made.

Method

In this investigation, researchers sought to establish the validity and reliability of a rating rubric designed to detect critical and ethical thinking represented in

student responses to moral dilemmas. Like formats used in the Collegiate Learning Assessment (Council for Aid to Education, 2011) and Ennis-Weir Critical Thinking Essay Test (1985), researchers provided students with a dilemma about which they were to make a decision. Students received mock abstracts, graphs, and other information related to the topical dilemma (Table 1). Each of the mock documents contained problematic assertions. Students were to think about the information in the various documents while responding to questions about the dilemma. Outside reviewers then used a rubric to assess comprehensiveness, clarity, logic, and use of evidence in students' responses to the questions about the dilemma. Higher scores on the rubric indicated more ethical thinking as revealed by the critical analysis of charts, detection of unsupported claims, and discernment of an author's bias or sense of empathy (Table 2).

Subjects in this study were students in the health care professions. Thus, each dilemma was created to identify a health-related issue (Table 1). Students were offered two alternative courses of action. The mock documents about the topic contained information intended to influence students' thinking about each issue. Each group of students responded to one dilemma at time one and a different dilemma, with different mock documents, at time two, approximately two weeks later. Each group of students participated in compliance with institutional review board protocols.

Round	Dilemma	Mock Documents
2-3	School Nurse: You are a school nurse in an urban elementary school. Two years ago, a medical marijuana clinic was opened three blocks from the school, and since then, many neighbors and merchants have expressed concerns about the clinic. A local committee has been formed and it wants your school to ask city officials to close the facility. You must take a stand on whether you support the measure to close the clinic or not.	Document A: Scatter chart allegedly illustrating a causal relationship between medical marijuana clinics and neighborhood crime Document B: Article abstract celebrating the health effects of marijuana use Document C: Article abstract poorly applying research to claim that marijuana clinics present no danger Document D: Speech made by a religious leader containing marginal relevance to the issue and poor evidence for assertions
2-3	Director of Community Health Clinic: You are the director of a community health clinic in an urban setting. Your clinic serves poor residents, ethnic minorities, and retired elders. About 80% of your funding comes from the state and the rest comes from municipal taxes and donations. In the past, you have offered screening and vaccinations for Hepatitis B and counseling services for teens struggling with substance abuse, depression, and violence. The state budget has cut your funding and you do not have money to continue both the Hepatitis B and teen counseling program. You must choose which to fund.	Document A: Scatter chart allegedly illustrating a causal relationship between teen therapy and academic success Document B: Article abstract addressing benefits of early detection of disease, intervention, and education to prevent epidemics Document C: Article abstract blaming the government for the public's suffering and using research in questionable ways Document D: A speech by the superintendent of schools calling for educators to become activists and using questionable logic

Table 1: Sample of Dilemmas and Mock Documents Used in Rounds 2 and 3 of Testing the Reliability and Validity of a Rubric for Ethical Thinking.

Item	Round One Items and Mock Documents (A-D) to Which They Refer	Round Two and Round Three Items
1	Differentiated cause from correlation in graph (A)	Student indicates a choice on the dilemma
2	Acknowledged lack of information about document authors (A)	A low number of subjects in a mock study
3	Recognized problems with sample population in study (A)	A misreading of causation in a chart that depicted correlation
4	Detected lack of detail regarding research methods (A)	A failure of a mock study to acknowledge variables affecting the outcome
5	Acknowledged lack of information about sponsorship of research (B)	A low number of subjects in a second mock study
6	Acknowledged lack of information about researchers (B)	A potential gender bias in a study conducted with members of only one sex
7	Recognized abstract did not address variables affecting outcome of study (B)	The irrelevance of information provided in a mock document
8	Detected that abstract/article population was irrelevant to the issue (B)	The flawed logic in a mock document linking cause and effect
9	Detected lack of clear and precise reporting of data (B)	A second irrelevant assertion in a mock document
10	Recognized that source of information was potentially not credible (C)	
11	Realized the document was an emotional appeal lacking analysis of evidence (C)	
12	Recognizes irrelevance of a speech (C)	
13	Detects serious lack of evidence for assertions (D)	The presence of an unsupported claim in a document
14	Recognizes bias in claims (D)	The biased and judgmental interpretation of a document
15	Recognizes bias in selection of data (D)	
16	Recognizes conflict of interest represented in study	
17	Acknowledges wide scope of stakeholders	
18	Acknowledges key points of opposing views	
19	Recognizes the vulnerable stakeholders in the decision	
20	Expresses empathy for the vulnerable in the decision	Evidence of empathy or caring for the person or public wellness across any responses
21	Specifically references social justice and equity in defense of decision	Specific references to social justice and/or equity relative to law or institutional policy across any responses
22	Specifically references dignity of human being	

Table 2: Elements of Ethical Thinking for Rounds 1, 2 and 3

Investigators conducted three rounds of data gathering. Each round was conducted in a different course related to human health care; no student participated in more than one round. The investigators assessed students' responses and the use of the rubrics after each round. Potential problems were noted, including problematic directions, the length of the documents, the alignment of issues raised at time one and time two within a round, the efficacy of the rubric, and the sufficiency of rater preparation. The investigators made adjustments in all five areas after the first round and to the rubric and rater preparation after the second round.

The rubric's descriptive scoring scheme allows the rater to describe the quality of students' performance on discrete and targeted tasks (Oakleaf, 2009). The rubric awarded points for short answers that noted a given element and points for developing ideas further, based on criteria representing critical and ethical thinking (Table 3). Of the three general categories of interrater reliability—consensus estimates, consistency estimates, and measurement estimates—researchers chose to use consistency estimates for computing interrater reliability for this rubric (Stemler, 2004). This decision was made based on three considerations. First, consistency estimates require less special training of the people who will rate the material; second, consistency estimates provide the means of capturing a general consistency among multiple raters; and, finally, this approach can be applied to continuous data as well as discrete data (Stemler, 2004). Data from the rubric forms were entered into an EXCEL (Microsoft, 2007) spreadsheet. Reliability was assessed using Cronbach's alpha for internal consistency in the second and third round of data. In Cronbach's alpha, the accepted statistical threshold for internal consistency is 0.70 (Stemler, 2004). Pearson's correlation was calculated between dilemmas and raters for test-retest and interrater reliability in all three rounds. Correlation values range between negative and positive 1 with values farther from zero indicating greater correlation. Validity was assessed using item response theory methods (ACER ConQuest: Generalised Item Response Modelling Software (Version 2.0), 2003).

Item response theory methods (IRT) were chosen because they specifically facilitate development and assessment of new rubrics or questionnaires and allow statistical analysis of ordinal data in such instruments (Wilson, 2005). The IRT analyses included: item fit,

Round	Element	Standard		
Rounds One and Two	Element Noted Yes (1) No (0)	Not clear or comprehensive; poor insights and weak use of logic and evidence (1)	Marginally comprehensive and clear; insights and evidence inconsistent (2)	Comprehensive and clear understanding; insights/evidence logically linked to argument (3)
Round Three	Failed to note the element (0)	Noted element but is not clear; weak logic and poor understanding of issue; uses no evidence (1)	Noted element; clarity is adequate as is logic and understanding of issue; some evidence is used (2)	Noted element; exceptional clarity; outstanding logic and understanding of issue; uses much evidence (3)

Table 3: Rubric Standards (Score) for Assessing Recognition and Commentary of Elements in All Rounds of Testing

item analysis, rater consistency, and person separation reliability (with values ranging from 0 to 1). Different IRT models for the data were compared to determine what numbering system worked better in the rubrics, including the rating scale and partial credit models. Items to which students received non-zero scores were examined for validity in all three rounds of testing.

Round One

Ten students in a graduate physical therapy course completed both testing sessions for the first round. Two raters assessed whether the students detected the elements of ethical thinking and how proficient they were in detecting them. See Table 1 for the items on the rubrics, and Table 3 for the standards used for the different rounds of testing. Students were awarded 0-4 points on the 22 items for each of two dilemmas indicating items were addressed not at all, barely, poorly, moderately, or well.

Round Two

Twenty-seven students in an undergraduate nursing course participated in round two.[1] The dilemmas were changed to align with the health care discipline of the students. Revisions between round one and round two included shortening of the four documents in each dilemma, decreasing the number of items on the rubric to reduce scoring requirements, and revising the instructions for the students to increase their understanding of the process and products expected from them. The mock documents were revised to ensure that the embedded elements of critical and ethical thinking were more closely aligned between dilemmas. In the resulting rubric for round two (Table 1), the first element (item) of the rubric identified whether students took a position on the controversy or not. The remaining 12 items of the rubric contained ten elements of critical thinking and two elements of ethical thinking that corresponded to assertions in the mock documents. Three raters scored the rubrics. Students were awarded 0-4 points indicating that items were addressed not at all, barely, not clearly, marginally, or comprehensively for each dilemma (Table 3).

Round Three

Twenty undergraduate nursing students participated in the third round. Categories of responses were collapsed to reflect 0-3 scoring for items (Table 3). Between the second and third rounds, some previous scoring disparities were addressed by a 90-minute training session for the two raters. The training session provided an occasion to gain a consensus on how to rate student commentary, distinguish exemplary responses from mediocre, and clarify the concepts underlying the embedded flaws in the mock documents.

Results

Round One

In the first round, two raters scored responses from 0-4 on the 22 items in the rubric. Students received between 0.5% and 8% of the 352 possible points (mean 4%, SD 2%) (Table 4). Scores higher than zero on an item indicated that students mentioned the designated "flaw" in the document and thus received credit for that element of critical or ethical thinking. Raters scored responses higher than zero on only 13 out of 22 items when examining data across all students and both dilemmas. The correlation between raters was close to zero at $r = 0.16$, and between dilemmas was low and negative at $r = -0.29$.

Round Two

In the second round, three raters scored responses from 0-4 on 13 items. Students scored between 6% and 36% of the available points (mean 17%, SD 8%) (Table 4). Person separation reliability was 0.99 for dilemma 1 and 0.83 for dilemma 2, indicating that there was enough information in the scoring to differentiate among students despite low overall scores. All but one item received higher than zero scores from at least 1 or

	Number of participants	Total possible points	Cronbach's alpha	Interrater correlation	Correlation between dilemmas
First round – test of concept	10	352, mean=4, SD=2	-	rater 1 & rater 2 =.16	r= -.29
Second round	30	196, mean=17, SD=8	.80	rater 1 & rater 2 =.68 rater 2 & rater 3 =.39 rater 3 & rater 1 =.61	r= .36
Third round	20	148, mean=19, SD=9	.67	rater 1 & rater 2 =.68	r= .35

Table 4: Statistics from the development of the rubric

2 students on one or both dilemmas. Student performance in round two was generally below the average level of difficulty of the items in both dilemmas with the notable exception of item 1, for which nearly all students received full credit. The minimum and maximum raw scores for the students in round two were 33 and 87 respectively, out of a possible 294 points across all raters and dilemmas.

A Cronbach's alpha score of 0.80 indicated that the test was reliable and that the items accurately reflected performance. After analyzing the data from round two, categories of item responses were collapsed for several items because no responses were scored a 2 or 3 in several items, and the highest scores were not given for many items.

The correlation between scores given by raters was r = 0.68 for raters 1 and 2, 0.61 for raters 1 and 3, and 0.39 for raters 2 and 3. Raters interpreted the rubric form differently so the best IRT model of the data included raters as part of the prediction.[2] Rater three in round two marked most items as 1, "poorly" addressed, as a default for both dilemmas. Raters one and two left items blank as a default, scored as 0 for "not addressed" for most items. Rater three had a much narrower spread between the low and high score on both dilemmas (13 to 20 and 12 to 17) compared to the other two raters who had wider spreads of 14 to 26 points. Overall, the raters in this second round were significantly different in their scoring, with rater 3 attributing the most points to students, rater 1 second, and rater 2 third.[3]

The correlation between dilemmas was r = 0.36. Responses to the dilemmas of round two were distinctly different. If dilemma 2 was given after dilemma 1, one would expect an increase in scores reflecting a greater comfort level on the part of the students with the assessment process. However, scores on items for dilemma 2 were generally lower than for the same items on dilemma 1, with the notable exception of item 11 on dilemma 2, which received the overall highest score of any item.

Round Three

In the third round of testing, two raters scored the responses of 20 students (Table 4). Students received between 7% and 35% of the total possible points (mean 19%, SD 7%). A Cronbach's alpha score of 0.67 approached the acceptable score of .70 that indicates that the test had internal consistency. Smaller sample size in the third iteration of the rubric affected the

statistical power of the calculations. The correlation between raters was r = 0.68 and between dilemmas was r = 0.35. The only item receiving no score higher than a zero was an item in which students were asked to indicate that some information was irrelevant. The number of categories of item responses per item provided a sufficient range to separate the students' scores.

Discussion

Overall, changes between rounds resulted in improved rubric reliability and validity. Reducing the length of documents and number of items on the rubric were associated with a change from a negative correlation between dilemmas to a small but positive correlation. Collapse of the response categories resulted in a simpler scoring system (0-3 instead of 0-4). Rater training for the third round of testing brought the inter-rater reliability up to a moderately strong correlation. The values for internal consistency and person separation reliability were high enough to accept for the final rubric. Validity of the testing improved with respect to number of items that students and raters could interpret or score. In this sample of students in health professions, items related to empathy more frequently received non-zero scores; students also reflected bias awareness in their responses to dilemmas.

Table 4 profiles the consistency and reliability of the rubric across the three rounds. Cronbach's alpha for the second and third rounds was .80 and .67, respectively. The second round Cronbach's alpha reaches accepted statistical levels of .70 for internal consistency while the third round is just short of accepted levels. The decrease between the Cronbach's alpha values of rounds two and three may reflect the smaller numbers of students and raters in round three. Inter-rater correlations for both the second and third round ranged from 0.38 to 0.68 indicating small to moderate agreement in scoring. While training of raters improved inter-rater reliability in these three rounds, discrepancies in scoring during the third round could be used as examples in future training to increase reliability further.

It should be noted that the differences in the total points possible in each round reflects revisions in the way the item responses were assigned numeric value. Differences between mean percentages of total possible points achieved by students across rounds probably reflect differences in the instructions provided to both students and raters. The dilemmas and rubric were intended to record students' ability to identify elements embedded in the mock documents that are vital factors in critical and ethical thinking. Future research might pursue sensitivity of this rubric to changes in these abilities with instructional units or community-based learning.

When examining specific items on these rubrics, students tended to reveal empathy more often than they commented on other items. In the first round, when examining items across dilemmas and raters, students received higher than zero scores 16 times for the items related to identifying vulnerable people and nine times for the items related to concern for others; the next most frequent non-zero score was six times for the items related to documents that disagreed with the majority. Social justice items had more moderate scores than the other items. The second dilemma in the second and third rounds had more non-zero scores for the bias item than for empathy or social justice items.

The data are significant because they not only reinforce the validity of measuring critical thinking by assessing student's ability to detect inferences, biases, and relevance, but because they indicate that ethical thinking may be reflected in analyses captured in written statements. The data illustrate that just as it is reasonable to rate a subject's proficiency with critical thinking by judging how well the subject recognized, thought about, and subsequently wrote about relevance, bias, or flaws in research design, it is also reasonable to rate a subject's proficiency with ethical thinking. Judging how well the students recognized, thought

about, and subsequently wrote about the implications of various assertions regarding the well-being of others is a reasonable paradigm for assessing ethical thinking.

Conclusion

Ethical thinking can be organized into a series of cognitive tasks that prompt individuals to think about the philanthropic aspects of assertions, beliefs, and behavior. It is possible for individuals to think critically without thinking ethically, which means that individuals who ponder a course of action may do so without a deep regard for the injuries their options might cause others. It is not possible, however, to engage in ethical thinking without critical thinking; in order to weigh the benefits and detriments of ideas and actions, one must examine the logic, relevance, bias, accuracy, and comprehensiveness of assertions.

The findings illustrate that the rubric is an effective tool with which to assess students' ability to perform certain cognitive tasks related to ethical thinking because it offers raters a relatively narrow scope of indicators that represent overall student performance. Our findings underscore the value of rubrics targeting discrete elements of ethical thinking. With an understanding of students' ability first to detect and then to speak to the ethical considerations of an assertion or action, instructors have a platform from which to proceed with further analysis that is ultimately aimed at improving students' metacognition, or thinking about their thinking. Ethical thinking can be detected and qualified when raters share a common understanding of how the abstract phenomenon of ethical thinking can be translated into concrete representations of how one person factors the well-being of others into one's deliberations and analysis of ideas and assertions.

References

ACER ConQuest: Generalised item response modeling software [computer program]. 2003. Version 2.0. Hawthorn, Australia: ACER (Australian Council for Educational Research).

Association of American Colleges and Universities. (2007). *College learning for the new global century.* Washington, D.C.: Association of American Colleges and Universities.

Blackburn, S. (2001). *Ethics: A very short introduction*. Oxford, UK: Oxford University Press.

Bok, D. (1982). *Beyond the ivory tower: Social responsibilities of the modern university*. Cambridge, MA: President and Fellows of Harvard College.

Brookfield, S. D. (2011). *Teaching for critical thinking: Tools and techniques to help students question their assumptions.* Chichester: Wiley.

Casebeer, W. D., & Churchland, P. S. (2003). The neural mechanisms of moral cognition: A multiple-aspect approach to moral judgment and decision-making. *Biology and Philosophy*, 18, 169-194. doi: 10:1023/A:1023380907603.

Cattell, J. (1890). Mental tests and measurements. *Mind,* July: 373-380.

Council for Aid to Education. (2011). *The collegiate learning assessment*. New York, NY: Council for Aid to Education.

Cremin, L. (1982). *American education: The national experience, 1787-1876*. New York, NY: Harper Colophon Books.

Cremin, L. (1990). *American education: The metropolitan experience, 1876-1980*. New York, NY: Harper and Row.

Einstein, A. (2007). *The world as I see it.* San Diego, CA: The Book Tree.

Ennis, R. H. (1996). *Critical thinking*. Upper Saddle River, NJ: Pearson/Prentice Hall.

Ennis, R., & Weir, E. (1985). *The Ennis-Weir critical thinking essay test.* Pacific Grove, CA: Midwest Publications.

Facione, P. (1990). *Critical thinking: A statement of expert consensus for purposes of educational assessment and instruction*. Milbrae, CA: The California Academic Press.

Finnis, J. (1983). *Fundamentals of ethics.* Oxford: Clarendon Press.

Goldberg, E. (2001). *The executive brain. Frontal lobes and the civilized mind*. Oxford: Oxford University Press.

Gonzzaniga, M. (Ed.) (2000). *The new cognitive neuroscience*, 2nd edition. Cambridge, MA: Massachusetts Institute of Technology.

Goodpaster, K. E. (2002). Teaching and learning ethics by the case method. In N. E. Bowie (Ed.), *The Blackwell Guide to Business Ethics* (pp. 117-142). Oxford: Blackwell.

Green, J., & Haidt, J. (2002). How (and where) does moral judgment work? *Trends in Cognitive Science*, 6, 517-523. doi: 10.1016/s1364-6613(02)02011-9.

Lemann, N. (2000). *The big test.* New York, NY: Farrar, Strauss, and Giroux.

McConnell, D. (2009). *Philosophical and theoretical foundations of psychology.* Dubuque, IA: Kendal Hunt Publishing Company.

McIntyre, A. (1966). *A short history of ethics: A history of moral philosophy form the Homeric Age to the twentieth century.* New York, NY: Macmillan, Inc.

Nosich, G. M. (2001). *Learning to think things through: A guide to critical thinking across the curriculum.* Upper Saddle River, NJ: Pearson/Prentice Hall.

Oakleaf, M. (2009). Using rubrics to assess information literacy: An examination of methodology and interrater reliability. *Journal for the American Society for Information Science and Technology*, 60, 969-983.

Paul, R. (1990). Critical thinking: What, why, and how. In J. A. Binker (Ed.) *Critical thinking: what every person needs to know in a rapidly changing world* (pp. 45-56). Rohnert Park, CA: Sonoma State University.

Paul, R., & Elder, L. (2008). *The miniature guide to critical thinking: Tools and concepts*. Tomales, CA: Foundation for Critical Thinking.

Paul, R., & Elder, L. (2009). *Understanding the foundations of ethical reasoning*. Tomales, CA: The Foundation for Critical Thinking.

Reynolds, S. J. (2006). A neurocognitive model of the ethical decision-making process: Implications for practice. *Journal of Applied Psychology,* 91(4), 737, 748.

Ricoeur, P. (1992). *Oneself as another*. Translated by Kathleen Blamey. Chicago, IL: University of Chicago Press.

Scanlon, T. M. (2000). *What we owe to each other*. Boston, MA: Belnap Press of Harvard University Press.

Shapiro, H. T. (2005). *A larger sense of purpose: Higher education and society*. Princeton, NJ: Princeton University Press.

Siegler, R. S. (1992). The other Alfred Binet. *Developmental Psychology*, 28, 179-190. doi: 10:1037/0012-1649.28.2.179.

Singer, P. (Ed.). (1994). *Ethics*. Oxford, UK: Oxford University Press.

Stemler, S. (2004). A comparison of consensus, consistency, and measurement approaches to estimating interrater reliability. *Practical Assessment, Research & Evaluation*, 9(4).

Thorndike, E. L. (1906). *Principles of teaching based on psychology.* New York, NY: A. G. Seiler.

Velasquez, M., Andre, C., Thomas Shanks, S. J., Meyer, M.J. & (1996). "Thinking Ethically: A Framework for Moral Decision Making." *Issues in Ethics, Santa Clara University Center for Applied Ethics*, 7(1).

Watson, G. (1980). *Watson-Glaser critical thinking appraisal*. San Antonio, TX: Psychological Corporation.

Watson, G. B. (1925). *The measurement of fair-mindedness*. New York, NY: Teachers College Columbia University.

Wilson, M. (2005). *Constructing Measures: An Item Response Modeling Approach.* Mahwah, NJ: Erlbaum.

Zazzo, R. (1993). Alfred Binet, 1857-1911. *The Quarterly Review of Comparative Education*, 23, 101-112. doi: 10:1007/BF021195028.

Notes

1 We acknowledge the generosity of Dr. Allen Orsi, who allowed researchers to administer tests to his students.

2 Model with raters deviance is 3546.07909 with 86 parameters; model without raters deviance is 3598.93824 with 84 parameters; G2 likelihood ratio statistic for comparing whether models were different =52.8 with 2 degrees of freedom, $p<0.0001$, indicating that the model with raters was significantly different and more parsimonious.

3 $\chi 2= 331.70$, degrees of freedom = 2, $p < 0.001$.

Skillful Scaffolding: Using Information Literacy Techniques to Enhance Literature Studies

Amy Getty and Dan Chibnall

Abstract

Faculty frequently think they can (or have to) teach information literacy (IL) on their own, ignoring the resources of academic librarians on their campus. This article explores the benefits of an equal collaboration between a faculty member in literature and an academic librarian, describing in detail the project they created. By scaffolding assignments of increasing difficulty and working collaboratively, this system allows students to progress in their IL skills throughout the semester.

Keywords

information literacy, American literature, children's literature, collaborative teaching, evaluating resources

Amy Getty is a professor of English at Grand View University.

Dan Chibnall is a user services and instructional design librarian at Grand View University.

Introduction

The explosion of digital information and new technologies complicates the role of twenty-first century faculty. The traditional ways of helping students find and process information within the influx of data are no longer adequate. The advent of new electronic resources often makes it difficult for the average person in any discipline to keep up with his or her field, let alone to integrate this material into the classroom. The traditional role of the academic librarian has also changed considerably over the past fifteen years, mainly due to misperceptions that new forms of technology can replace the services traditionally provided. However, there is a growing body of literature that shows librarians have evolved with the technology and have adopted new skills, as well as honing older ones, to help students and faculty see the value of the modern library in the research process. It is only by combining forces in a strong collaboration between librarian and faculty member that we can effectively help our students become truly information literate.

Collaborations between faculty members and librarians provide an opportunity to design course objectives and outcomes together, which ensures that students will be exposed to both discipline-specific content and information literacy methods. Lindstrom and Shonrock (2006) note the growing trend in higher education not only to integrate information literacy into classroom activities and assignments, but also to practice it through stronger

collaborative efforts between faculty and librarians. This sentiment is echoed by Mounce (2010): "Collaboration is important because it helps librarians understand the research needs of faculty and students and helps improve students' information literacy skills" (p. 317). Although the English classroom, with its focus on the analysis of texts, writing methods, and multi-stage evaluation of one's own work and that of one's peers, makes it well suited to information literacy concepts, the diligent evaluation and use of quality sources is essential for every discipline in the university curriculum. Vital, however, to success in integrating information literacy and helping students truly learn these skills is a strong faculty collaboration with a university librarian. As Lindstrom and Shonrock (2006) caution, "what distinguishes the collaborative endeavors mentioned here is not the time commitment for the librarian, the number of sessions being taught, or the number of students being reached; it is the level of librarian involvement in terms of goal setting and course development" (p. 20).

We, too, have found that the more closely a faculty member works with a librarian in developing the course assignments and projects, the better able the students are to recognize the importance and value of information literacy in their overall studies. Collaboration works because the librarian and the faculty member can see where their respective disciplines and ideas overlap with and complement each other. A course design structured on such a collaboration also helps build outcomes and assignments that test the students' ability to recognize and use information literacy skills. Holliday and Fagerheim (2006) encourage a deeper collaboration at the departmental level which helps integrate information literacy across a series of courses at every level of their major and ensure that students learn these skills. Collaborations also become more effective if they are created and nurtured from a simple, basic foundation of shared goals and shared outcomes. Jacobs and Jacobs (2009) emphasize that "[c]ollaborations need to be grassroots: manageable and organic…and above all connected with all stakeholders—especially students" (p. 79). Indeed, when we started our own collaboration, first in Literature for Children and Adolescents and then in American Literature, we began with smaller goals, eventually building to completely integrated information literacy and literature assignments. In a way, we scaffolded our collaboration the same way we eventually scaffolded our students' assignments.

Similar collaboration between librarians and faculty in all disciplines can have a long-term positive effect on student learning. The skills that students learn in classes grounded in information literacy are skills that will be transferable not just to other courses, but also to situations and problems outside of the college classroom. Reed and Stavreva (2006) write that one of the positive effects of teaching information literacy alongside critical thinking is that it helps students to become active learners and enables them to "learn how to learn" (p. 448). College education should not simply be training in the specifics of a certain field, but learning how to evolve and engage with new ideas and problems in the complex world after graduation. Elmborg (2006) argues that information should be seen as the "raw material students use to solve these problems and to create their own understandings and identities…" (p. 198). It was with all of these outcomes in mind that we established our scaffolded assignments.

In our collaboration, we believed that information literacy could best be delivered to college students by scaffolding the assignments and projects. Collaboration, in this case, produced a series of library visits, projects, and assignments that were scaffolded to build on students' information literacy skills as they mastered each one. Information literacy, much like reading and writing, is a skill set that can only be learned through repetition, practice, and application to a variety of projects and problems. As Jacobs and Jacobs (2009) note, writing and information literacy must be integrated as

much as possible, especially in lower-level courses. We encouraged students to test the information literacy skills they were learning on assignments and projects and to apply them within a disciplinary context.

In order to understand the structure of our collaboration, it is necessary briefly to define information literacy, to explain how this project began, and to illustrate how it evolved over time.

The Problem

Many articles have addressed the issues of integrating information literacy skills into the classroom and faculty-librarian collaboration, but they are often written for specialized library audiences rather than faculty members. In his review of literature on this issue, Mounce (2010) sets as his goal to "provide examples of academic librarians collaborating with faculty members' courses and to provide statistical data for all reviewed articles and summaries of some items reviewed." Published in *The Reference Librarian*, his article focuses on the trend of the "shift from bibliographic to information literacy instruction" (p. 301), citing 133 journal articles on this topic found within 49 different journals in disparate fields. Close inspection of this journal list, however, illustrates that 33 of these journals, accounting for 114 of the articles, cater specifically to a librarian audience. While the goal of working together is explicitly stated, implicit in the data is the reality that information literacy is largely touted only to library audiences.

Nearly every article about information literacy, no matter the audience and across university disciplines, stresses the importance of conveying ideas about how to integrate information literacy to a wider faculty audience. The common denominator in the research is the idea that students entering college often do not have an understanding of what information literacy is or how it can be practiced in the college curriculum. Deitering and Jameson (2008) write that new students have "limited critical thinking skills" and that in order for them to learn writing and information literacy skills, they must be taught in a collaborative setting (p. 78). Integrating information literacy into students' curriculum provides them with the best possible avenue for understanding its value as a way of thinking, evaluating, and writing.

Traditionally, students only visit the library once during the semester, and that is with the rest of their class, for formal instruction on information literacy. However, as Holliday and Fagerheim (2006) note, there is a definite gap between what students need to learn in terms of information literacy and what they are being taught in one-shot sessions (p. 170). Additionally, some within librarian circles feel that the term "information literacy" may be hindering the connection between academic librarians and faculty. Purdue (2003) makes the case in "Stories, Not Information," that in addition to expanding the one-shot session, purveyors of information literacy should shift their paradigm from a transactional mode to a transformative one. "Information is transient; its insistence on 'prompt verifiability' makes it akin to basic education. Stories are transformative because they require active participation on the part of the hearer/reader" (p. 658). Purdue would argue that we can encourage true critical processing of the data students discover and a more complex development of informational literacy skills by expanding the amount of time spent looking for and evaluating information.

One way to achieve a more transformative or storytelling model is to have instructors focus on creating learner-centered class sessions in a classroom where information literacy is integrated effectively. In the model described by Kenedy and Monty (2008), these classes are not lecture-based, but rather discussions with examples and activities where students work together to find resources and evaluate them on multiple levels (p. 95). Information literacy cannot simply be taught as a stand-alone concept. It must be

mixed with other content in order for students to see its usefulness. Purdue (2003) enhances this argument by stating that we must "do away with any kind of mechanistic, utilitarian notions of information literacy" and embrace the idea that information literacy is essential to the research process (p. 661). To ensure that our own collaboration was grounded in this storytelling model from the beginning, we collaborated in course planning and development in order to integrate information literacy concepts into a course effectively.

Much like a sequenced assignment, scaffolding provided us with the ability to tell the story of each literature class. It provided students with multiple sessions devoted to projects and assignments with varying degrees of difficulty and purpose, but largely practicing the same skills. Classes visiting the library in a one-shot model would not be able to take advantage of a scaffolded curriculum involving information literacy. Scaffolding forces students to practice accessing and evaluating many kinds of resources over a longer period of time. The purpose of scaffolding in a collaborative environment like ours was to give students ample practice in accessing, evaluating, and using resources within the context of their class. We discovered that the critical thinking and information literacy skills produced from this prolonged exposure were richer and more effective over time. Kenedy and Monty (2008) add that the information students seek out has to be directly connected to their assignments and projects, so they are not just practicing information literacy skills in a vacuum (p. 92). Alfino, Pajer, Pierce, and Jenks (2008) also note that student learning and critical thinking "can be enhanced by promoting information literacy skills as part of a set of sequenced assignments, which raise student awareness of knowledge acquisition tools, standards of evaluation for authority, and point of view" (p. 97). In our collaboration, we applied this idea of scaffolding assignments that built toward an end goal. Students were asked to practice new skills by developing projects that helped other students learn the material and by creating an anthology that could be used as a type of "proto-literature review." Students also began to see themselves as part of a larger research community rather than as just one person completing a project or simple "day in the library" assignment. These activities helped pull them more firmly into the disciplinary ways of thinking they would need in the future.

Grand View Background

Grand View University Library takes an active approach to student learning by attempting to teach students information literacy skills whenever possible. In the recent past the library's customary approach to teaching these types of skills was through traditional one-shot sessions wherein students would be exposed to as many of the library's resources as possible within the time constraints of the class period. This form of teaching information literacy skills gave teaching faculty in all disciplines an opportunity to provide their students with the resources they needed for specific assignments and projects. However, based on much of the research already explored here, we reconsidered this approach due to a number of issues with its effectiveness. Student attentiveness became an issue within these sessions simply because a number of the students were overwhelmed by the amount of information being presented. Students also did not always make the connection between the resources and methods being presented and their plans and goals for their own assignments. They realized the library had many books and periodicals to offer, but they did not make a concentrated effort to include these resources in their research plan. There was also a fair amount of repetition because of the number of classes coming in: some students were enrolled in more than one course that included the library's one-shot introduction to information literacy. Due to these issues, the Grand View University Library decided to retain these types

of sessions, but gradually to reduce the number of them. Over time, a new program focused on embedded librarianship took their place.

The Grand View English Department was also dissatisfied with the outcome of one-shot library sessions. From an internal departmental survey as well as feedback from students in graduate programs, we realized that our graduates were not leaving us with the level of research and analysis ability that they needed. The department knew about the library's initiative with information literacy, so we felt the best course of action to remedy this gap was collaboration with the information literacy professionals on campus. The Grand View English Department held a summer retreat to decide where information literacy goals could best fit into the existing curriculum. At the retreat, the English faculty, in consultation with the library director and the two academic librarians, decided where each goal could fit the curriculum and identified how to pull in activities and assignments at the basic, intermediate, and advanced levels in both literature and composition classes. The results of this discussion are presented in Appendix A.

Embedded Librarianship

The goals of the embedded librarian program are many, but one of the most important is to promote information literacy concepts within the context of the college classroom. One of the difficulties with teaching students information literacy concepts within a one-shot session is that the material can often be divorced from the content of the course. While the English department was one of the early adopters of the new model, the embedded librarian program helps students gradually see how information literacy concepts relate to the content in all their courses. Before moving forward with an embedded librarian program it was necessary to develop guidelines and outcomes. In this way any academic librarian could take the format of the embedded program and develop it within almost any college course without having to reinvent the model each time. This process began with an examination of the Association of College & Research Libraries' (ACRL) Information Literacy Competency Standards.

The ACRL Information Literacy Competency Standards (2000) attempt to create a universal definition of what an information literate student will be able to accomplish during the research process and at the end of the educational process. These standards try to encapsulate the major methods that any information literate person should be able to perform as part of his or her quest to find high-quality information and incorporate it into a new project or written work. The standards are as follows: determine the extent of information needed; access the needed information effectively and efficiently; evaluate information and its sources critically, incorporate selected information into one's knowledge base; use information effectively to accomplish a specific purpose; understand the economic, legal, and social issues surrounding the use of information; and access and use information ethically and legally (ACRL). Each of these standards acts as a guide for librarians and teachers when information literacy is incorporated into an assignment, a course, or an entire curriculum. These standards are both specific enough to serve as a useful guide to student achievement, but general enough to be modified and applied across university disciplines. Because each institution is unique in the way that it educates its students, each must develop a new set of guidelines to fit with the overall educational mission and methods of the institution.

In order for our embedded librarian model to work, it was necessary to construct our own set of information literacy standards, or outcomes, and use these as guides in our collaborative efforts with faculty (See Appendix B). These outcomes are similar in structure and scope to the ACRL standards, but the outcomes have been developed with a rubric in mind. The

information literacy rubric exists to measure how well students are meeting the criteria. The outcomes listed here include: defining a question, thesis, or problem; defining the scope of the inquiry; accessing information; evaluating information; distinguishing not only between primary and secondary sources, but between the whole range of sources, including print, digital, popular, and so on; synthesizing and communicating information; and using information ethically. These outcomes have different levels (basic, intermediate, and advanced) that are measured according to the type of course being taught. For example, an introductory English course would look to measure students' abilities on the basic level of information literacy. The rubric helps to identify how advanced a student should be at each level of his or her education. This structure also fits nicely into a course where the professor and the librarian have collaborated using a scaffolding approach. The different information literacy concepts can be scaffolded over the course of the semester and measured at the time of delivery as well as at the end of the course.

Our Collaborative Project

Our plan was put into practice in three classes over the course of three semesters. The structures that we developed to reach the outcomes within the embedded librarian model were used in American Literature I, American Literature II, and Literature for Children and Adolescents. During the planning stages we decided that due to the fact the students were at an intermediate level of their learning for all three classes, we would not employ a full embedded librarian model. This meant that the students would work with the librarian about four times a semester rather than what we had previously considered a full load of eight sessions. Each of the four library visits/orientations was focused on resources the students would be using throughout the semester and later on in other classes. Just as introductory literature classes help students with basic interpretation and analysis, these intermediate classes are designed to help students delve deeper into genre and theme. Each class was different from the others, so the order in which we chose to teach each resource varied.

Students coming into the English major at Grand View start from a wide array of information literacy backgrounds, ranging from those who are just starting out on computers to those who are quite adept at using technology and finding sources. What they all have in common, however, is a lack of practice at sorting through and evaluating the information they do find. The American Literature survey classes are taken by students in their second or third year, placing them solidly in the intermediate range. By the time they enter this sequence they will have had at least First-Year Composition and Introduction to Literature, but may not have had experience finding sources specific to literature as a field.

By the end of these two classes, our goal was to give English majors the analytical tools they needed to move forward in English studies and also in whatever general education classes remained in their programs. We began the scaffolding of assignments in the American Literature surveys by encouraging students to delve deeper into the literature. We started where they are usually the most comfortable (simple Internet searches) and then moved them into more complex sources (both books and academic journals). By the end of each survey the goal was that students be able to find quality sources, evaluate them, and use them for the class activities described below. They were then asked to repeat all these skills and display mastery in a series of take-home essay exams.

Alternately, students in the Literature for Children and Adolescents class vary in major from the American Literature students. While Secondary Education majors in English do take the class, the majority of the students are Elementary Education

majors. These students tend to have different information literacy needs. While all Education majors are required to take a course in educational media, which stresses finding quality websites for use in the classroom, not all of them make the leap to finding good teaching resources or utilizing the library. Our goal with this class was to reemphasize the benefits of seeking library help, not only to complete the assignments, but also to help them in their future teaching careers.

Web Sources

Based on observation over the years, it was evident that many students begin their research using the web. Because this practice was so prevalent, we felt it was necessary to discuss websites and their value early in each course. In the American Literature I class, websites were covered during a class session focusing on the Puritans and puritanical writing. The idea here was to help students understand what a high-quality website contained, how to access better websites, and how to evaluate them in the future. Students needed to find websites that focused on the historical Puritans as well as those illustrating examples of modern day puritanical writing in order to show the pervasive influence of these original ideas on American thought. Because this class was the students' first exposure to the concept of evaluating a source at the intermediate level, they had to learn to recognize key elements of a source and to understand that they were expected to seek out those kinds of key elements in the future. Students were then asked to find a quality Internet source, apply it to a writing task, and evaluate it on the exam for this unit, reinforcing the skills they learned in class. Because this assignment was the cornerstone of our scaffolding and critical assessment of sources, it helped students ease into more complicated literary analysis.

We developed a similar assignment in the American Literature II course, but tried to have the students approach evaluation of websites in a different way. Although the overall goal for this portion of the course was to continue to teach students how to access high-quality websites, we added the element of asking them to then evaluate these sources with a rubric. For this assignment, students created rubrics that tried to capture the most important criteria for the analysis of websites. The literary subject matter during this class session focused on American Realist authors. Students had to apply their rubric to a high-quality website pertaining to the life or work of a chosen author. So as not to bias the process too much, students were only given some basic concepts related to evaluating websites. They were responsible for fleshing out the rubric based on what they felt was most important. Upon completion of the first part of the project, students turned in their websites and rubrics for assessment. The faculty member assessed them for quality in relation to the content of the Realist author while the librarian assessed them for quality in relation to website evaluation. After the first assessment, the librarian spoke to the class about the overall trends found in their rubrics (many students favored appearance and credibility as very important criteria) and taught them some new strategies and ideas in terms of other criteria to consider. The faculty member also spoke to the students about their choices. Students were then asked to work with a partner to re-assess their rubrics and revise them accordingly for use on the exam. This assignment would transfer easily across disciplines as evaluation of websites by developing a rubric could apply to any context.

In Literature for Children and Adolescents, we spread web evaluation over several classes to integrate more evenly with other source material. Our goal here was to have students compare information obtained from websites with information they obtained from more traditional sources such as books, magazines, and scholarly journals. The first topic discussed in relation to web evaluation was the role of gender differences in reading preferences. Students were asked to find reli-

able statistics and recent studies on these issues using electronic databases of scholarly material as well as websites from organizations that might evidence bias. Once they had located material from both types of sources, they were asked to compare and contrast not only the information they had found but how it was presented. Students then had to create a marketing project in which they tried to encourage certain age groups or genders into reading from a genre that was normally outside their comfort zone.

Because future teachers will depend on electronic sources heavily, we devoted two more class periods in Literature for Children and Adolescents to website evaluation. The first tackled censorship, requiring students to research information about banned books. The second concerned context and fiction, where students had to create lesson plans for K-12 students to teach them difficult historical subjects. One part of the censorship class focused on students' attempts to access statistical and historical information about challenges in libraries across the U.S. They needed to research which books were banned and for what reasons. Students were encouraged to look for high-quality websites maintained by professional organizations that had clear citations or references. In the class relating fiction to its historical context, students developed a lesson plan to teach K-12 students about a difficult historical topic such as American slavery or the Holocaust. Using such titles as *Nightjohn* and *The Diary of Anne Frank*, students then had to locate scholarly materials and websites that helped bolster the activities they would use for their lesson plans. Due to the fact that the quality of the websites on these subjects ranged from extremely poor to scholarly, the assignment required students to explain why they chose the particular resources they did. In this way the students were exposed to multiple sources at the same time, forcing them to think about the different sources critically through comparison and contrast.

Books and Academic Journal Articles

Moving on from websites, our next step in scaffolding assignments in American Literature I concerned finding good scholarly material in books and academic journals. Focusing on the Writers of the Early Republic, students read various pieces about "The Woman Question" in their anthology. They followed these readings with a visit to the library to seek additional primary and secondary sources on the issue of women's rights. Working in pairs, the students found at least one journal article and one book source that would help them illustrate the problem caused by a lack of gender equality in the early United States. They brought all these sources to bear the next class day in a mock trial – "The Man" v. "Outraged Womanhood." Since we never have enough time in this exercise to fully explore this complicated issue as a group, the take-home exam essay asked them to find one additional source, either journal or book, and present and defend a challenge, in writing, to the outcome of the class trial. By the end of this unit, students had found and used at least one journal and one book and applied the material in a practical way.

The final unit of American Literature I covers the Romantics and Transcendentalists, so we used it as an opportunity to review accessing all the material types students had become familiar with so far. We asked students to seek a quality website and then either a book or journal article on Henry David Thoreau. We then had them assess the quality of both sources and determine how the sources might be used by an academic in this field. For the final exam, students earned "self-reliance" points by finding quality sources for use on their take-home essays. The key with all of these sessions was to have students find and then use their sources immediately. The lag between research sessions and use of sources often is detrimental to enforcing good information literacy skills.

American Literature II posed somewhat of a different challenge. Some, but not all, of the students in

this class had already taken American Literature I, so we sought to repeat the skills through different activities. However, we still provided instruction to those students who had limited exposure to information literacy skills. We addressed this issue earlier in the term by having students create their own rubrics to evaluate websites and help them increase their emerging abilities at literary analysis and critique. We went a step further with book sources. Instead of just having students find and use book sources, in American Literature II we also had them do additional evaluation of the sources. During class discussion of Eugene O'Neill's *The Emperor Jones*, we provided numerous books from the Grand View Library about both the Haitian Revolution and the author's life. We then had students work quickly in pairs to digest the information they'd found in these sources. After garnering the information and evaluating the source, each pair was asked to partner with another pair partner with a pair who had received the opposite topic. For example, students who initially learned about Haiti's revolution paired with those who initially worked with information on O'Neill's life. After the group work, they all reflected individually on how this new information either enhanced their understanding of O'Neill's work or hindered it. We have found repeatedly with this assignment that students initially hated the play, but appreciated it more after they gathered additional insights from sources. For the exam on this unit, we had students research another work by an author whose writing had confused them and then use their source to defend that work to a group who would like to see the work banned.

Finally, the last section of American Literature II covers Postmodernism and Contemporary Authors. Mirroring the web assignment, we provided students with several quality journal articles and asked them to develop a rubric to evaluate them. We asked why they chose the criteria they did. Then, for the final take-home exam, they applied their rubric to a quality scholarly article they found on an author of their choice. Again, finding the source, evaluating it, and then using it in short order reinforced the information literacy skills we wanted students to master.

In Literature for Children and Adolescents, we discovered that having students find academic book and journal articles was not as vital to course outcomes as having them visit and explore their local public libraries. To that end, we devised an assignment that encouraged a broader understanding of what children and young adult sections of local libraries have to offer. In the past, when students were asked to bring in varying examples of children's books, including alphabets, picture book genres, and young adult novels, they often simply would scan their own personal bookshelves (or those of their children) to find these books and bring them in. To help break them of this habit and encourage them to explore the vast array of library materials out there, near the beginning of the semester we asked them to bring in a couple of alphabet books, not stipulating where they should get them. Predictably, many brought books from home. We then had them search for the same types of books at the Grand View Library and on local databases. Afterward, we had a Blackboard and verbal discussion about the increase in the variety and interest of the books they found once library resources were added. Since the range of quality materials proves so much greater when library collections are included, we used the activity as an object lesson – all the books they were asked to bring in from then on needed to be from the public library instead of from home. Once they had gone through an experience that proved to them why variety and selection were important and how easily they could search databases and request books, they demonstrated that they had achieved the change in behavior that we sought.

Question	American Literature I	American Literature II	Literature for Children and Adolescents
The library instruction was helpful in completing my assignments. (1= Definitely False; 2= More False than True; 3= In Between; 4= More True than False; 5= Definitely True)	4.7	4.8	4.6
I would ask a librarian for help on future assignments. (1= Definitely False; 2= More False than True; 3= In Between; 4= More True than False; 5= Definitely True)	4.4	4.6	4.5

Figure 1: Student-reported satisfaction with IL assignments.

IDEA Assessment

Overall, students achieved more complete information literacy in all three of these classes as evidenced by the quality of their discussions, their performance on exams, and an informal survey taken in class. They were able to find good quality sources on their own by the end of each term; their overall comprehension of the course content improved as well. The consensus was that students felt getting to know a librarian just for their class was helpful not just for the specific assignments in that class, but for work they were doing in other classes as well. They liked knowing that they could go to the library for any of their classes and meet with someone familiar. This anecdotal perception was also supported numerically. Each semester on the official course evaluation forms (IDEA), students responded to supplemental questions about the embedded librarian. They answered regularly that they felt the library sessions and assignments were helpful to their learning. The table in Figure 1 shows the scores students gave the classes.

Conclusion

In a society that is inundated by "information" through the web, television, phones, and various other media, it is vital that educational institutions teach students how to discern fact from fiction and informed opinion from gossip. Librarian and faculty collaboration is the key to helping emphasize the importance of information literacy to our students. Additionally, we feel that through planning and carefully scaffolding assignments with specific disciplinary goals in mind, we can train our graduates to be informed consumers of all the varieties of published data.

Instead of complaining that our students start (and sometimes end) their research with Wikipedia, we need to start compelling them to examine and discover the merits of quality sources beyond their initial hit on a Google search. We need to teach them the skills we want to see as well as our course content. Through deliberate and respectful collaboration between academic librarians and faculty members of all disciplines, students will learn more, think more critically, and transfer information literacy skills well beyond the classroom.

References

Alfino, M., Pajer, M., Pierce, L., & Jenks, K. O. (2008). Advancing critical thinking and information literacy skills in first year college students. *College and Undergraduate Libraries, 15(1-2),* 81-98.

Association of College & Research Libraries (ACRL). (2000). Information Literacy Competency Standards for Higher Education. Retrieved from http://www.ala.org/acrl/standards/informationliteracycompetency

Deitering, A., & Jameson, S. (2008). Step by step through the scholarly conversation: A collaborative library/writing faculty project to embed information literacy and promote critical thinking in first year composition at Oregon State University. *College and Undergraduate Libraries, 15*(1-2), 57-79.

Elmborg, J. (2006). Critical information literacy: Implications for instructional practice. *The Journal of Academic Librarianship, 32*(2), 192-199.

Holliday, W., & Fagerheim, B. (2006). Integrating information literacy with a sequenced English composition curriculum. *Libraries and the Academy, 6*(2), 169-184.

Jacobs, H.L.M., & Jacobs, D. (2009). Transforming the one-shot library session into pedagogical collaboration: Information literacy and the English composition class. *Reference and User Services Quarterly, 49*(1), 72-82.

Kenedy, R., & Monty, V. (2008). Dynamic purposeful learning in information literacy. *New Directions for Teaching and Learning, 114*, 89-99.

Lindstrom, J., & Shonrock, D. (2006). Faculty-librarian collaboration to achieve integration of information literacy. *Reference and User Services Quarterly, 46*(1), 18-23.

Mounce, M. (2010). Working together: Academic librarians and faculty collaborating to improve students' information literacy skills: a literature review 2000-2009. *The Reference Librarian, 51*(4), 300-320.

Purdue, J. (2003). Stories, not information: Transforming information literacy. *Libraries and the Academy, 3*(4), 653-662.

Reed, S., & Stavreva, K. (2006). Layering knowledge: Information literacy as critical thinking in the literature classroom. *Pedagogy: Critical Approaches to Teaching Literature, Language, Composition, and Culture, 6*(3), 435-45.

Appendix A

INFORMATION FLUENCY LEARNING OUTCOME: Students will critically evaluate information and synthesize ideas as independent learners.		**1: Define question, thesis, or problem**	**2. Define Scope**	**3. Understand Scholarly Inquiry**	**4. Access Info**	**5. Evaluate Info**	**6. Distinguish between sources**	**7. Synthesize & Communicate Info**	**8. Use Info Ethically**
BASIC (Prerequisites)	ENGL 101 First Year Composition ➔ At least 2 library visits	***Essential*** (lib 1)	**Choose 2 to focus on (lib visit 2)**						***Essential***
			Minor	Minor	Important	Important	Minor	Minor	
	ENGL 111 Interpretation of Lit ➔ At least 1 library visit	Review	Minor	***Essential***	Review	Review	Important	Important	***Essential***
	ENGL 150 English Seminar ➔ At least 1 library visit	Review	***Essential***						***Essential***
INTERMEDIATE	ENGL 251 Writing for Engl Studies ➔ Embedded Librarian		***Essential***			***Essential***	***Essential***	***Essential***	***Essential***
	ENGL 231 Surv. of Am. Lit. I				***Essential***	***Essential***			***Essential***
	ENGL 232 Surv. of Am. Lit. II				***Essential***	***Essential***			***Essential***
	ENGL 241 Surv. of Brit.Lit. I	***Essential***		***Essential***					***Essential***
	ENGL 242 Surv. of Brit.Lit. II			***Essential***					***Essential***
	ENGL 221 Intro. to Linguistics				***Essential***			***Essential***	***Essential***
ADVANCED	ENGL 301 Literacy Studies		***Essential***			***Essential***		***Essential***	***Essential***
	ENGL 311 Literary Theory							***Essential***	***Essential***
	ENGL 460 Style & Editing Sem.	***Essential***						***Essential***	***Essential***
	ENGL 485 English Capstone ➔ Embedded Librarian		***Essential***			***Essential***			***Essential***

Appendix B

Criteria	Excellent	Good	Satisfactory	Poor	Unsatisfactory
Purpose: Defines a question, thesis, or problem to investigate	Designs focused and concise question , thesis, or problem recognizing all relevant concepts	Designs focused and concise question, thesis, or problem recognizing many relevant concepts	Designs question, thesis, or problem recognizing some relevant concepts	Designs question, thesis, or problem that requires more specific focus	Fails to design question, thesis, or problem
Information gathering: Accesses information	Accesses high quality, subject-specific, research-based information from a broad range of sources and types	Accesses high quality, research-based, subject-specific information using multiple sources and types	Accesses needed information on a subject using a small number of sources or types	Access limited information on a subject using minimal sources	Unsuccessful in locating information on the subject
Evaluation: Critically analyzes information, visuals and sources	Analyzes research-based, subject-specific information from a broad range of sources in various formats, and assesses accuracy, authority, currency, relevance, and bias	Analyzes research-based, subject-specific information from a multiple sources and assesses accuracy, authority, currency, relevance, and bias	Analyzes information from a small number of sources and assesses accuracy, authority, currency, relevance, and bias on a limited basis	Minimally analyzes information from a minimal number of sources and does not assess accuracy, authority, currency, relevance or bias	Shows no evidence of source evaluation
Differentiation: Distinguishes between sources	Differentiates between multiple sources and nearly always uses them appropriately	Differentiates between multiple sources and typically uses them appropriately	Differentiates between basic source types and occasionally uses them appropriately.	Inconsistently differentiates between source types and may use them inappropriately	Does not understand the difference between source types
Integration: Synthesizes and communicates information	Synthesizes concepts and information from multiple research-based sources in various formats with one's own ideas to create a high quality original product	Synthesizes concepts and information from multiple research-based sources to create an original product	Synthesizes the ideas or information from several authors into a product in one's own words	Poorly or infrequently synthesizes information. Tends to quote directly from sources. Infrequently extracts and condenses data from information sources	Unable to synthesize information. Quotes directly from sources. Unable to extract and condense data from information sources
Responsible use: Manages information ethically and legally	Consistently follows laws, regulations, and institutional policies regarding access to and use of information resources and demonstrates an understanding of plagiarism, including accurate use of bibliographic citations	Consistently follows laws, regulations, and institutional policies regarding access to and use of information resources and demonstrates an understanding of plagiarism, usually including accurate use of all types of bibliographic citations	Usually follows laws, regulations, and institutional policies regarding access to and use of information resources and demonstrates an understanding of plagiarism, usually including accurate use of the most common types of bibliographic citations	Lacks adequate knowledge of laws, regulations, and institutional policies regarding access to and use of information resources and commits unintentional plagiarism	Lacks adequate knowledge of laws, regulations, and institutional policies regarding access to and use of information resources and willfully commits plagiarism

Enhancing Business Students' Emotional Skills Through Mindfulness Practice

Chulguen (Charlie) Yang and Ellen D. Durnin

Abstract

Based on the evolutionary psychological premise that the human mind consists of adapted psychological mechanisms develop through natural selection, this paper advocates mindfulness as a valuable tool that helps students be more aware of their inherited emotional predispositions. With brief literature reviews on emotions and mindfulness in management and organizational studies, this paper presents descriptions of three mindfulness practices that can be applied to non-business classroom settings. The current practices are delivered in undergraduate and graduate business courses and are embedded in an emerging personal and professional program in the business school.

Keywords

mindfulness, emotional intelligence, emotional skills, evolutionary psychology

Chulguen (Charlie) Yang, Ph.D., is Associate Professor in the Department of Management/MIS at Southern Connecticut State University, where he teaches organizational behavior, human resource management, and creativity and innovation. His research interests include evolutionary psychology and its applications in organizational studies, storytelling/gossip, and mindfulness/spirituality in organizations.

Ellen D. Durnin, Ph.D., has been serving as the Dean of the School of Business at Southern Connecticut State University since 2010. Dr. Durnin holds a B. A. in Sociology from Wagner College, a master's in Industrial and Labor Relations from Cornell University, and a Ph.D. in Business from the City University of New York Graduate Center. Her teaching and research focus on the areas of human resource management, negotiations and conflict resolution, and work/family balance.

Introduction

In the field of management and organizational studies, research on emotions was largely neglected for much of the second half of the 20th century (Ashkanasy & Humphrey, 2011). This lack of appreciation for emotions can be partly attributed to the dominant view of what constitutes useful knowledge in business management. For too long, management education has put greater emphasis on the tools of rationality and cognition, while underestimating the roles that emotional dimensions (e.g., intuition, improvisation, and narratives) play in organizations (Jordan, Ashkanasy, & Härtel, 2003; Weick, 2007). The lack of consideration of the evolutionary basis of human emotions – their adaptive functions and *almost* hardwired emotional inclinations – further reinforces the unspoken, but pervasive assumption that the human mind is like a blank slate (Pinker, 2002).

Fortunately, however, research on emotions has developed into a major field of study over the past 20 years and "is now seen to be part of an affective revolution in the organization sciences" (Ashkanasy & Humphrey, 2011, p. 214). For instance, studies of emotional intelligence and emotional competence have deepened our understanding of their impacts on work performance (e.g., Kim, Cable, Kim, & Wang, 2009), effective leadership (e.g., Goleman,

Boyatzis, & McKee, 2002), decision-making processes (e.g., Yip & Côté, 2013), negotiation skills (e.g., Foo, Elfenbein, Tan, & Aik, 2004), and organizational climate (e.g., Momeni, 2009).

Nonetheless, for all the important findings and advancement of our knowledge of emotions for the past two decades, emotions and our capacity for compassion and empathy have received very little attention in our formal education (Caruso & Salovey, 2004); consequently, students often feel that they are not adequately prepared to identify and understand their emotional reactions and unprepared for managing their own difficult emotions and impulsive behaviors (Ryan, 2012). Helping students develop emotionally has been recently espoused as one of the key attributes of excellence by the Association to Advance Collegiate Schools of Business (AACSB), the premier accrediting institute for business schools around the world (e.g., Trapnell & Boxx, 2011).

Evolutionarily speaking, as Charles Darwin once said, "the very essence of instinct is that it's followed independently of reason." In fact, most of us often fail to recognize the extent to which our irrational or misguided emotions affect our decision-making processes. We are often unaware of how "animal spirits" – as used by John Maynard Keynes, referring to "a spontaneous urge to action" – affect our financial decision-making in the marketplace (Akerlof & Shiller, 2009). During his conversation with the Dalai Lama, Paul Ekman, a renowned expert on human emotion and facial expressions, also contended that "Nature did not provide us with that tool [*that enables us to be aware of the impulse before we take action*] as a fundamental part of our emotions" (Ekman, 2008, p. 45, italics added). In other words, we have to learn to be aware of moment-to-moment emotional experiences, which is the core principle of mindfulness.

Mindfulness has become an increasingly popular term in the West due to the influence of several prominent authors and meditation teachers, including Thich Naht Hanh, Jon Kabat-Zinn, and Jack Kornfield (Cullen cited in Ekman, 2008). Kabat-Zinn (1990), for instance, defined mindfulness as moment-to-moment awareness, which can be "cultivated by purposefully paying attention to things we ordinarily never give a moment's thought to" (p. 2). Thus, mindfulness is a way of cultivating "a capacity for deepened awareness, concentration, and insight" (Dumas, 2007, p. 53) letting thoughts and sensations come and go without being distracted by them. As Kabat-Zinn (2005a) poetically stated, the practice of mindfulness is to learn the skill of dwelling "in the silence and stillness behind the stream of thought itself, in a timeless present" (p. 350). Mindfulness can also be seen as a prerequisite to a number of skills considered essential for organizational success, such as problem solving, critical thinking and qualitative and quantitative analysis.

It has been reported that mindfulness training improved working memory capacity (Jha, Stanley, Kiyonaga, Wong, & Gelfand, 2010; Mrazek, Franklin, Phillips, Baird, & Schooler, in press), reduced mind wandering (Mrazek et al., in press), and prevented mindless impulses (Papies, Barsalou, & Custers, 2012). Higher mindfulness practice time was found to correspond to higher levels of positive affect as well (Jha et al., 2010). A positive relationship between mindfulness and academic performance was also found among a group of 149 MBA students (Shao & Skarlicki, 2009). It has been further proposed that "if mindfulness is associated with greater attention to external stimuli, and, therefore, fewer cognitive failures, then a variety of favorable work outcomes is likely to follow, including increased performance and fewer accidents" (Glomb, Duffy, Bono, & Yang, 2011, p. 115). Studies on mindfulness have also suggested its great potential for leadership development (Goldman Schuyler, in press; Shapiro & Carlson, 2009; Weick & Putnam, 2006; Weick & Sutcliffe, 2006).

The primary goal of this paper is to provide a pedagogical example of introducing mindfulness into the business curriculum in order to cultivate business students' emotional skills. Although emotional intelligence is a highly regarded and much published topic in business literature (Goleman, 1995, 1998; Harms & Crede, 2010; Salovey, Brackett, & Mayer, 2004), until now, business schools have not integrated the cultivation of mindful learning, which emphasizes the development of students' inner resources for a more balanced and integrated way of life, into their curricula (Wallace & Shapiro, 2006). Considering that current business education has consistently overlooked the need for developing students' self-awareness and reflective mindset (Mintzberg, 2005), business students have had few opportunities to hone their skills for mindful learning, which include both a deep appreciation of their inner thoughts and feelings as well as the ability to let go of them, rather than being entangled by them.

Two subspecialties of the discipline of business administration within which the first author primarily focuses his teaching and the second author taught in the past – Organizational Behavior (OB) and Human Resource Management (HRM) – rely heavily on the applied behavioral sciences. Given the interdisciplinary nature of understanding human behavior in work organizations, the first author has applied concepts and theories from different fields of study. For instance, based on the rapid development of evolutionary-based behavioral sciences in recent years, he has emphasized how evolutionary psychology has enriched our understanding of human nature and how our adapted cognitive and emotional tendencies influence our behavior in the workplace (Yang, Colarelli, & Holston, 2011). The second author, now dean of a business school, supports the practice as a means for students to understand their own behavior as well as that of others in organizational settings. After a brief introduction to evolutionary psychology, this paper presents descriptions of three mindfulness practices developed by the first author for his management courses.

Mindfulness Practices in the Business Classroom

According to evolutionary psychology, which is a synthesis of modern biology and cognitive psychology, the human mind is not a blank slate, but an ancient tool box containing massive psychological mechanisms that evolved to help our distant ancestors solve adaptive problems under ancestral environmental pressures (Barkow, Cosmides, & Tooby, 1992; Buss, 1999). The key conceptual foundation of evolutionary psychology is that members of our species share a set of universal psychological and behavioral traits inherited from our distant ancestors. Those traits are adaptations that contributed to our survival and successful reproduction.

From an evolutionary perspective, the essence of moral failure lies in natural selection having selectively retained only those traits that were immediately favorable to the survival and reproduction of our distant ancestors under ancient life conditions, with no regard for late consequences (de Duve, 2010). In other words,

> Natural selection has not privileged the foresight and wisdom needed for sacrificing immediate benefits for the sake of the future. The genetically designed search for immediate profit, whether individual or collective, also explains our irresponsible exploitation of natural resources and lack of concern for the nefarious consequences of our activities. … They are the outcome of traits that are *inborn*, written, and sustained in our genes by natural selection….They are a natural burden that we assume at birth. (de Duve, 2010, pp. 148 – 149, *italics in original*)

Evolutionary analysis spotlights the fundamental aspect of our existential problems; we have inherited psychological and behavioral predispositions that motivated our ancestors to certain courses of action and that are very hard to eliminate. As Nicholson (1998, p. 135)

put it, "you can take the person out of the Stone Age, but you can't take the Stone Age out of the person." Our moral failure is largely due to the mismatch between once-desirable patterns of motivation and action and current situations in which those nearly hardwired traits and behaviors can easily become ineffective or even destructive to our well-being, as the conditions of our modern lives are drastically different from those of our distant ancestors (Tiger, 1992). Because natural selection has not equipped us with mindfulness as a trait in our inherited behavioral repertoire, without conscious, deliberate, and persistent practice, mindfulness will not come naturally to most of us (Ekman, 2008; Goleman, 2003).

The first author of this paper introduced mindfulness to his management curriculum to facilitate his students' learning of various "skillful means" to meet the challenge of paying attention to their emotional *reactions* and transforming them into wholesome emotional *responses*. Specifically, he adopted the practice of mindful meditation and developed two other practices, empathetic visual storytelling, and musical metaphors, for his management courses. A brief description of each practice is presented below.

Mindful Meditation

As aforementioned, mindfulness has recently gained momentum and has penetrated the consciousness of leading psychologists, neuroscientists, teachers, and even artists (Boyce, 2011; Schoeberlein & Sheth, 2009). Kabat-Zinn, founder of the Mindfulness Based Stress Reduction (MBSR) program at the University of Massachusetts in 1979, repeatedly clarified that "MBSR, despite its Buddhist roots, is a secular application of mindfulness, which is a practice of carefully focusing attention, not a form of religion" (Siegel, 2011, p. 137). Mindfulness is thus a mental practice of investigation, or introspective exploration of one's thoughts and feelings and their consequences, that "enables [practitioners] to become more sensitive and attentive to thoughts and emotions from a center of awareness that is separate from them and therefore [to be] able to witness them as discrete events" (Flowers, 2011, p. 169). In other words, mindfulness is a way of cultivating a capacity for deepened meta-attention (monitoring attention), concentration, and insight without being caught up in thoughts or sensations.

Students in the first author's Human Resource Management class typically attended eight sessions of 10 to 20 minute mindfulness meditation during a semester. After a brief overview of the concepts behind mindfulness and meditation practices, he used several CDs produced by Kabat Zinn (2005b) for guided meditation sessions in class. Given that the students tended to have different levels of familiarity with meditation, some variations of the following direction (Tolle, 2004, p. 129) were given in the beginning of every session. This helped reduce emotional resistance of those who were not comfortable – at least initially – with the idea of "sitting still" in the classroom.

> Sit on a chair comfortably, but don't lean back. Make sure the body is relaxed, but keep the spine erect. Close your eyes. Take a few deep breaths. Feel yourself breathing into the lower abdomen and observe how it expands and contracts slightly with each in and out breath. Then become aware of the entire inner energy field of the body. Don't think about it – *feel* it. (*italics in original*)

In addition to the eight in-class sessions, students were assigned a few practices of sitting meditation and a short follow-up reflection paper on their meditation experience as homework. It was helpful to reinforce the importance of practicing "presence" (Senge, Scharmer, Jaworski, & Flowers, 2004) by making it a habit to ask a simple question such as, "What's going on inside me at this moment?" Actually, everyday activities (e.g., eating, walking, and engaging in physical exercise) can be transformed into mindfulness practice. In order to help

the students do that, they were encouraged to recite and reflect upon a short poem by Das (1997, pp. 195 - 196) for their individual practice of sitting meditation:

Stop.
Be still.
Remain silent.
Meditators should be seen,
not heard.
Ssshhh.
Still
All the senses.
Let everything be.
Let go, and let it all
come to you.
Relax.
Being is in;
doing is out.
Do nothing.
For a moment
Just be.
Silence
is
Golden.
Enjoy it.

Upon completing his individual practice session, a graduate student wrote:

> Despite the many successes of my at-home mindfulness meditation experience, I also struggled to overcome some frustrations with the practice. *Wouldn't it be more productive and satisfying to actually make progress on my to-do list rather than spending 20 minutes "doing nothing" – and battling feelings of anxiety and fatigue?* As I worked through my to-do list following my mindfulness meditation experience, I was reminded of last month's *New York Times* opinion piece, "The 'Busy' Trap" by Time Kreider, in which he asserts, "Idleness is not just a vacation, an indulgence or a vice; it is as indispensible (sic) to the brain as vitamin D is to the body, and deprived of it we suffer a mental affliction as disfiguring as rickets. The space and quiet that idleness provides is a necessary condition for standing back from life and seeing it whole, for making unexpected connections and waiting for the wild summer lightning strikes of inspiration – it is, paradoxically, necessary to getting any work done." In other words, although I did not literally make progress on my to-do list while meditating, I likely primed my mind to engage in these activities with greater clarity. A revelation! (*italics in original*)

Empathetic Visual Storytelling

According to the original conceptualization of emotional intelligence (Mayer & Salovey, 1997; Salovey & Mayor, 1990), a capacity for empathy or the capability to know someone else's feelings or moods is one of the key characteristics of emotionally intelligent individuals. As members of a literary species, we often use emotional stories or even gossip to make sense of our constantly changing social environments (Yang, 2013). In fact, Adam Smith, the founder of free market economics, believed that sympathy or compassion is the glue that holds society together. He even contended that reading draws on our sympathy because we easily become interested spectators of other lives (Oatley, 2010).

In his Organizational Behavior class, the first author has widely used various visual mediums and storytelling to enhance students' skills for empathetic appreciation of emotions and moods. For example, he has used several photographs by Gregory Crewdson, a visual artist whose work tends to be ambiguous, yet emotionally realistic. As a facilitator, the first author deliberately created a situation where his students are challenged to construct a plot based on their intuitive understanding of the emotional states of the characters in the photographs. In order to do so, they must be able to imagine the inner worlds of the characters and use

empathy to understand what the snapshot seems to be conveying. For instance, upon reflecting on Plate 43 of Gregory Crewdson 1985 – 2005 (Berg & Hentschel, 2007), a graduate student came up with the following story:

> How has my life gotten to this point? How have I reached this place? Look at him, sound asleep, he has no idea that thoughts are running through my head. So innocent, so honest, so loyal. Look at me. I'm disgusting. I make myself feel sick. How could I have possibly done this to him – the man I love. Why would someone treat another they care about so badly? How can he be so perfect and I'm so messed up?…Does she tell him what she has done? Should she explain her reasons for cheating? Does she even know herself?

In addition to this classroom activity, his students are required to visit two art museums in New Haven, Connecticut – Yale University Art Gallery and Yale Center for British Arts – and send him two postcards briefly describing their aesthetic experiences. The purpose of this assignment is to provide some opportunities for the students to (a) learn different ways of seeing and appreciating everyday objects or artifacts in the environment from an artist's perspective, and (b) reflect upon the meanings of their aesthetic experiences. Upon appreciating the painting, "The Factory (ca. 1921)" by Adolf Erbslőh at the Yale Art Gallery, for instance, a male undergraduate student articulated his thoughts as follows:

> I choose this painting because I like how the house (or whatever it may be) is on the top of the mountain. If you look closely, there is no path to get up there. So it makes you wonder what exactly is up there that is so important. It reminds me of life and how people always wonder what their lives would be like after they achieve a certain goal. So the bottom on the hill would be someone's life now and the top (where the house is) is where they want to be. So this picture, along with life, keeps you thinking about what it would be like when you get to the top. The "top" being the top of the mountain or the chain of command in the workplace.

As an interesting side note, it has been reported that formal art observation training tends to improve medical students' visual diagnostic skills (Naghshineh et al., 2008).

Creative Use of Musical Metaphors to Enhance Mindfulness

One of the key functions of a metaphor is to facilitate our creative thinking. As a musical metaphor, jazz improvisation has been used to make sense of seemingly chaotic disruptions in our working lives (Hatch, 1998). In his Organizational Behavior class, the first author has adopted "symphony orchestra" and "counterpoint" as musical metaphors to highlight mindful listening and the process of creating harmony amidst diversity, as harmony is created in music from a variety of instruments and voices.

To facilitate students' learning of these musical concepts, films have been widely used. For instance, *Music from the Inside Out*, directed by Daniel Anker (2004), a documentary film on The Philadelphia Symphony Orchestra, has been used to illustrate how sharing biographic narratives and mindful listening in authentic and mutually respectful small groups can be utilized as powerful leverage in creating and sustaining an emotional healthy workplace. By watching instrumentalists articulate their personal struggles to find their own voices while belonging to a group, students are encouraged to take a more reflective stance toward their inner experiences. Pedagogically speaking, this film is very useful in terms of clarifying how narratives can be used to help students consolidate their identity through retelling and reconstructing deep meanings of their life experiences.

The first author has also used the original music of Johann Sebastian Bach and its jazz adaptations to introduce the musical concept of counterpoint and the evolutionary model of creativity (i.e., blind variation and selective retention, Campbell, 1960) (Yang, 2011). During his typical two and a half hour workshop, the first author shows his students two documentary films on J. S. Bach: *Great Composers – Bach*, by Runcie (2006), and *Swingin' Bach* (2000), a recorded live concert of various jazz adaptations of Bach's original music (Image Entertainment, 2001). By the end of the workshop, the students are encouraged to connect seemingly unrelated ideas—counterpoint and jazz improvisation—with organizational learning. The format of the two and a half hour long workshop is presented in the Appendix. Below is a response from a graduate student after attending the workshop:

> All of these terms refer to two or more independent, simultaneous melodies. Simultaneous in this sense means the melodies are happening at the same time. Being independent also, in this sense, means that at any given moment what is happening in one melody is probably not the same thing that is happening in the other melody. A central theme in both organizing and sense-making is that people organize to make sense of ambiguous inputs and enact this sense back into the world to make the world more orderly.

Conclusion

We believe that business schools have not been aggressive enough in their focus on the cultivation of mindful learning which emphasizes the development of the students' inner resources for a more balanced and integrated way of life. Given that many current business education programs have overlooked the need for enhancing students' self-awareness and integrity using these methods, it is not surprising that students have rarely had an opportunity to develop their skills for mindful learning, which include a deep appreciation of their inner thoughts and feelings. Fortunately, the recognition that increasing awareness is a meaningful and important activity has begun to attract serious attention among business educators (Boyatzis & McKee, 2005; Chaskalson, 2011; Frost, 2003; Rynes, Bartunek, Dutton, & Margolis, 2012) as well as among corporate leaders (Hunter, 2013; Tan, 2013). It is essential that these practices be aligned with the business school's curriculum and support the school's mission, in order for them to be effective. Additionally, the faculty members using these practices in their courses should embed them in a larger personal and professional development program adopted by the school.

In this paper, we have presented concise descriptions of mindfulness practices that have been used in our business curriculum to assist students in becoming more mindful learners, a trait which is deemed critical to their success in both their personal and professional lives. Specifically, each mindfulness practice aims to facilitate students' learning of practical skills for paying attention to their emotions and feelings in a wholesome manner. As such, they are primarily exploratory and developmental in nature. As educators at a business school, we strongly believe that mindfulness and persistent practice of it can open up a new possibility for creating and sustaining a "caring and compassionate" learning environment. Additionally, the lessons learned can be applied in their employing organizations and in their future and professional roles. It is our hope to share our vision and useful practices with both business and non-business professors in various teaching and learning environments.

References

Akerlof, G. A., & Shiller, R. J. (2009). *Animal spirits: How human psychology drives the economy and why it matters for global capitalism.* Princeton, NJ: Princeton University Press.

Anker, D. (Producer/Director). (2004). *Music from the Inside Out* [Motion picture]. United States: Anker Productions.

Ashkanasy, N. M., & Humphrey, R. H. (2011). Current emotion research in organizational behavior. *Emotion Review,* 3(2), 214 – 224.

Barkow, J. H., Cosmides, L., & Tooby, J. (1992). *The adapted mind: Evolutionary psychology and the generation of culture*. New York, NY: Oxford University Press.

Berg, S., & Hentschel, M. (Eds.). (2007). *Gregory Crewdson 1985 – 2005*. Germany: Hatje Cantz.

Boyatzis, R., & McKee, A. (2005). *Resonant leadership: Renewing yourself and connecting with others through mindfulness, hope, and compassion*. Cambridge, MA: Harvard Business School Press.

Boyce, B. (Ed.). (2011). *The mindfulness revolution*. Boston, MA: Shambhala Publications.

Buss, D. M. (1999). *Evolutionary psychology: The new science of the mind* (1st ed.). Boston, MA: Allyn and Bacon.

Campbell, D. T. (1960). Blind variation and selective retention in scientific discovery. *Psychological Review,* 67, 380 – 400.

Caruso, D. R., & Salovey, P. (2004). *The emotionally intelligent manager: How to develop and use the four key emotional skills of leadership*. San Francisco, CA: Jossey-Bass.

Chaskalson, M. (2011). *The mindful workplace: Developing resilient individuals and resonant organizations with MBSR*. Malden, MA: John Wiley & Sons.

Das, L. S. (1997). *Awakening the Buddha within*. New York, NY: Broadway Books.

De Duve, C. (2010). *Genetics of original sin: The impact of natural selection on the future of humanity*. New Haven, CT: Yale University Press.

Dumas, C. (2007). Cultivating mindfulness in management education. *The International Journal of Learning,* 14(4), 53 – 60.

Ekman, P. (Ed.). (2008). *Emotional awareness: Overcoming the obstacles to psychological balance and compassion: A conversation between the Dalai Lama and Paul Ekman*. New York, NY: Times Books.

Flowers, S. (2011). Mindfully shy. In B. Boyce (Ed.), *The mindfulness revolution* (pp. 166 – 176). Boston, MA: Shambhala Publications.

Foo, M. D., Elfenbein, H. A., Tan, H. H., & Aik, V. C. (2004). Emotional intelligence and negotiation: The tension between creating and claiming value. *The International Journal of Conflict Management,* 15(4), 411 – 429.

Frost, P. J. (2003). *Toxic emotions at work: How compassionate managers handle pain and conflict.* Boston, MA: Harvard Business School Press.

Glomb, T. M., Duffy, M. K., Bono, J. E., & Yang, T. (2011). Mindfulness at work. *Research in Personnel and Human Resources Management,* 30, 115 – 157.

Goldman Schuyler, K. (in press). From the ground up: Revisioning sources and methods of leadership development. In Melina, L. (Ed.) *The embodiment of leadership*. San Francisco, CA: Jossey Bass/Wiley.

Goleman, D. (1995). *Emotional intelligence*. New York, NY: Bantam Books.

Goleman, D. (1998). *Working with emotional intelligence*. New York, NY: Bantam Books.

Goleman, D. (2003). *Destructive emotions: A scientific dialogue with the Dalai Lama*. New York, NY: Bantam.

Goleman, D., Boyatzis, R., & McKee, A. (2002). *Primal leadership: Realizing the power of emotional intelligence.* Boston, MA: Harvard Business School Press.

Harms, P. D., & Crede, M. (2010). Remaining Issues in Emotional Intelligence Research: Construct Overlap, Method Artifacts, and Lack of Incremental Validity. *Industrial and Organizational Psychology: Perspectives on Science and Practice,* 3(2), 154-158.

Hatch, M. J. (1998). Jazz as a metaphor for organizing in the 21st century. *Organization Science,* 9(5), 556 – 557.

Hunter, J. (2013). Is mindfulness good for business? *Mindful,* 1(1), 52 – 59.

Jha, A. P., Stanley, E. A., Kiyonaga, A., Wong, L., & Gelfand, L. (2010). Examining the protective effects of mindfulness training on working memory capacity and affective experience. *Emotion,* 10(1), 54 – 64.

Jordan, P. J., Ashkanasy, N. M., & Härtel, C. E. J. (2003). The case for emotional intelligence in organizational research. *Academy of Management Review,* 28(2), 195 – 198.

Kabat-Zinn, J. (1990). *Full catastrophe living: Using the wisdom of your body and mind to face stress, pain, and illness.* New York, NY: Bantam Dell.

Kabat-Zinn, J. (2005a). *Full catastrophe living: Using the wisdom of your body and mind to face stress, pain, and illness*. Fifteenth anniversary edition. New York, NY: Bantam Dell.

Kabat-Zinn, J. (2005b). *Guided mindfulness meditation Series 1* [Audio CD]. Louisville, CO: Sounds True.

Kim, T. Y., Cable, D. M., Kim, S. P., & Wang, J. (2009). Emotional competence and work performance: The mediating effect of proactivity and the moderating effect of job autonomy. *Journal of Organizational Behavior,* 30, 983 – 1000.

Mayer, J., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey & D. Sluyter (Eds.), *Emotional development and emotional intelligence: Implications for educators* (pp. 3 – 31). New York, NY: Basic Books.

Mintzberg, H. (2005). *Managers not MBAs: A hard look at the soft practice of managing and management development*. San Francisco, CA: Berrett – Kochler Publishers.

Momeni, N. (2009). The relation between managers' emotional intelligence and the organizational climate they create. *Public Personnel Management,* 38, 35 – 48.

Mrazek, M. D., Franklin, M. S., Phillips, D. T., Baird, B., & Schooler, J. W. (in press). Mindfulness training improves working memory capacity and GRE performance while reducing mind wandering. *Psychological Science*.

Naghshineh, S., Hafler, J. P., Miller, A. R., Blanco, M.A., Lipsitz, S. R., & Dubroff, R. P., et al. (2008). Formal art observation training improves medical students' visual diagnostic skills. *Journal of General Internal Medicine,* 23(7), 991 – 997.

Nicholson, N. (1998). How hardwired is human behavior? *Harvard Business Review,* 76(4), 134–147.

Oatley, K. (2010). A feeling for fiction. In D. Keltner, J. Marsh, & J. A. Smith (Eds.), *The compassionate instinct: The science of human goodness* (pp. 150 – 156). New York, NY: W.W. Norton & Company.

Papies, E. K., Barsalou, L. W., & Custers, R. (2012). Mindful attention prevents mindless impulses. *Social Psychological and Personality Science,* 3(3), 291 – 299.

Pinker, S. (2002). *The blank slate: The modern denial of human nature*. New York, NY: Viking.

Runcie, J. (Director). (2006). *Great Composers – Bach* [Motion picture]. United States: Kultur Video.

Ryan, T. (2012). *A mindful nation: How a simple practice can help us reduce stress, improve performance, and recapture the American Spirit*. New York, NY: Hay House.

Rynes, S. L., Bartunek, J. M., Dutton, J. E., & Margolis, J. D. (2012). Care and compassion through an organizational lens: Opening up new possibilities. *Academy of Management Review,* 37(4), 503 – 523.

Salovey, P., Brackett, M. A., & Mayer, J. D. (Eds.). (2004). *Emotional intelligence: Key readings on the Mayer and Salovey Model*. Port Chester, NY: Dude Publishing.

Salovey, P., & Mayor, J. D. (1990). Emotional intelligence. *Imagination, Cognition, and Personality,* 9, 185 – 211.

Schoeberlein, D., & Sheth, S. (2009). *Mindful teaching and teaching mindfulness: A guide for anyone who teaches anything*. Somerville, MA: Wisdom Publications.

Senge, P., Scharmer, C. O., Jaworski, J., & Flowers, B. S. (2004). *Presence: Human purpose and the field of the future*. Cambridge, MA: The Society for Organizational Learning.

Shao, R., & Skarlicki. D. P. (2009). The role of mindfulness in predicting individual performance. *Canadian Journal of Behavioral Science,* 41(4), 195 – 201.

Shapiro, S. L., & Carlson, L. E. (2009). *The art and science of mindfulness: Integrating mindfulness into psychology and the helping professions*. Washington DC: APA.

Siegel, D. (2011). The proven benefits of mindfulness. In B. Boyce (Ed.), *The mindfulness revolution* (pp. 136 – 139). Boston, MA: Shambhala Publications.

Simonton, D. K. (2010). Creative thought as blind-variation and selective-retention: Combinatorial models of exceptional creativity. *Physics of Life Reviews,* 7(2), 156-179.

Swingin' Bach (2000) [Motion picture]. United States: Image Entertainment.

Tan, C. M. (2013). *Search inside yourself: The unexpected path to achieving success, happiness (and world peace)*. New York, NY: HarperOne.

Tiger, L. (1992). *The pursuit of pleasure*. Boston, MA: Little, Brown, & Company.

Trapnell, J., & Boxx, W. R. (2011).Attributes of excellence. *BizEd,* 10(4). 50-54.

Tolle, E. (2004). *The power of now: A guide to spiritual enlightenment*. Novato, CA: New World Library.

Wallace, B. A., & Shapiro, S. L. (2006). Mental balance and well-being: Building bridges between Buddhism and Western psychology. *American Psychologist,* 61(7), 690 – 701.

Weick, K. E. (2007). Dropping your tools: On reconfiguring management education. *Journal of Management Education,* 31, 5-16.

Weick, K. E., & Putnam, T. (2006). Organizing for mindfulness: Eastern wisdom and Western knowledge. *Journal of Management Inquiry,* 15, 275-287.

Weick, K. E., & Sutcliffe, K. M. (2006). Mindfulness and the quality of organizational attention. *Organization Science,* 17, 514–524.

Yang, C. (2011). The creative use of music in teaching Organizational Behavior. *Business Research Yearbook,* 18(2), 474 – 479.

Yang, C., Colarelli, S., & Holston, K. (2011). Understanding human nature: From an evolutionary psychological perspective. *International Journal of Business Disciplines,* 6(1), 43 – 60.

Yang, C. (2013). Telling tales at work: An evolutionary explanation. *Business Communication Quarterly,* 76(2), 132 – 154.

Yip, J. A., & Côté, S. (2013). The emotionally intelligent decision maker: Emotion-understanding ability reduces the effect of incidental anxiety on risk taking. *Psychological Science,* 24(1), 48 – 55.

Appendix A

Title of the Workshop

The Use of Music in Teaching Mindful Listening and Creative Problem-Solving Skills for Business Students: From a Darwinian Evolutionary Perspective

The Goals of the Workshop

After attending this workshop, students are able to:

1. Understand the conceptual model of creativity from a Darwinian evolutionary perspective,
2. Appreciate how the evolutionary model of creativity can be applied to enhance skills for deep listening and creative problem-solving in business,
3. Borrow ideas from other fields of study and connect them to generate new ideational variations in business management.

The Outline of the Workshop

I. Introduction
   - Why musical metaphors in teaching business management?
   - Purpose/learning goals
   - The Darwinian evolutionary model of creativity

II. The Darwinian model of creativity in music (I)
   - Why J. S. Bach in the business classroom?
   - Life and legacy of J. S. Bach (video segments from "Great Composers – Bach")

III. The Darwinian model of creativity in music (II): Bach & contemporary Jazz
   - Jazz adaptation of J. S. Bach's original music (video segments from "Swingin' Bach (2000)")

IV. The Darwinian model of creativity in business management
   - Brief theoretical overview
   - Business cases

V. Experiential learning activities: Tinkering with musical and visual metaphors to generate ideational variations

VI. Discussion

VII. Evaluation

This Way for Vampires: Teaching First-Year Composition in "Challenging Times"

Sandie Friedman

Abstract

In this essay, I respond to composition scholar Linda Adler-Kassner's (2012) "no vampires" dictum: her stand against content (other than writing studies) in first-year composition courses. I argue that in "challenging times," when students are pressured to take a pragmatic, career-oriented approach to college, it is important for them to choose content, especially in a required course. It may be one of the few times in the course of a goal-focused, pre-professional college career when students can explore topics that interest them, while still learning writing skills. Further, I draw from Harris (2004) and Moskovitz and Petit (2007) to argue that first-year writing programs are more vital when they can bring together instructors from various disciplinary backgrounds for the common goal of teaching first-year writing. Finally, I contend that in "challenging times," we are in special need of vampires or other subject matter that enables students to engage in intellectual play.

Keywords

first-year composition, student engagement, popular culture, writing pedagogy, vampires

Sandie Friedman is Assistant Professor of Writing and Deputy Director of First-Year Writing at George Washington University. She is also affiliated with the Washington Center for Psychoanalysis, where she leads workshops in essay writing. Her work has appeared in *Enculturation, Writing on the Edge*, and *Other/Wise*.

> *It is in playing and only in playing that the individual…is able to be creative and to use the whole personality, and it is only in being creative that the individual discovers the self.*
>
> –D.W. Winnicott, Playing and Reality.

Introduction: Defining "Challenging Times"

In her 2012 address at the annual conference of the Council of Writing Program Administrators (CWPA), keynote speaker Linda Adler-Kassner analyzes the reasons why these are "challenging times" for educators and how, as writing teachers and writing program administrators, we might respond. Adler-Kassner's story begins with the 2006 Spelling Report, which criticized educators for failing to prepare students for college and careers. She goes on to reveal how a far-reaching network of organizations has developed to respond

to these claims: organizations that seek to determine what "preparation" means, and how we should define "adequate" preparation. She exposes a covert educational-industrial complex, with conservative think tanks in league with educational testing companies, working together in an effort to control the kinds of learning available in high schools and colleges. That is one dimension of what Adler-Kassner means by "challenging times."

Times are also challenging for educators, she contends, because current discourses surrounding education constrain students' approach to learning. Adler-Kassner (2012) opens her talk with a graduation speech delivered by President Obama in which he encouraged students to regard their education as the best tool they have for achieving the American dream. President Obama drew on a widespread discourse about education, also expressed in the Spellings Report, that college is a means of social mobility and essentially provides preparation for becoming productive members of the 21st century economy. In a period of economic crisis, when students are especially anxious about finding jobs after college, the "social mobility" narrative takes on greater force.

To respond productively to challenging times, Adler-Kassner (2012) argues, we must act from a clear set of principles about what Writing Studies is, and what it should do. One key principle is: "no vampires" (p. 132) "Vampires" is shorthand for content other than writing itself in first-year writing courses. Later in the talk, she went on to make explicit her opposition to content other than Writing Studies in writing courses:

> Writing classes, especially first-year classes, must absolutely and always be grounded in Writing Studies, must always be about the study of writing. They should not…engage students in writing about vampires—nor about political issues, nor about recent controversies, nor about other things that are not about *writing*. (p. 132)

The reasoning behind the "no vampires" dictum is complex: when college is assumed to be about acquiring a credential for work, then what matters are the skills you build—content no longer matters. In writing classes, for instance, students can acquire the skills of critical thinking, effective written communication, and reading. However, Adler-Kassner points out, when our courses are conceived in terms of skills, and content is sidelined, the discipline of writing studies disappears. If we teach any content—vampires, zombies, politics, the environment—we are sidelining the discipline.

In recent years, we have seen a proliferation of approaches to first-year composition (FYC) and, as Beaufort (2012) has observed, no widespread agreement among writing studies scholars about the best way to structure a FYC course:

> Views in writing studies regarding subject matter for first-year composition courses are controversial. There is no consensus on what is appropriate subject matter in academic writing courses, nor is there any overarching heuristic to guide writing teachers in their choice of subject matter or course themes (i.e. readings and writing topics) for writing courses. (p. 4)

Adler-Kassner's talk at CWPA reflected, I believe, some anxiety about this lack of consensus in our field. This anxiety is reflected, too, in the slightly mocking air of the "no vampires" dictum—in fact, the phrase evoked appreciative laughter in the banquet room when I heard the talk delivered. Adler-Kassner openly acknowledged that one of her goals was to consolidate the identity of writing studies as a field, even as practice and theory within it becomes increasingly diverse.

In addressing the problems raised above, it might be helpful to introduce the notion of what I call "theme-based" programs. Rather than selecting readings from a shared textbook (which really means that students encounter multiple themes), theme-based programs enable students to begin to develop expertise

in a particular field or topic.[1] In first-year writing programs such as ours at George Washington University, instructors from a variety of disciplinary backgrounds teach seminars with topics of interest to first-year students. The course themes range from: a seminar on the Holocaust, in which students do research at the national Holocaust Memorial Museum; to service learning courses, in which students volunteer for local nonprofits and write for these organizations; to a course on video games; to my own on classic Hollywood films. In their syllabi, instructors must justify their choice of topic as appropriate for a writing course, and they must follow the guidelines in a course template: http://www.gwu.edu/~uwp/new/1020template.html.[2]

Aside from these guidelines, instructors have considerable freedom to choose topics, as one goal of the program administrators is to appeal to a broad spectrum of student tastes. Like many faculty members in our program, I share Harris's (2006) conception of the work of FYC as introducing students to intellectual writing: the kind of writing about texts and ideas that might appear in *The New Yorker, Harper's,* or *The Atlantic* (p. 10). We don't have a course specifically on vampires right now, but we have had courses on horror movies. An outstanding student in one of my courses wrote a paper on the history of zombie films—it's probably only a matter of time before vampires make an appearance.

Should we banish vampires from FYC classes? What should be our response, as writing teachers and program administrators, to "challenging times?" It's clear that the current economic crisis is shaping our students' experience of college in a negative way, and Adler-Kassner has offered a compelling analysis of how current discourses about education constrain us as teachers. However, I would like to question Adler-Kassner's contention that we should respond to "challenging times" by focusing our classes exclusively on writing studies.

I want to reply to Adler-Kassner's "no vampires" dictum from the perspective of someone who has taught in theme-based writing programs for more than ten years and who feels strongly about their value. I would argue that especially in challenging times, when students are pressured to take a pragmatic, career-oriented approach to college, it's important for them to be able to choose content, especially in a required course. It may be one of the few times in the course of a goal-focused, pre-professional college career when students can explore something that interests them for its own sake—for reasons of intellectual curiosity, rather than because it is a step towards acquiring a necessary skill or credential.

Teaching in Response to "Challenging Times"

If writing teachers are to have a clearly defined position, Adler-Kassner (2012) argues, we must "develop *and act from* principles about the meaning of what writing studies and composition is *as a discipline*." (p. 130. Italics in the original). Her primary principle, as I noted earlier, is that our classes "must absolutely and always be grounded in the Writing Studies, must always be about the study of writing. They should not…engage students in writing about vampires—nor about political issues, nor about recent controversies, nor about other things that are not about writing" (p.132). This certainly makes sense if our aim is to consolidate ourselves as a discipline, to develop a unified collective response to the erosion of liberal education. But *should* this be our goal?

First, I'd like to take up the question from the perspective of teachers. In "Thinking Like a Program," Joseph Harris (2004) observes that we think of professors in the disciplines—our allies/rivals in English for example—as enjoying status and privileges such as tenure track lines, institutional support for research, and reasonable course loads. Composition programs, by contrast, are often staffed by graduate students or

underprepared adjuncts; these lower-status faculty members are swamped by student work and have no time to do the research that might enable them to advance up the academic ladder. It makes sense, then, for those of us who work in writing programs to desire the status of a discipline, since that seems to bring better working conditions and better lives. However, Harris also points out that the disciplinary apparatus we have developed (journals, conferences, graduate programs) has not actually improved working conditions for most composition instructors.

Harris (2004) proposes, and I agree, that we should not focus our efforts on solidifying composition's status as a discipline, but instead we should conceive of writing programs as sites of multi-disciplinary collaboration. He makes the radical claim that "scholars trained in English or composition studies have no unique skill in teaching students the moves and strategies of academic writing; rather, I have come to believe that close, generous, and assertive work with texts is a defining characteristic of intellectual work across a wide range of disciplines"(p. 360). Harris argues that faculty members from across the disciplines may be equally qualified to teach writing, provided they can instruct students in rigorous work with texts and in the "moves and strategies of academic writing." Moskowitz and Petit (2007) have made a powerful argument for the "diverse disciplines" model, and for the idea that writing programs/pedagogy benefit when writing "insiders" and "outsiders" from other fields work together. This is important for the vitality of individual programs and for the field as a whole.

Adler-Kassner's "no vampires" dictum stipulates that writing courses should present only writing studies content: this model of first-year writing would mean that composition scholars certainly would have an advantage over "outsiders" from other fields. It might even mean that *only* those trained in composition studies could teach first-year writing. The reality is that most programs are not staffed exclusively by scholars in composition and rhetoric—most programs are already multi-disciplinary to some extent, some more deliberately than others. And that reality is good: a multidisciplinary writing program, which brings together faculty with expertise in different types of reading and writing, can become a rich site of exchange. Drawing from Harris, then, I would argue that "no vampires" is not the best approach for composition teachers, in spite of its promise to unify and strengthen the discipline.

From the perspective of students, it's even clearer that vampires are good—vampires, along with any other subject matter that offers students a field for inquiry. Ann Beaufort (2012) seeks to correct the mistaken impression that she advocated only one theme, "Writing as Social Practice," for first-year composition. She praises writing-about-writing curricula as effectively encouraging transfer of writing knowledge to new contexts, but insists that it is not necessarily the only appropriate choice of theme. Rather, she asserts that "there are numerous appropriate areas of intellectual inquiry for writing courses. No course theme for an academic writing course deserves priority as 'the best' or the only one that will facilitate transfer of learning"(p. 5). She doesn't exclude vampires.

Instead of setting out strict guidelines for choosing course themes, Beaufort (2012) suggests that we consider whether we might pose what Grant Wiggins calls "essential questions" about the subject, questions that "frame the intellectual inquiry about the course" (p. 6). As long as the subject matter has "breadth and relevance to the age range of the students in the course," the theme can work. Beaufort proposes loose guidelines for choosing course themes. Essentially, she suggests we ask two fundamental questions about a theme:

1. Does the theme have "both breadth and relevance to the age range of students in the course"?

2. Can we derive from the theme "essential questions" that serve to "frame the intellectual inquiry of the course"? (Beaufort, 2012, p. 6)

As a topic, vampires are "broad enough" because they have a long history of capturing readers' (and movie viewers') imaginations. Of course, students in our courses are most likely to have encountered them in one of their recent incarnations, as part of the *Twilight* series, or on the TV show *True Blood*, or maybe in the old cult favorite TV series, *Buffy the Vampire Slayer*.

As a choice of course theme, pop culture is double-edged. On one hand, students are drawn to courses that feature vampires, *Harry Potter*, *Mad Men*, and video games. On the other hand, such courses may seem less than serious, to both colleagues and students. Our program directors have occasionally wondered whether pop culture themes lead students to give courses low ratings for "intellectual challenge" on course evaluations. But I believe that teaching writing through pop culture can have the same intellectual rigor as courses that "sound serious," courses with themes grounded in philosophy, science, or for that matter, writing studies. It depends on the pedagogical goals and how we approach those goals. I would argue that vampires can offer just as much material for intellectual inquiry as, for instance, Beaufort's (2012) proposed course, "Locating Self in Landscape" (p. 5).

For years, I have been carrying with me an elegant and still timely essay from the 1996-1997 issue of the Harvard Writing Program's student magazine, *Exposé*, "Modern Gothic Fiction and the Changing Face of Fear," by a student named Chad Hill. I offer it as a model when my students write essays using theoretical frameworks. Hill's essay happens to be about vampires. Drawing on work by the literary critic Terry Castle, the student analyzes a series of Gothic stories, culminating with Angela Carter's "The Lady of the House of Love." While we no longer believe in ghosts, he argues, we certainly are not beyond irrational terror. Here is his thesis: "Whereas the first two authors take diametrically opposed positions on this issue—Mayor questions our incredulity, Russell our remaining superstitiousness—the third [Carter] juxtaposes the supernatural against the rational to arrive at a more subtle and significant conclusion: that we have replaced the superstitious fears of the past with the more horrendous, more legitimate terrors of the present, including the fear of full-scale world war" (Hill, 1996-1997, p. 44). In this essay, vampire stories become the occasion for serious reflection—as well an opportunity to practice the skills involved in using a theoretical lens to read a cultural object. The student, an introduction notes, planned to concentrate in "Applied Math or Social Studies," but a First-Year Writing Course, "Gothic Fiction," gave him the chance to think through the "changing face of fear," with the help of vampires (Hill, 1996-1997, p. 44).

To put it bluntly, not all students will be interested in researching writing itself, and engagement is essential to learning; if students are not interested, even the soundest pedagogy is of no use. Sommers and Saltz (2004) discovered in their longitudinal study of Harvard undergraduates that the reason why some students develop and sustain an interest in academic writing is because they see a purpose greater than fulfilling an assignment: they are able to pursue questions and problems that genuinely interest them. Moreover, they can learn the intellectual moves and practices of scholarly writing with any subject matter that enables them to ask significant questions. To banish vampires is not only to exclude instructors not trained in writing studies, but also to limit students' choices—and thus, to reduce the possibility of engagement.

It's also worth noting that there is more than one way to invite vampires into your classroom—that is, there are multiple strategies for integrating content while remaining focused on writing instruction. I acknowledge that vampires or other subject matter could certainly displace the work of learning to write.

But it is the job of program administrators to provide guidelines and strategies to ensure that doesn't happen—that the focus of the class remains on writing. As teachers become more skilled, the relationship between writing and content will shift. Beginning instructors may simply divide the time they spend in the classroom, focusing on content one day and writing the next. However, more experienced instructors in theme-based programs develop ways of synthesizing writing instruction and work with content. In my classroom, we discuss the content of essays or films exclusively through the medium of student writing. My focus, for example, will be on teaching students to ask analytical questions—so I can ask them to formulate questions about *The Godfather*. We are certainly talking about *The Godfather*, but the real purpose of the discussion is to consider what makes an effective analytical question.

At an even higher level of instruction, the thematic content may resonate with the work of writing in unique ways. Consider this reflection from my colleague Christy Zink's syllabus for a course centered on documentary film:

> This course takes as its central texts film documentaries on the American experience that rest with no easy answers. Because these texts themselves wrestle with essential questions about fair and ethical representation, of substantial research and handling of facts and argument, and of what, in the end, it means to even try to document the truth, they provide an important catalyst for exploring how writers come to research and write on advanced subject matter and, in turn, to change the accepted discourse, offering new possibilities and new potential truths.

In Zink's course, students' engagement with documentary film serves a dual purpose: it gives them compelling material to write *about*; more importantly, Zink's pedagogy also enables students to see significant parallels between the construction of documentaries and of academic writing. In documentaries, as well as in analytical articles, writers are striving to handle "facts and argument" fairly. Zink's course is certainly a special case; not every themed writing course can achieve this admirable unity of theme with writing instruction. But it does show, as Beaufort has suggested, that first-year composition does not have to focus exclusively on writing itself to function coherently as a writing course.

FYC and Subversive Play

Whether we view the question from the point of view of teachers or students, banishing vampires is not the best policy, even though as Adler-Kassner warns, the focus of our classes might not always be on writing studies. If we are not primarily concerned with consolidating our status as a field, we can consider other possible responses to "challenging times." In this era of economic anxiety, students crave a sense of safety: the promise of a job at the end of four years of extraordinary expenditure, a way to pay back the monstrous loans accrued in the pursuit of a college degree. But what if there is no security—no guarantee that on the other end of college, there will be a job that provides adequate support? And if the dream of security is impossible, then we have to consider some other alternative—perhaps even a shift from working within the social mobility model to resisting it.

In "Never Mind the Tagmemics, Where's the Sex Pistols?" a 1997 article in *CCC*[3], Geoffrey Sirc suggests such an alternative: he critiques the discipline of writing studies from the radical perspective of punk rock. In his experiment in "cultural parallelism," Sirc focuses on the cultural moment of the birth of punk rock in 1977, and the attitude of the composition establishment towards it. Looking at copies of *CCC* from the 60s and 70s, Sirc observes that the discipline acknowledged the importance of popular music to students, at times regarding it with disdain, at other times turning to it to engage students with something they cared about. With punk

rock, it was different; the establishment didn't even acknowledge its existence. I would argue that Adler-Kassner's talk (and perhaps the turn towards writing about writing in general) reflects a similar attitude in the field of composition right now: call it fear of fun. Or since "vampires" stand in for popular culture in general, call it "hostility towards popular culture."

Punk rock represents an anti-work, anti-responsibility, anti-adult point of view, embodied in the Clash's "Career Opportunities": "Career opportunities, the ones that never knock/Every job they offer you is to keep out the dock." Sirc (1997) asks: "Why train students for the future when there is no future? Why give them career-oriented writing lessons when career opportunities are the ones that never knock?" (p. 14). Sirc's question suggests that economic pressure might send us in another direction altogether: Why prepare students for jobs when there are no jobs? Why not prepare them to live in a group house or a teepee, raise chickens or co-own a bakery? Sirc (1997) urges us to consider what it might mean to teach composition in the spirit of punk rock—to value the junky freewriting over the finished product, as the punk rock aesthetic valued trash and shredded clothing. Against the pressure to be "accountable," we might teach in the spirit of punk rock: intellectual play just might get you outside the "social mobility" paradigm. In fact, vampires might get you out of this paradigm, if vampires help you learn to do cultural critique.

The climate of economic anxiety has pushed both students and teachers to become even more career-oriented. I am extending Sirc's argument by suggesting that in "challenging times," we are in special need of the subversive spirit of punk rock. In 1997, when Sirc wrote the article, some of the rebellious, no-teachers legacy of Peter Elbow still informed our pedagogy. Some instructors still teach rebellion, whether in the spirit of Elbow, Freire, or Giroux. Rather than teaching students exclusively writing studies, we can teach a mode of critique that might enable them to step outside of the narratives of "college and career readiness," or education as the key to social mobility. We can teach them, in the spirit of Henry Giroux, to read vampires and other forms of popular culture against the grain, to push them to think about the economic and ideological systems that shape their lives.

Finally, I want to argue that in an era when students feel bound to approach school pragmatically and to make choices that will bring them closer to a career, we should look for ways to enable them to have some fun—to do intellectual exploration for its own sake. Those of us who attended college in the 70s or 80s often carry memories—perhaps idealized—of college as a space for experimentation, protected from the demands of supporting ourselves. Not everyone had this luxury, of course, but many of us did. Our students don't feel that same sort of freedom -- but shouldn't we protect those places where they might have some experience of play and intellectual fun? Even though—or perhaps precisely because—FYC is a required course, it can be a place where students pursue intellectual projects out of curiosity and interest in a subject.

In fact, it makes more sense to teach vampires—that is, cultural critique—at a moment when students need to be able to read ideology. Teach students to do cultural critique, and they will become less subject to the prevailing narratives that pressure them into approaching college as a career-readiness program.

References

Adler-Kassner, L. (2012). The companies we keep *or* the companies we would like to try to keep: Strategies and tactics in challenging times. *WPA: Writing Program Administration,* 36 (1), 119-140.

Beaufort, A. (2012). College writing and beyond: Five years later. *Composition Forum,* 26. Retrieved from http://compositionforum.com/issue/26/

Harris, J. (2004). Thinking like a program. *Pedagogy: Approaches to Teaching Literature, Language, Composition, and Culture*. 4 (3), 357-363.

Harris, J. (2006). *Rewriting: How to do things with texts*. Logan, Utah: Utah State University Press.

Hill, Chad. 1996-1997. Modern Gothic fiction and the changing face of fear. *Exposé* 1996-1997. Harvard Writing Program. 44-50.

Moskovitz, C., & Petit, M. (2007). Insiders and outsiders: Redrawing the boundaries of the writing program. *WPA: Writing Program Administration*, 31 (1-2).

Sirc, G. (1997). Never mind the tagmemics, where's the sex pistols? *College Composition and Communication*, 48 (1) February 1997.

Sommers, N., & Saltz, L. (2004). The novice as expert: Writing the freshman year. *College Composition and Communication*. 56 (1), 124-149.

Endnotes

1 Some of the most prominent theme-based programs include those at Harvard, Princeton, Stanford, and Duke.

2 There is significant overlap between our program's template for University Writing and the WPA Outcomes Statement for First-Year Composition: http://wpacouncil.org/positions/outcomes.html. Like the WPA Statement, our template addresses: rhetorical knowledge, critical thinking skills, writing process, and knowledge of conventions.

3 Sirc's article has also been anthologized in *The Norton Book of Composition Studies* (2009) Ed. Susan Miller, New York: Norton, 973-990.

Current Clips and Links

A list of links to interesting, non-commercial websites related to teaching and learning, compiled by Ashley Janes and Ana Pérez-Manrique. *Currents* invites reader recommendations.

MERLOT II: Multimedia Educational Resource for Learning and Online Teaching A program run out of the California State University System, it began as a project in 1997 to develop collegiate communities dedicated to sharing knowledge and learning materials. As well as hosting an annual conference for colleges nation-wide, MERLOT runs a website with numerous faculty resources, including an entire section on faculty development and a media center featuring links to the program's Twitter feed and YouTube channel. Under the tab "Communities" educators can access different discipline-specific resources, from teaching tips to learning and class materials.
http://www.merlot.org/merlot/index.htm

Ted Talks A nonprofit started in 1984, TED (Technology, Entertainment, Design) is devoted to ideas worth sharing. There are approximately 1500 videos in various disciplines from renowned speakers and researchers, all with English subtitles and some subtitled for other languages as well. Both teachers and students find these videos enjoyable and engaging: a wonderful supplement to the regular lecture.
https://www.ted.com/talks/browse

Kathy Shrock's Guide to Everything

Kathy Schrock is educated in communication and information technologies, with an extensive background in library science. She owns and runs the website Kathy Schrock's Guide to Everything, which has ideas and tips for everything from assessments and rubrics to "Twitter for Teachers." This is a fantastic site for resources and is organized alphabetically for easy access. Her instructions and aids are easy to understand and can be used in any classroom or for any major.
http://www.schrockguide.net/

Cornell University's Center for Teaching Excellence "The Center for Teaching Excellence … acts as a resource for the academic community by offering a wide array of research-based programs and services that support teaching and reflective practice." It focuses on advancing scholarly activities and encouraging student learning. The webpage is Well-organized and easy to access, the Center's Website highlights popular videos, articles, and links right on the home page. The various pages are informative and offer a breakdown of everything a professor may need to be successful in the classroom and on campus.
http://www.cte.cornell.edu/

Library of Congress Aside from a vast catalogue of books, documents, and other resources, the Library of Congress has a webpage designed with teachers in mind, from elementary to higher education. There are links to professional development, ideas for teaching with primary sources, and classroom materials. Although the focus is on education professionals, there are also links to specific collections and starting points for presentations and activities that can be used by both students and teachers.
http://www.loc.gov/teachers/index.html

About Us

Currents in Teaching and Learning is a peer-reviewed electronic journal that fosters exchanges among reflective teacher-scholars across the disciplines. Published twice a year, *Currents* seeks to improve teaching and learning in higher education with short reports on classroom practices as well as longer research, theoretical, or conceptual articles and explorations of issues and challenges facing teachers today. Non-specialist and jargon-free, *Currents* is addressed to both faculty and graduate students in higher education, teaching in all academic disciplines.

Subscriptions

If you wish to be notified when each new issue of *Currents* becomes available online and to receive our Calls for Submissions and other announcements, please join our *Currents* Subscribers' Listserv. Subscribe Here.

CALL FOR SUBMISSIONS

Currents Invites general submissions for its Vol. 7, No. 1, Fall 2014 issue, including:

Short reports from different disciplines on classroom practices (2850-5700 words).

Longer research theoretical, or conceptual articles, and explorations of issues and challenges facing teachers today (5700-7125 words).

Book and Website reviews.

Special Call For Papers

Currents welcomes submissions on the topic of Service Learning in Higher Education (essays or teaching reports), to be included in a special section of our Fall 2014 issue.

We welcome both individual and group submissions. All submissions must be original, previously unpublished work. Submissions received after these dates will be reviewed on a rolling basis.

Submissions Deadline, Volume 7, Number 1 (Fall 2014): May 15th, 2014.
Submissions Deadline, Volume 7, Number 2 (Spring 2015): November 15, 2014.

Submissions and Contact Information

Please address all submissions and inquiries to Ana Perez-Manrique via e-mail: currents@worcester.edu
For further information and submissions guidelines see our website: www.worcester.edu/currents.

Please address all postal inquiries to

Ana Perez-Manrique
Editor, *Currents in Teaching and Learning*
Department of World Languages
Worcester State University
486 Chandler Street
Worcester, MA 01602-2597
U.S.A.

Currents in Teaching and Learning is a publication of The Center for Teaching and Learning, Worcester State University, Worcester, Massachusetts, U.S.A.
ISSN: 1945-3043